LIST OF MEMBERS WHO PREPARED SUPPORT MATERIAL FOR ECONOMICS

Class XII

Mr. Sanjeev Kumar Vice Principal	GBSSS, Babarpur, Delhi-32

Team Members

Mr. Ajay Kumar (EM) Lect. (Eco)	RPVV, D-1Nand Nagari, Delhi-110093
Mr. Susheel Jain Lect. (Eco)	GBSSS, Sabha Pur, Delhi
Mr. Mandeep Dagar Lect. (Eco)	RPVV Vasant Kunj, Delhi
Mr. S.N. Vats Lect. (Eco)	GBSSS, Saraswati Vihar, Delhi
Mr. Mukesh Lect. (Eco)	RPVV, Link Road, Karol Bagh, Delhi
Mr. Sanjay Kumar Lect. (Eco)	Babu Ram GBSSS, Shahdara, Delhi
Mrs. (Dr.) Alka H. Singh Lect. (Eco)	GGSSS, C Block, Dilshad Garden, Delhi
Mrs. Renu Verma Lect. (Eco)	GGSSS B-1,Yamuna Vihar, Delhi
Mrs. Rita Gangwar Lect. (Eco)	GGSSS Shivaji Park, Shahdara, Delhi
Mrs. Sangita A. Tanton Lect. (Eco)	GGSSS, Dallu Pur,Delhi
Mr. Mohd. Fahim (UM) Lect. (Eco)	GBSS School Zakir Hussain Memorial, Jafrabad, Delhi

ECONOMICS

Class XII (2016-17)

Paper 1 **100 Marks**
3 Marks

Units		Marks	Periods
Part A	Introductory Microeconomics Introduction	6	11
	Consumer's Equilibrium and Demand Producer Behaviour and Supply	16 16	34 34
	Forms of Market and Price Determination under Perfect competition with simple applications	12	31
		50	110
Part B	**Introductory Macroeconomics**		
	National Income and Related Aggregates	15	32
	Money and Banking Determination of Income and Employment	8 12	12 27
	Government Budget and the Economy	8	17
	Balance of Payments	7	16
		50	110

Part A : Introductory Microeconomics

Unit 1 : Introduction **11 Periods**

Meaning of microeconomics and macroeconomics, Positive and Normative Econimcs.

What is an economy? Central Problems of an economy: what, how and for whom to produce; concepts of production possibility frontier and opportunity cost.

Unit 2 : Consumer's Equilibrium and Demand **34 Periods**

Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis.

Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.

Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand - (a) percentage-change method and (b) geometric method (linear demand curve); relationship between price elasticity of demand and total expenditure.

Unit 3 : Producer Behaviour and Supply **34 Periods**

Meaning of production function - Short-Run and Long-Run

Total Product, Average Product and Marginal Product.

Returns to a Factor

Cost : Short run costs - total cost, total fixed cost, total variable cost; Average cost; Average fixed cost, average variable cost and marginal cost-meaning and their relationships.

Revenue - total, average and marginal rvenue - meaning and their relationships.

Producer's equilibrium-meaning and its conditions in terms of marginal revenue-marginal cost. Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply; (a) percentage-change method and (b) geometric method.

Unit 4 : Forms of Market and Price Determination under Perfect Competition with simple applications 31 Periods

Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply.

Other Market Forms - monopoly, monopolicstic competition, oligopoly - their meaning and features.

Simple Applications of Demand and Supply : Price ceiling, price floor.

Part B : Introductory Macroeconomics

Unit 5 : National Income and Related Aggregates 32 Pediods

Some basic concepts consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.

Circular flow of income; Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.

Aggregates repated to National Income : Gross National Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP) - at market price, at factor cost; National Disposable Income (gross and net), Private Income, Personal Income and Personal Disposable Income : Real and Nominal GDP

GDP and Welfare

Unit 6 : Money and Banking 18 Periods

Money - its meaning and functions.

Supply of money - Currency held by the public and net demand deposits held by commercial banks.

Money creation by the commercial banking system.

Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin Requirement.

Unit 7 :Determination of Income and Employment 27 Periods

Aggregate demand and its components.

Propensity to consume and propensity to save (average and marginal)

Short-Run equilibrium output; investment multiplier and its mechanism.

Meaning of full employment and involuntary unemployment.

Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

Unit 8 :Government Budget and the Economy 17 Periods

Government budget - meaning, objectives and components.

Classification of receipts - revenue receipts and capital receipts; classification of expenditure - revenue expenditure and capital expenditure.

Measures of government deficit - revenue deficit, fiscal deficit, primary deficit their meaning.

Unit 9 :Balance of Payments 16 Periods

Balance of payments account - meaning and components; balance of payments deficit-meaning.

Foreign exchange rate - meaning of fixed and flexible rates and managed floating.

Determination of exchange rate in a free market.

Prescribed Books :

1. Statistics for Economics, Class XI, NCERT
2. Indian Economic Development, Class XI, NCERT.
3. Introductory Micro Economics, Class XII, NCERT.
4. Macro Economics, Class XII, NCERT
5. Supplementary Reading Material in Economics, Class XII. CBSE

Note : *The above publications are also available in Hindi Medium.*

SUGGESTED QUESTION PAPER DESIGN
Economics (Code No. 030)
March 2017 (Examination)

Class-IX (2016-17)

Marks : 100 **Duration : 3 Hours**

S.No.	Typology of Questions	Very Short Answer MCQ 1 Mark	Short Answer I 3 Marks	Short Answer II 4 Marks	Long Answer 6 Marks	Total Marks	% age
1.	Remembering (Knowledge Based Simple recall questions, to know specific facts, terms, concepts, principles, or theories; identify, define, or recite, information)	2	1	2	2	25	25%
2.	Understanding (Comprehension to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	3	2	1	2	25	25%
3.	Application (Use abstract information in concrete situation, to apply knowledge to new situations; Use given content to interpret a situation provide an example, or solve a problem)	3	1	2	1	20	20%
4.	High Order Thinking Skills (Analysis & Synthesis - Classify compare, contrast, or differentiate between different pieces of information; Organize and/or integrate unique pieces of information from a variety of soursces)	1	1	1	2	20	20%
5.	Eveluation : Appraise, juduge and/or justify the values or worth of a decision or outcome, or to predict outcomes based on values).	1	1	–	1	10	10%
	Total	10×1 =10	6×3=18	6x4 = 24	8x6 = 48	100(30)	100%

Note : There will be nternal Choce is quesitons of 3 marks, 4 marks and 6 marks in both sections (A and B). Total 3 internal choices in section A and total 3 internal choices in section B).

Content

UNIT 1

INTRODUCTION

Points to Remember

- Micro economics studies the behaviour of individual economic units.

  Example : Demand of an individual consumer Production of a firm etc.

- Macro economics studies the behaviour of the economy as a whole.

  Example : Aggregate Demand, National Income etc.

- An economy is a system that helps to produce good and services and enables people to earn their living.

- Economic problem is the problem of basically making the choice of the use of scarce resources for satisfying unlimited human wants.

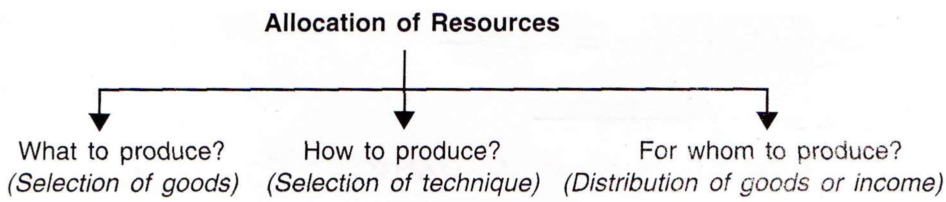
- Causes of economic problems are :

  (a) Unlimited Human Wants

  (b) Limited Economic Resources

  (c) Alternative uses of Resources

- **Central Problems of an Economy**



- Opportunity cost of a given resource can be defined as the value of the next best use to which that resource could be put.

- Production possibility frontier shows all possible combinations of two goods that an economy can produce with given resources and available technology, assuming that all resources are fully and efficiently utilised.
- Economising of resources means use of resources in best possible manner.
- Features of Production Possibility Frontier
  - (a) Slopes downward from left to right because if production of one good is to increase then production of other good has to be sacrificed.
  - (b) Concave to the origin because of increasing marginal opportunity cost or (MRT)
- Rightward shift of PPF indicates increase in resources or improvement in technology.
- Leftword shift of PPF indicates decrease in resources or degradation in technology.
- PPC will shift rightwards due to all those reasons which enhances production potential, quantity and efficiency of resources in an economy.

Resons for Rightwards shift	**Reasons for Leftward Shift**	**No. Change in PPC**
1. Increase in Resources	1. Decrease in Resources	1. Transfer of Resources
2. Improvement in technology	2. Technological obseletion	2. Unemployment Eradication Programme
3. Skill Development Programme (Training)	3. Natural Calamities (Flood, Earthquake, Tsunami, Drought etc.)	
4. Education for all (Health)	4. Migration	
5. Clean India Campaign (Health)		
6. Yoga Enhancement Plans (Health).		
7. Beti Bachao, Beti Padhao (Education)		
8. Make in India (Investment)		
9. Increase in Foreign Capital (Foreign Investment)		

- Marginal Rate of Transformation (MRT) is the ratio of number of units of a good sacrificed to increase one more unit of the other good.

$$MRT = \frac{\Delta Y}{\Delta X}$$

- MRT can also called Marginal Opportunity Cost. It is defined as the additional cost in terms of number of units of a good sacrificed to produce an additional unit of the other good.
- When MOC increases, PPF is concave to origin. When MOC decreases, PPF is convex to origin when MOC remains constant, PPF is downward sloping straight line.
- Positive Economic Analysis : It deals with the things 'as they are'. It represents facts like what was? What is? What will be? etc. Example : 'India is overpopulated', Prices have been rising in India'.
- Normative Economic Analysis : It deals with things as 'they outhgt to be'. It deals with idealistic situation instead of actual situation. Example : 'Rich people should be taxed more'. Free education should be given to the poor'.

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. Which of the following subject matter studies in Micro Economics.
   (a) Theory of Consumer's behaviour
   (b) Aggregate demand and supply
   (c) Govt. Budget
   (d) National Income
2. Which subject matter does not study in Macro Economics.
   (a) Employment Level (b) Aggregate Demand & Supply
   (c) National Income (d) Individual Firm
3. Economic Problem arises because
   (a) Resources are scare (b) wants are unlimited

(c) Resources have alternative uses

(d) above all

4. Which problem is not a central problem of an Economy?

(a) What to produce (b) How to produce

(c) For whom to produce (d) Indiscipline in students.

5. Any point outside the boundary line of PPF shows :

(a) under utilisation of Resource

(b) unattainable combination of output

(c) efficient utilisation of Resources

(d) None of these.

6. In which situation PPF shifts towards right

(a) Resources are increased

(b) Resources are reduced

(c) Inefficient technology (d) None of these

7. Slope of production possibility curve

(a) Slope downward (b) Parallel to x-axis

(c) Slope upward (d) Above all

8. An Economy produces two goods Wheat and Cloth. Find out Marginal opportunity cost by the following table

Wheat	*Cloth*
100	0
90	25

(a) 1 (c) .4

(b) 10 (d) .25

9. Which of the followings are assumptions of PPF

(a) Available Resources are fully and efficiently utilized

(b) Technology remain stable

(c) Resources are not equally efficient in production of all goods

(d) All of the above

Ans. **1.** (a); **2.** (d); **3.** (d); **4.** (d); **5.** (b); **6.** (a); **7.** (a); **8.** (b); **9.** (d)

Short Answer Type Questions (3-4 Marks)

1. Distinguish between microeconomics and macroeconomics. Give example.
2. Why does an economic problem arise? Explain the problem of 'How to Produce'?
3. Explain the problem of 'What to Produce' with the help of an example.
4. 'For whom to produce' is a central probloem of an economy. Explain.
5. Define opportunity cost with the help of an example, how does it differ from marginal opportunity cost?
6. What is 'Marginla Rate of Transformation'? Explain with the help of an example.
7. Why is a production possibility curve concave? Explain.
8. What is PP Frontier? Explain it with the help of an imaginary schedule and diagram.
9. Show the following situation with PPF (PPC).
   (a) Fuller utilisation of resources
   (b) Growth of resources
   (c) Under utilisation of resources.
10. An economy always produces on, but not inside a PPF. Defend or refute.
11. A lot of people died and many factories were destroyed because of a severe earthquake in a country. How will it affect the country's PPF?
12. Calculate MRT from following table. What will be the shape of PPF and why?

Combinations	*Green Chilly (Units)*	*Sugar Units*
A	100	1
B	95	1
C	85	2
D	85	3
E	50	4
F	25	5

13. Given that no resource is equally efficient in producing all goods. Write name of such curve which shows production potential of an economy. Explain features of this curve along with the reasons?

14. If an Economy is not able to utilise its available resources efficiently, what will be the effect on PPF? What will you suggest for economic growth?

15. Recently a severe earthquake occurred in Nepal. How this incident will affect the PPF of Nepal?

16. Suppose the river Yamuna is now totally clean. Is it going to affect the PPF of Delhi? Explain.

Hints (3 Marks Questios)

12.

Combinations	*MOC*
A	–
B	5
C	10
D	15
E	20
F	25

Exam. Oriented Questions with Answer

Very Short Answer Question (1 Mark)

Q. 1. Define Economy.

Ans. An economy is a system that helps to produce goods and services and enables people to earn their living.

Q. 2. What is the meaning of scarcity of resources?

Ans. Scarcity of resources means shortage of resources as compared to its demand.

Q. 3. Write the meaning of Economic Problem.

Ans. Economic problem is the problem of basically making the choice of the use of scarce resources for satisfying unlimited human wants.

Q. 4. Define MRT.

Ans. Marginal Rate of Transformation (MRT) is the ratio of number of units of a good sacrificed to increase one more unit of the other good $MRT = \frac{\Delta Y}{\Delta X}$

Q. 5. Define opportunity cost.

Ans. Opportunity cost of a resource is its value in next best alternative use.

Q. 6. Govt. has started promoting Foreign investments. What will be its economic value in the context of PPC?

Ans. Production will improve with more foreign investments. Thus PPC will shift rightward.

Q. 7. What is the meaning of economising of resources?

Ans. Economising of resources means best possible use of available resources.

3 - 4 Marks Questions

Q. 1. Why is a production possibility curve concave? Explain.

Ans. The production possibility curve being concave means that MRT increases as we move downward along the curve. MRT increases because it is assumed that no resource is equally efficient in production of all goods. As resources are transferred from one good to another, less and less efficient resources have to be employed. This raises cost and raises MRT.

Q. 2. Explain properties of a production possibility curve.

Ans. There are two properties of a production possibility curve.

1. **Downward sloping :** It is because as more quantity of one good is produced some quantity of the other good must be sacrificed.
2. **Concave to the origin :** It is because the marginal rate of transformation increases as more of one good is produced.

Q. 3. Explain the problem of 'what to produce'.

Ans. An economy can produce different possible combinations of goods and services with given resrouces. The problem is that, out of these different combinations, which combinations is produced. If production of one good increases then less resources will be available for other goods.

Q. 4. What is 'Marginal Rate of Transformation'? Explain with the help of an example.

Ans. MRT is the rate at which the units of one good have to be sacrificed to produce one more unit of the other good in a two goods economy. Suppose an economy produces only two goods X and Y. Further suppose that by employing these resources fully and efficiently, the economy produces 1X + 10Y. If the economy decides to produce 2X, it has to cut down production of Y by 2 units. Then 2Y is the opportunity cost of producing 1X. Then 2Y : 1X is the MRT.

Q. 5. Explain the problem 'How to produce'.

Ans. The central problem 'How to Produce' is basically the problem of choosing the appropriate technique of production for producing goods. There can be more than one method for producing a good. More labour and less capital (i.e., labour intensive technique) or more capital and less labour (i.e., capital intensive technique) can be used for production of a good. Since resources are scarce, decision has to be taken about which technique should be used.

Example : A given quantity of cloth can be manufactured by combining factors of production in different proportions, making it capital-intensive or labour intensive method.

Q. 6. For labourers working under MGNREGA Govt has increased minimum employment from 100 to 150 days. How will this affect real and potential level of production.

Ans. Real level of production will be increased by improvement in employment. But potential level of production will not increase (No shifting of PPC will take place). Reason being PPC is based on the assumption that available resources are fully utilised.

Q. 7. Explain the central problem 'for whom to produce'.

Ans. For whom to produce means that who will buy the goods and services produced. Clearly those who have income will be able to buy. So, the problem amounts to how the national income is distributed in an economy.

Q. 8. Giving reason comment on the shape of Production Possibilities curve based on the following schedule :

God X (units)	0	1	2	3	4
Good Y (units)	10	9	7	4	0

Ans.

Good X (units)	**Good Y (Units)**	**MRT**
0	10	–
1	9	1Y : 1X
2	7	2Y : 1X
3	4	3Y : 1X
4	0	4Y : 1X

Since MRT is increasing, the PP curve is downward sloping and concave to the origin.

Q. 9. Explain the effects of floods in Jammu and Kashmir on its production possibilities frontier.

Ans. Floods have damaged and reduce resources. Since potential production declines, the production possibility frontier shifts to the left.

UNIT II

CONSUMER'S EQUILIBRIUM & DEMAND

Points to Remember

- **Consumer :** is an economic agent who consumes final goods and services to fulfill his basic needs.
- **Total utility :** It is the sum of satisfaction from consumption of all the units of a commodity at a given time.
- **Marginal Utility :** It is a net increase in total utility by consuming an additional unit of a commodity.
- **Law of Diminishing Marginal Utility :** As consumer consumes more and more units of commodity the Marginal Utility derived from each successive units goes on declining.
- **Consumer's Bundle :** It is a quantitative combination of two goods which can be purchased by a consumer from his given income.
- **Budget set :** It is quantitative combination of those bundle which a consumer can purchase from his given income at prevailing market prices.

  Budget Set : $Px . X + Py . Y \leq M$
- **Budget Line :** It is a line showing different combinations of two goods which a consumer can attain with given income and market price of the goods.

  Budget line : $M = Px . x + Py . y$
- **Consumer Budget :** It states the real income or purchasing power of the consumer from which he can purchase the certain quantitative bundles of two goods at given price.
- **Budget Line :** Shows those combinations of two goods which a consumer can purchase expending his entire income.

- **Monotonic Preferences :** Consumer's preferences are called monotonic when between any two bundles, one bundle has more of one good and no less of other goods.

- **Change in Budget Line :** There can be parallel shift (leftwards or rightwards) due to change in income of the consumer and change in price of goods.

- **Marginal Rate of Substitution (MRS) :** It is the rate at which a consumer is willing to substitute good Y for good X.

$$\text{MRS} = \frac{\text{Loss of Good Y}}{\text{Gain of Good X}} \text{ or } -\frac{\Delta Y}{\Delta X}$$

- **Indifference Curve :** is a curve showing different combination of two goods, each combinations offering the same level of satisfaction to the consumer.

- **Indifference Map :** It refers to a set of indifference curves placed together in a diagram.

- Characteristics of IC

  1. Indifference curves are negatively sloped.
  2. Indifference curves are convex to the point of origin.
  3. Indifference curves never touch or intersect each other.
  4. Higher Indifference curve represents higher level of satisfaction.

- **Consumer's Equilibrium :** It is a situations where a consumer is spending his income in such a way that he is getting maximum satisfaction and has no tendency to change.

- **Condition of Consumer's Equilibrium**

  (a) **Cardinal approach (UtilityAnalysis) :** According to this approach utility can be measured. "Utils" is the unit of utility.

  Condition

  (i) In case of one commodity

$$\text{MU}m = \frac{\text{MU}x}{\text{P}x}\left[\text{If MU}m = 1, \text{MU}x = \text{P}x\right]$$

Where, MU_m = Marginal utility of money

MU_x = Marginal utility of 'x', P_x = Price of 'x'.

(ii) In case of two commodity : $\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_m$

and MU must be decreasing.

(b) **Ordinal approach (Indifference Curve Analysis) :** According to this approach utility can't be measured but can be expressed in order or ranking.

- **Condition of Equilibrium :**

(i) $MRS_{xy} = \frac{P_x}{P_y} \begin{bmatrix} P_x = \text{Price of 'x'} \\ P_y = \text{Priceof 'y'} \end{bmatrix}$

or budget line must be tanget to indifference curve.

(ii) MRS must be decreasing or

Indifference curve must be convex to the origin.

- **Quantity Demanded :** It is that quantity which a consumer is able and is willing to buy at given price and in a given period of time

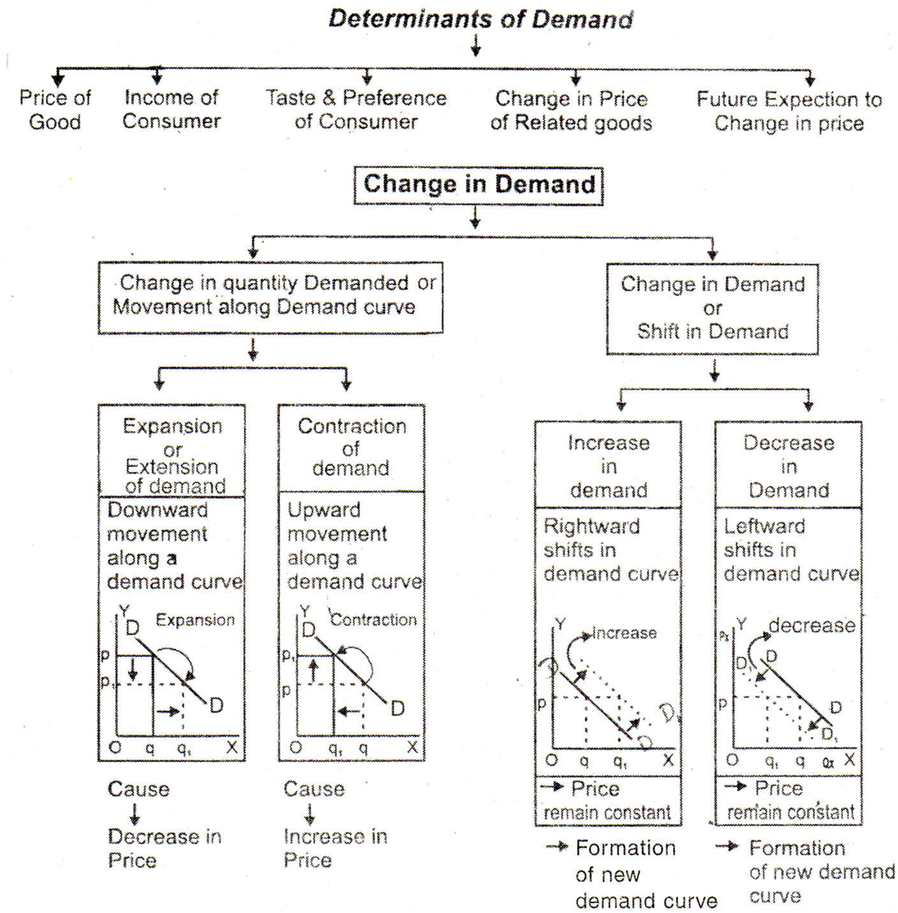
- **Market Demand :** It is the total quantity purchased by all the consumers in the market at given price and in a given period of time.

- **Demand Function :** It is the functional relationship between the demand of a good and factors affecting edemand.

D = f(P_x, P_r, Y, T, E, N, Y_d).

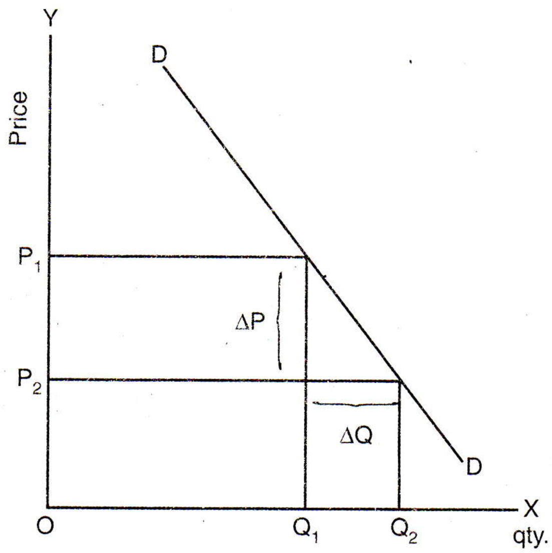
- **Demand Schedule :** Demand schedule is a table which shows the relationship between price and quantity demanded of a commodity.

- **Law of Demand :** If remaining things are being constant as price of a com. increases demand of the com. decreases and as price of a com. decreases demand of the com. increases, it is called law of demand.



- ❑ **Change in Demand :** When demand changes due to change in any one of its determinants other than the price.
- ❑ **Change in Quantity Demanded :** When demand changes due
- ❑ **Demand Curve :** It is a graphical presentation of demand schedule, which shows there is inverse relation b/w price and demand of commodity.

❑ Demand curve and its slope :



$$\text{Slope of demand curve} = \frac{\text{Change in price}}{\text{Change in qty. dd.}}$$

$$= \frac{\Delta P}{\Delta Q}$$

❑ **Price Elasticity of Demand :** Price Elasticity of Demand is a measurement of change in quantity demanded in response to a change in price of the commodity.

Methods of Measurement of Price Elasticity of Demand

- **Percentage Method**
- **Total Expenditure Method**
- **Geometric Method**

❑ **Percentage Method :**

$$\text{Ed.} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

Ed. $\rightarrow$ Elasticity of Demand

$\Delta Q \rightarrow$ Change in quantity

$\Delta P \rightarrow$ Change in Price

$P \rightarrow$ Initial Price

$Q \rightarrow$ Initial Quantity

$$\text{Ed.} = \frac{\text{Percentage Change in Quantity demanded of a commodity}}{\text{Percentage Change in Price}}$$

- **Total Expenditure Method :** It measures price elasticity of demand on the basis of change in total expenditure incurred on the commodity by a household due to change in its price.

  There are three conditions :

  1. If the Total Expenditure on the commodity changes inversely with the price change, the demand is relatively elastic (ed>1).
  2. If the total expenditure on the commodity remains the same as before and after change in price, then demand is said to be unitary elastic (ed = 1).
  3. If the total expenditure on the commodity increases with an increase in its price and decreases with a decrease in the price, then demand is relatively inelastic (ed < 1).

- **Geometric Method :** Elasticity of demand at any point is measured by dividing the length of lower segment of the demand curve with the length of upper segment of demand curve at that point.

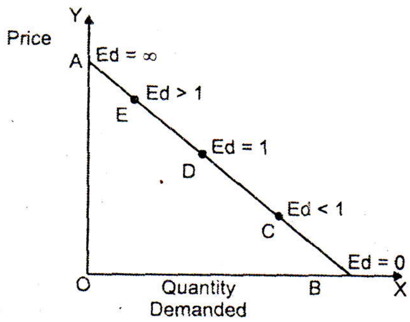
- The value of Ed is unity at mid point of any linear demand curve.

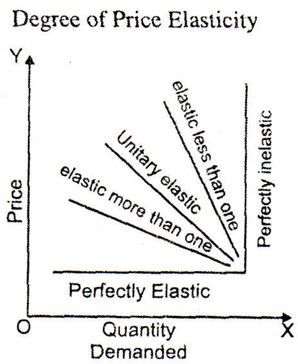
  Elasticity of demand at given point.

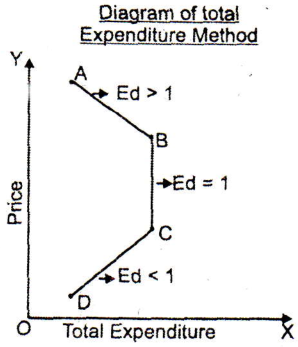
$$\text{Ed} = \frac{\text{Lower segment of the demand curve}}{\text{Upper segment of the demand curve}}$$

D is mid point of the demand curve.

❑ Diagram to show Geometric or point method.







❑ Factors affecting Price elasticity of Demand

(a) Nature of the Commodity.

(b) Availability of Substitute goods.

(c) Income of the consumer.

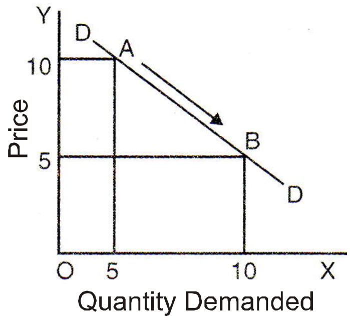
(d) Price of the commodity.

(e) Share of the commodity in total expenditure.

(f) Use of the commodity.

(g) Habit of the consumer.

MULTIPLE CHOICE QUESTIONS (1 MARK)



1. What shows by the above demand curve?

   (a) Increase in Demand (b) Decrease in Demand

   (c) Extension of Demand (d) Contraction of Demand

2. According to utility analysis, 'Utility is ____________.

   (a) catrdinal concept (b) ordinal concept

   (c) cardinal and ordinal concept

   (d) None of these

3. It is _______ derived from the consumption of all the units of a commodity

   (a) marginal utility (b) total utility

   (c) average utility (d) consumer equilibrium

4. What term is used for additional utility on account of the consumption of an additional unit of a commodity.

   (a) Total utility (b) average utility

   (c) marginal utility (d) None of these

5. When marginal utility is negative, total utility ____________

   (a) TU starts increasing (b) TU starts diminishing

   (c) TU becomes zero (d) TU becomes negative

6. "As more and more units a commodity are consumed marginal utility derived from every additional unit must decline". The name of law is ____________.

(a) Law of diminishing marginal utility

(b) Law of demand

(c) Law of supply (d) consumer equilibrium

7. Which of the following condition implies in consumer equilibrium in case of one commodity?

(a) $\frac{MUm}{MUx} = Px$ (b) $\frac{MUx}{Px} = MUm$

(c) $\frac{Px}{MUx} = MUm$ (d) None of these

8. Marginal utility of money in Marginal utility analysis.

(a) constant (b) increases

(c) decreases (d) None of these

9. What happens when $\frac{MUx}{Px} > \frac{MUy}{Py}$

(a) increase in consumption of X & Y

(b) decrease in consumption of X & Y.

(c) increase in consumption of X

(d) increase in consumption of X and decrease in consumption of Y.

10. In case of two commodities a consumer strikes equilibrium when

(a) $\frac{MUx}{Px} = \frac{MUy}{Py} = MUm$ (b) $\frac{MUx}{Px} > \frac{MUy}{Py}$

(c) $\frac{MUx}{Px} < \frac{MUy}{Py}$ (d) $\frac{Px}{MUx} = \frac{Py}{MUy}$

11. This shows different combinations of two goods which a consumer can attain by given his income and market prices of the goods.

(a) Budget set (b) indifference map

(c) indifference curve (d) marginal rate of substitution

12. Which of the following is not a characteristic of indifference curve

(a) IC is convex to the origin

(b) Higher IC indicates higher level of satisfaction

(c) ICs do not intersect each other

(d) Concave to the origin

13. Which of the following is not a determinants of individual demand function

(a) Distribution of Income (b) Price

(c) Income of Consumer (d) Taste and preferences

14.

Price (Rs.)	*Demand (Units)*
20	80
20	100

Name the type of demand by the above example

(a) contraction of demand (b) expansion of demand

(c) increase in demand (d) decrease in demand

15.

Price (Rs.)	*Quantity Demanded (Units)*	*Total Expenditure (Rs.)*
16	200	3200
20	160	3200

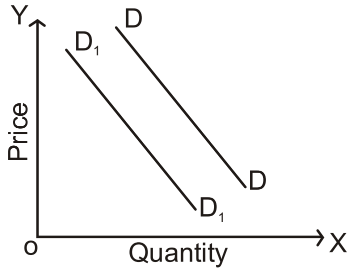
Answer about Elasticity by Expenditure method

(a) greater than unitary (b) less than unitary elasticity

(c) unitary elastic demand (d) Infinite

16. Demand curve of a good shifts from DD to D_1D_1 . The shift can be caused by ____

(a) fall in the goods



(b) rise in the price of good

(c) fall in the price of substitute good

(d) rise in the price of complementary good

17. Specific quantity to be purchased against a specific price of the commodity is called-

(a) demand (b) quantity demanded

(c) movement along the demand curve

(d) shift in demand

18. Demand of butter for a poor man is ______

(a) Inelstic (b) Elastic

(c) Perfectly inelastic (d) Perfactly elastic

19. Which of the following goods has elastic demand

(a) salt (b) medicine

(c) diamond (d) water

ANSWERS

1. (c); **2.** (a); **3.** (b); **4.** (c); **5.** (b); **6.** (a); **7.** (b); **8.** (a); **9.** (d); **10.** (a); **11.** (a); **12.** (d); **13.** (a); **14.** (c); **15.** (c); **16.** (d); **17.** (b); **18.** (b); **19.** (c).

SHORT ANSWER TYPE QUESTION (3-4 MARKS)

1. Explain the relation between total utility and marginal utility with the help of schedule?
2. Explain consumers equilibrium with utility approach in case of single good.

3. What do you mean by budget line? What are the reason of change in budget line?

4. Explain the relationship between total utility and marginal utility with the help of schedule.

OR

What changes will take place in total utility when –

(a) Marginal utility curve remains above X-axis

(b) Marginal utility curve touches X-axis

(c) Marginal utility curve lies below X-axis

5. State three features of indiference curve.

6. Why does two indifference curves not intersect each other?

7. Under what situations there will be parallel shift in budget line?

8. Explain the effect of a rise in the prices of 'related goods' on the demand for a good X.

9. Why does demand of a normal good increases due to increase in consumer's income?

10. Explain following factors effecting Price Elasticity of Demand

(a) Nature of commodity

(b) Availability of substitutes

(c) Postponement of the use

11. Distinguish between expansion of demand and increase in demand with the help of diagram

12. Measure Price Elasticity of Demand on the following points of a straight line demand curve :

(a) Centre point of the demand curve

(b) Demand curve intercepting y-axis

(c) Demand curve intercepting x-axis

13. Distinguish between change in demand and change in quantity demanded.

14. What will be the effect of following on elasticity of demand.

    (a) Income level of buyers

    (b) Habit of the consumer

15. What will be the slope of demand curve under following situations.

    (a) Perfectly elastic demand

    (b) Perfectly inelastic demand

    (c) Unit elastic demand

16. State the factors of rightward shift of demand curve. Explain any one.

17. State the factors of leftward shift of demand curve. Explain any one.

18. How does 'a portion of income spent on a good' effect elasticity of demand.

19. What will be elasticity of demand if

    (a) Total expenditure increases due to increase in price.

    (b) Total expenditure increases due to fall in price.

20. When price of a good is Rs. 7 per unit a consumer buys 12 units. When price falls to Rs. 6 per unit he spends Rs. 72 on the goods. Calculate price elasticity of demand by using the percentage method. Comment on the likely shape of demand curve based on this measure of elasticity.

21. A consumer buys 09 units of a goods at a price of Rs. 10 per unit. At price of Rs. 09 per unit he buys 10 units. What is price elastically of demand? Use expenditure approach comment on the likely shape of demand curve on the basis of this measure of elastically.

22. A consumer buys 20 units of a good at a price of Rs. 5 per unit. He in incurs an expenditure of Rs. 120 when he buys 24 units. Calculate price elasticity of demand of the percentage method. Comment on the likely shape of demand curve based on this information.

23. Price elasticity of good X is known to be thrice that of Good Y. If price of the Good X increases by 20% and price of the Good Y decreases by 40% then calculate percentage charges in demand in both the cases.

24. The price elasticity of good X or Y are equal. The demand of X rises from 100 units to 250 units due to a 20 percent fall in its price. Calculate the percentage rise in demand of Y, it its price falls by 8 percentage.

25. Explain any four factors/determinantes affecting price elasticity of demand.

26. Fill in the gaps in the following equations :

(i) $\text{MRS} = \frac{\Delta ?}{?}$

(ii) $? = \Sigma \text{MU}$

(iii) $\text{MU}_n = \text{TU}_n - ?$

(iv) $e_d = \frac{\Delta Q}{?} \times \frac{P}{Q}$

27. Differentiate between :

(i) Normal goods and Inferior goods

(ii) Complementary goods and substitute goods.

28. Why should the budget line be tangent to the indifference curve at the point of consumer's equilbrium.

29. Why does consumer stop consumption in case where marginal utility is less than price of a good?

30. What is budget line? Why is it negatively sloped?

31. A consumer consumes only two goods x & y State & explain the conditions of consumer's equilibrium with the help of utility analysis.

32. Explain the conditions determining how many units of a good the consumer will buy at a given price.

33. Define marginal rate of substitution. Explain why is an indifference curve convex?

LONG QUESTIONS (6 MARKS)

1. Explain the conditions of consumer's equilibrium with the help of the indifference curve analysis. Represent the same in a diagram.
2. Explain the determination of consumers equlibrium with the help of a schedule in case of two commodities by using utility approach.
3. Why does demand curve slope downward?
4. Explain the determinants of price elasticity of demand.
5. With the help of diagrams, explain the effect of following changes on the demand of a commodity.
   (a) A fall in the income of its buyer.
   (b) A rise in price of complementary good.
6. What are the conditions of consumer's equilibrium under the indifference curve approach? What changes will take place if the conditions are not fulfilled to reach equilibrium?
7. Explain the three properties of indifference curve.
8. With the help of numerical example measure price elasticity of demand in the following conditions by total expenditure method :
   (i) Demand falls when price is constant.
   (ii) Price falls while demand is constant.
9. Whether the following statements are true or false? Give reasons.
   (i) Two indifference curves never intersects each other.
   (ii) Income effect of inferior good is positive.
   (iii) Change in quantity demanded is the explanations of law of demand.
10. Explain the concept of marginal rate of substitution (MRS) by giving an example. What happens to MRS when consumer moves downwards along the indifference curve? Give reasons for you answer.
11. Following statements are true or false give reasons :

(i) Increase in number of consumers shifts the demand curve rightward.

(ii) The demand of a commodity becomes elastic if its substitute good is available in the market.

(iii) The price elasticity of demand is equal to unity at a point situated in the middle of a straight line demand curve.

12. The demand for electricity is not falling inspite of regular hike in the price of electricity. What will be the elasticity of demand for electricity. Explain giving suitable reason in support of your answer?

13. Explain the other factors which are responsible for rise in demand of food products even when own price of food products in rising?

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. When a good is called 'Normal Good'?

Ans. If the income effect of a commodity is positive and price effect is negative, it is called 'Normal Good'.

Q. 2. When a good is called 'Inferior Good'?

Ans. If the income effect of a commodity is negative, it is called 'Inferior Good'.

Q. 3. Why the demand of water is Inelastic?

Ans. Because water is a necessary good.

Q. 4. Define Market Demand.

Ans. Market Demand refers to various quantities that all the consumers in a market are ready and able to purchase at various prices in a given period of time.

Q. 5. What is the meaning of Marginal Rate of Substitution?

Ans. MRS is the rate at which a consumer is willing to substitute good Y for good X, assuming that there is no change in the level of satisfaction.

Q. 6. What is the meaning of 'Monotonic Preference'.

Ans. Consumer's preference is called monotonic when between any two bundles, consumer give preference to that bundle, which contains more quantity of at least one commodity and not less quantity of other commodity.

Q. 7. Write equation of Budget line

Ans. $M = Px . X + Py . Y$

Q. 8. Write equation of Budget set

Ans. $Px . X + Py . Y \leq M$

3-4 MARKS QUESTIONS

Q. 1. Distinguish between increase in demand and increase in quantity demanded of a commodity.

Ans. When demand increase at given Price due to the change of other factor. It is called increase in demand. On the other hand when other things remain constant and demand increase by decrease in the price of a commodity then, it is called increase in quantity demanded.

Q. 2. Given price of a good, how does a consumer decide as to how much of that good to buy?

Ans. Consumer purchases upto the point where marginal utility is equal to the price (MU = P). So long as marginal utility is greater than price, he keeps on purchasing. As he makes purchases MU falls and at a particular quantity of the good MU becomes equal to price. Consumer purchases upto this point.

Q. 3. A consumer consums only two goods X and Y. State and explain the conditions of consumer's equilibrium with the help of utility analysis.

Ans. There are two conditions of consumer equilibrium.

Explain :

(i) $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$

If $\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$ the consumer is not in equilibrium because he can raise his total utility by buying less of Y and more of X and vice versa in case of $\frac{MU_x}{P_x} < \frac{MU_y}{P_y}$

(ii) **MU falls as consumption increases :** If MU does not fall as consumption increases the consumer will end up buying only good which is unrealistic or consumer will never reach the equilibrium position.

Q. 4. Explain how the demand for a good is affected by the price of its substitute goods. Give examples.

Ans. Related goods are eiether substitutes or complementary.

Substitute Goods : When price of a substitute falls, it becomes cheaper than the given good. So the consumer substitutes it for given good then demand of given good will decreases.

Similarly, a rise in the price of substitute will result in increase in the demand for given good. For example : Tea and Coffee.

Q. 5. Distinguish between Normal Goods and Inferior Goods. Explain with Example.

Ans. **Normal Goods :** These are the goods the demand for which increase as Income of the buyers rise. There is a positive relationship between Income and demand or in case of normal goods income effect is positive.

Inferior Good : There are the goods the demand for which decreases as income of buyer rises. Thus, there is negative relationship between income and demand or income effect is negative.

Q. 6. Explain any four factors that affect price elasticity of demand.

Ans.

1. **Nature of Commodity :** Necessasities like Salt, Kerosene oil etc. have inelastic demand and luxuries have elastic demand.
2. **Availability of substitutes :** Demand for goods which have close substitute is relatively more elastic and goods without close substitutes have less elastic demand.
3. **Different uses :** Commodities that can be put to different uses have elastic demand for instance electricity has different uses.
4. **Habit of the consumer :** Goods to which consumer become habitual will have inelastic demand.

   Example : Liquor and Cigarette.

Q. 7. Explain relationship between total utility and marginal utility with help of a schedule.

Ans.

Quantity (Units)	*Total Utility*	*Marginal Utility*
0	0	–
1	8	8
2	14	6
3	18	4
4	20	2
5	20	0
6	18	–2

(1) As long as MU decreases but is positive, TV increases at decreasing rate.

(2) When marginal utility is equal to zero then total utility is maximum.

(3) When marginal utility is negative. Total utility starts diminishing.

Q. 8. Define marginal utility. State the law of diminishing marginal utility.

Ans. **Marginal Utility :** It is addition to the total utility as consumption is increased by one more unit of the commodity.

Law of Diminishing Marginal Utility : It states that as consumer consumes more and more units of a commodity, the utility derived from each successive unit goes on decreasing. According to this law TU increases at decreasing rate and MU decreases.

6 MARKS QUESTIONS

Q. 1. Explain the three properties of indifference curves.

Ans. Three properties of indifference curves are as follows :

1. **Slopes downward from left to right :** To consume more of one good the consumer must give up some quantity of the other good so that total utility remains the same.
2. **Convex towards the origin :** MRS declines continuously due to the operation of the law of diminishing marginal utility.
3. **Higher indifference curves represents higher utility :** Higher indifference curve represent large bundle of goods.

Which means more utility because of monotonic preference.

Q. 2. Explain the conditions of consumer's equilibrium using indifference curve analysis. Use diagram.

Ans. There are two conditions for consumer's equilibrium.

(i) MRS = Px/Py

(ii) MRS is continuously falling.

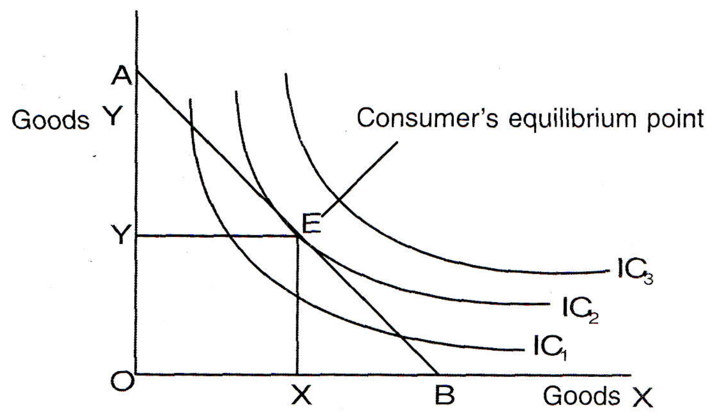
Explanation

Suppose there are two goods X and Y the first condition of consumer's equilibrium is MRS must be equal to the ratio of prices of two goods $\frac{Px}{Py}$

If MRS > Px/Py, It means consumer values X more than what market values and willing to give more price than market price he will purchase more of X this cause fall in MRS and it will continue upto that when **MRS** = Px/Py.

If MRS $< \frac{Px}{Py}$. It means consumer values X less than what market values. Consumer is willing to give less price than market price and he will purchase less of X, by this MRS will increase and it will continue till $MRS = \frac{Px}{Py}$.

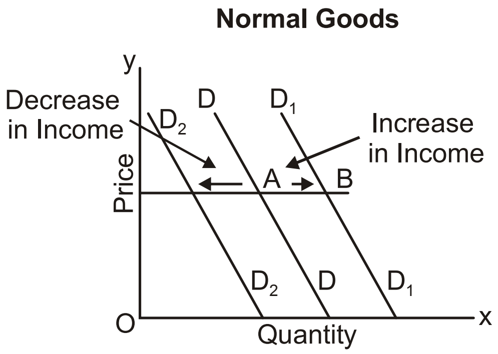
(ii) MRS is continuously falling unless the equality between the MRS and Px/Py will not be reached.

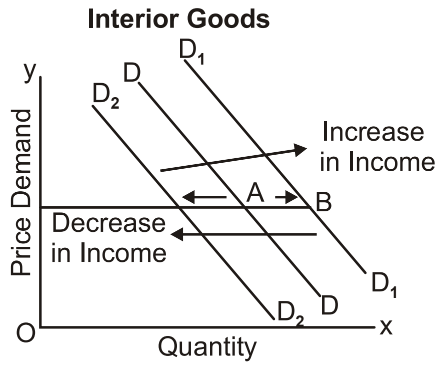


Consumer is in equilibrium at point E. OX of X and OY of Y is optimum bundle of both goods.

Q. 3. Explain the effect of change in income on demand for a good with the help of diagram.

Ans.





Q. 4. Why does demand curve slope downwards?

Ans. Following are the causes why demand curve slope downward –

(i) **Law of Diminishing Marginal Utility :** According to this law, as consumption of the commodity increases, marginal utility of successive unit goes on diminishing to a consumer. Accordingly, for every additional unit consumer is willing to pay less and less price.

(ii) **Income effect :** When real income of buyer changes due to change in price of the commodity, with a fall in price, real income increases. Accordingly demand for the commodity expand.

(iii) **Substitution Effect :** Substitution effect refers to substitution of one goods for the other good, when it becomes relatively cheaper. It is expansion of demand due to substitution effect.

(iv) **Size of Consumer Group :** When price of a commodity falls, many more buyers can afford to buy it. Accordingly demand expand.

(v) **Different Uses :** A good may have several uses. Milk for example is used for making curd, chees and butter. If price of milk reduces, it will be put to different uses. Accordingly demand for milk expand.

Q. 5. Explain the effect of change in Income of the consumer on the demand for a goods.

Ans. **Normal Goods :** In the situations when the income increases consumer will increase the demand of Normal goods and if the Income decreases consumer will decrease the demand of normal good, because in normal good income effect is positive.

Inferior Goods : In the situations when the Income decreases consumer will increase the demand of inferior goods and if the income increases a consumer will decrease the demand of inferior good because in inferior good income effect is negative.

Q. 6. A consumer consumes only two goods X and Y both priced at Rs. 3 per unit. If the consumer chooses a combination of these two goods with Marginal Rate of Substitution equal to 3, is he consumer in equilibrium? Give reason. What will a rational consumer do in this situation? Explain.

Ans. Given Px = 2, Py = 3 and MRS = 3, A consumer is said to be in equilibrium when

$$\text{MRS} = \frac{\text{Px}}{\text{Py}}$$

Substituting values we find that

$$3 > \frac{3}{3}$$

i.e., $\text{MRS} > \frac{\text{Px}}{\text{Py}}$

Therefore consumer is not in equilibrium $\text{MRS} > \frac{\text{Px}}{\text{Py}}$ means that consume is willing to pay more for one more unit of x as compared to what market demands.

(i) The consumer will buy more and more of x.

(ii) As a result MRS will fall due to the law of Diminishing Marginal Utility.

(iii) This will continue till $MRS = \frac{Px}{Py}$ and consumer is in equilibrium again.

Q. 7. A consumer consumes only two good x and y whose prices are Rs. 4 and Rs. 5 per unit respectively. If the consumer chooses a combination of the two goods with marginal utility of X equal to 5 and that of Y equal to 4, is the consumer in equilibrium? Give reason. What will a rational consumer do in this situation? Use utility analysis

Ans. Given Px = 4, Py = 5 and MUx, MUy, and consumer will be in equilibrium when

$$\frac{MUx}{Px} = \frac{MUy}{Py}$$

Substituting values, we find that

$$\frac{5}{4} > \frac{4}{5} \text{ or } \frac{MUx}{Px} > \frac{MUy}{Py}$$

Since per rupee MUx, is higher than per rupee MUy, consumer is not in equilibrium.

The consumer will buy more of x and less of y, As a result MUx will fall and MUy will rise. The reaction will continue till $\frac{MUx}{Px}$ and $\frac{MUy}{Py}$ are equal and consumer is in equilibrium again.

UNIT III

PRODUCER BEHAVIOUR & SUPPLY

Points to Remember

- **Production Function :** It shows the functional relation between physical inputs and physical output of a good. It can be expressed as Q - (f_1, f_2, f_3 ...... f_n). Where Q = Physical output of a good; f_1, f_2, f_3, ... f_n = Physical inputs. Technology remains constant
- **Types of Production Function :**

  There are two types of Production Function.

  1. **Short-run Production Function :** In this production function one factor of production is variable and all others are fixed. So, law of return to a factor is applied. It is also called variable proportion type production function.
  2. **Long-run Production Function :** In this production function all the factors of production are variable. So, law of returns to scale is applied. It is also called constant proportion type production function.
- Total production refers to total amount of a good which is produced by a firm in a given period of time.
- Average production is the per unit output of variable factor (labour) employed.

$$AP = \frac{TP}{\text{Variable input}}$$

- Marginal product is addition to total product resulting from employing one additional unit of variable input.

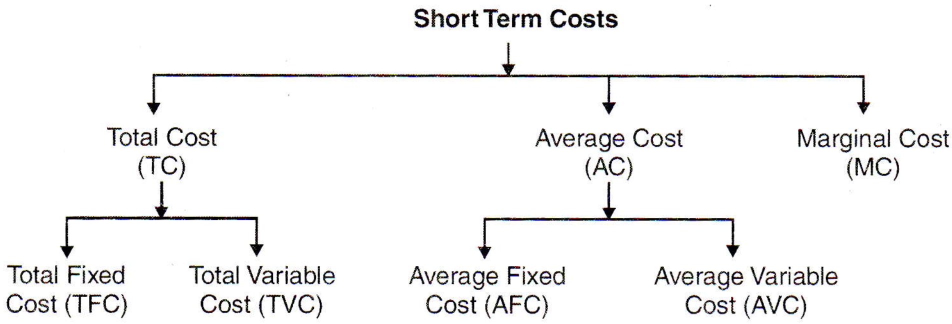
$$MP = \frac{\Delta TP}{\Delta L} \text{ or } MP_n = TP_n - TP_{n-1}$$

- **Relation between Total, Average and Marginal Product**
  1. So long as marginal product rises, total product increases at increasing rate.
  2. Marginal product starts falling but remains positive, total product rises at diminishing rate.
  3. When MP = 0, TP is maximum.
  4. When marginal product becomes negative, then total product starts falling.

Relation betwen MP and AP

- When MP > AP, AP rises.
- When MP = AP, AP is maximum and constant.
- When MP < AP, AP falls.
- **Returns to a factor :** In a short period when additional unit of variable factor are employed with fixed factors, then returns to a factor operates. Returns to a factor shows the changes in total products, of a good when only the quantity of one input is increased, while that of other inputs kept constant.
- **Law of variable proportion :** The law states that as we increase the quantity of only one variable input, keeping other inputs fixed, the total product increases at increasing rate in the beginning, then increases at decreasing rate and finally TP falls. According to this law, change in TP and MP are classify into three phases.
  - **Phase I : TP Increases at increasing rate :** In the initial phase as more and more units of variable factor are employed with fixed factor total physical production increases at increasing rate, MP increases.
  - **Phase II : TP increases at decreasing rate :** As more and more units of variable factors are employed with fixed factors then total product increases at diminishing rate, MP decreases but is positive. At the end of this phase TP maximum and MP becomes zero.
  - **Phase III : TP falls :** As more and more units of variable factors are employed with fixed factors, total production starts decreasing and marginal product becomes negative.

- **Economic Cost :** It is the sum of direct (explicit cost) and indirect cost (explicit cost), including Normal profit.
- **Economic cost :** Explicit cost + implicit cost + Normal Profit.
- **Explicit Cost :** Actual money expenditure incurred by a firm on the purchase and hiring the factor inputs for the production is called explicit cost. For example-payment of wages, rent, interest, purchases of raw materials etc.
- **Implicit cost** is the cost of self owned resources of the production used in production process, Or estimated value of inputs supplied by owner itself.



- Total cost refers to total amount of money which is incurred by a firm on production of a given amount of a good.
- Total cost is the sum of total fixed cost and total variable cost

  $TC = TFC + TVC$ or $TC = AC \times Q$
- Total fixed cost remains constant at all levels of output. It is not zero even at zero output level. Therefore, TFC curve is parallel to OX-axis.

  $TFC = TC - TVC$ or $TFC = AFC \times Q$
- Total variable cost is the cost which vary with the quantity of output produced. It is zero at zero level of output. TVC curve is parallel to TC curve.

  $TVC = TC - TFC$ or $TVC = AVC \times Q$.
- Average cost is per unit of production of a commodity. It is the sum of average fixed cost and average variable cost.

$$AC = \frac{TC}{Q} \text{ or } AC = AFC + AVC$$

- Average fixed cost is per unit of fixed cost of production of a commodity.

$$AFC = \frac{TFC}{Q} \quad \text{or} \quad AFC = AC - AVC$$

- Average variable cost is per unit variable cost of production of a commodity.

$$AVC = \frac{TVC}{Q} \quad \text{or} \quad AVC = AC - AFC$$

- **Marginal Cost :** It refers to change in TC, due to additional unit of a commodity is produced. $MC = \Delta TC/\Delta Q$ or $MC_n = TC_n - TC_{n-1}$ But under short run, it is calculated from TVC.

$$MC_n = TVC_n - TC_{n-1} \quad \text{or} \quad MC = \frac{\Delta TVC}{\Delta Q}$$

Relation Between Short-Term Costs

- Total cost curve and total variable cost curve remains parallel to each other. The vertical distance between these two curves is equal to total fixed cost.
- TFC curve remains parallel to X-axis and TVC curve remains parallel to TC curve.
- With increase in level of output, the vertical distance between AFC curve and AC curve goes on increasing. On contrary the vertical distance between AC curve and AVC curve goes on decreasing but these two curves never intersect because average fixed cost is never zero.
- Relation between MC and AVC.
  - When MC < AVC, AVC falls.
  - When MC = AVC, AVC is minimum and constant
  - When MC > AVC, AVC rises.
- Relation between MC and ATC

- When $MC < ATC$, ATC falls.
- When $MC = ATC$, ATC is minimum and Constant
- When $MC > ATC$, ATC rises.

- Money received from the sale of product is called revenue.
- Total revenue is the total amount of money received by a firm from the sale of given units of a commodity at a market price.

  $TR = AR \times Q$ or $TR = \Sigma MR$

  TR = Price × Quantity Sold.

  Price = AR

- Per unit revenue received from the sale of given units of a commodity is called average revenue. Average revenue is equal to price. Per unit price of a commodity is also called AR.

$$AR = \frac{TR}{Q} \quad \text{or} \quad \frac{P \times Q}{Q} = P = \text{Price}$$

- Marginal revenue is net addition to total revenue when one additional unit of output is sold.

$$MR = \frac{\Delta TR}{\Delta Q} \quad \text{or} \quad MR_n = TR_n - TR_{n-1}$$

- Relation b/w TR, AR and MR when more quantity sold at the same price : under perfect competition.
  (a) Average revenue and marginal revenue remains constant at all levels of output and AR and MR curves are parallel to ox-axis. AR = MR.
  (b) Total revenue increases at constant rate MR is constant and TR curve is positively sloped straight line passing through the origin.
- Relation between TR, AR and MR when more quantity by sold at the lower price or there is monopoly or monopolistic competition in the market.
  (a) Average revenue and marginal revenue curves have negative slope. MR curve lies below AR curve. AR > MR.

(b) Marginal revenue falls, twice the rate of average revenue.

$$MR = \frac{1}{2} AR$$

(c) So long as marginal revenue decreases and positive, total revenue increases at diminishing rate. When marginal revenue is zero, total revenue is maximum and when marginal revenue becomes negative, TR starts falling.

- Relation b/w AR and MR (General)
  - When MR > AR, AR rises.
  - When MR = AR, AR is maximum and constant.
  - When MR < AR, AR falls.
- **Concept of Producer's Equilibrium :** If refers the stage where producer is getting maximum profit with given cost and he has no incentive to increase or decrease the level of output.

(A) **MR and MC Approach :** Conditions of producer equilibrium according to this approach are :

(a) MC = MR

(b) MC curve should cut the MR curve from below at the point of equilibrium.

Or

MC should be more than MR after the equilibrium point, with increase in output.

- **Supply :** Refers to the amount of the commodity that a firm or seller is willing to offer or ready to sell at a certain price and in a given period of time.
- **Factors affecting supply of a commodity :**
  - Price of the commodity.
  - Prices of other related goods.
  - Level of Technology.
  - Prices of inputs.
  - No. of firms.

- ❑ Government policy regarding Taxation and subsidies.
- ❑ Goals of the firm.

❑ **Imdividual Supply :** Refers to quantity of a commodity that an individual firm is willing and able to offer for sale at a certain price during a given period of time.

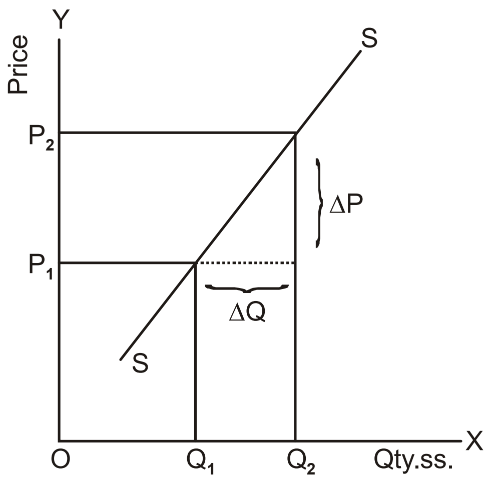
❑ **Market supply :** It is the sum total of quantity supplied of a commodity by all sellers or all firms in the market at a certain price and in a given period of time.

❑ **Stock :** Refers to the total quantity of a particular commodity available with the firm at a particular point of time.

❑ **Supply Schedule :** Refers to a tabular presentation which shows various quantities of a commodity that a producer is willing to supply at different prices, during a given period of time.

❑ **Supply curve :** Refers to the graphical representation of supply schedule which represents various quantities of a commodity that a producer is willing to supply at different prices during given period of time.

❑ Slope of supply curve = $\Delta P/\Delta Q$



❑ **Law of Supply :** States the direct relationship between price and supply of a commodity, keeping other factors constant.

❑ **Price Elasticity of Supply :** It refers to the degree of responsiveness of supply of a commodity with reference o a change in price of the commodity. It is always positive due to direct relationship between price and quantity supplied.

Price Elasticity of Supply (Es)

$$= \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}}$$

- **Methods for measuring price elasticity of supply :**

1. Percentage Method

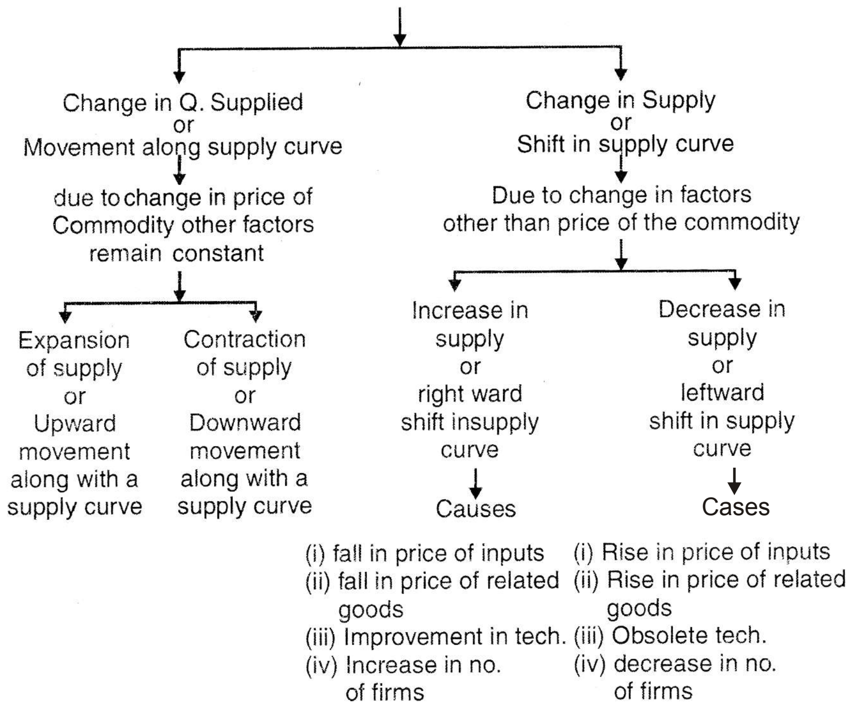
$$Es = \frac{\text{\% change in a quantity supplied}}{\text{\% change in price}}$$

$$\text{Or} \quad Es = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

2. Geometric Method

$$Es = \frac{\text{Supply curve intercept on X-axis}}{\text{Quantity supplied}}$$

Change in Q. Supplied Vs change in Supply



- **There are three posibilities of Elasticity of Supply :**
  - (a) If a straight line supply curve passes through the point of origin doesn't matter what it makes angles, Es at any point is equal to unity. Es=1
  - (b) If a straight line supply curve passes through left side of point of origin and intersect x-axis in its negative range, Es will be greater than one at any point. Es>1
  - (c) If a straight line supply curve passes through right side of point of origin and intersects x-axis in its positive range, Es will be less than one at any point. Es<1

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. The cause of upward movement along a supply curve is

   (a) Decrease in Price (b) Increase in Income

   (c) Decrease in Income (d) Increase in Price

2. When Total Revenue is maximum, marginal Revenue is :-

   (a) Minimum (b) Maximum

   (c) Zero (d) Constant

3. When percentage change in Price is equal to percentage change in supply :

   (a) Es > 1 (b) Es = 1

   (c) Es < 1 (d) Es = 0

4. The behaviour of Average Revenue when Total Revenue increases at constant rate is

   (a) Constant (b) Increasing

   (c) Decreasing (d) Zero

5. The Behaviour of Total Product when Marginal Product is zero is:

   (a) Minimum (b) Maximum

   (c) Constant (d) Zero

6. Which cost curve is parallel to x-axis :

(a) AFC (b) TVC

(c) TFC (d) TC

7. If supply curve is parallel to Y-axis :

(a) Es = 0 (b) Es = $\propto$

(c) Es = 1 (d) Es > 1

8. When per unit price remains constant

(a) AR > MR (b) AR < MR

(c) AR = MR (d) None of above

9. When Total Product is falling then

(a) MP is maximum (b) MP = zero

(c) MP becomes negative (d) MP is falling

10. When Average Product is maximum then

(a) MP > AP (b) MP = AP

(c) MP < AP (d) None of above

Answers

1. (d); **2.** (c); **3.** (b); **4.** (a); **5.** (b); **6.** (c); **7.** (a); **8.** (c); **9.** (c); **10.** (b).

SHORT ANSWER TYPE QUESTION (3-4 MARKS)

1. State the relation between AP and MP.
2. How does total product behave with change in marginal product?
3. Briefly explain the causes of increasing returns to a factor with the help of marginal product.
4. Explain the likely behaviour of total product. When only the unit of a variable factor is increased and keeping all other factor fixed. Use numberical example.

5. Distinguish between total fixed cost and total variable cost.

6. Explain with the help of a diagram the relationship between Average cost, Average variable cost and Marginal cost.

7. Why is short run average cost curve 'U' shaped?

8. What changes will take place in total revenue when

   (a) Marginal revenue is falling but is positive

   (b) Marginal revenue is zero

   (c) Marginal revenue is negative

9. Define marginal revenue. Explain the relationship between average and marginal revenue when price is constant at all levels of output.

10. What do you mean by producers equilibrium? State and briefly explain the conditions of producer's equilibrium with Marginal Revenue and Marginal Cost approach. Use diagram.

11. Explain producers equilibrium with the help of a numerical example using marginal revenue and marginal cost approach.

12. Draw in a single diagram the average revenue and marginal revenue curves of a firm which can sell any quantity of the good at a lower price. Explain.

13. Complete the following table :

Units of Variable input	***TP (Units)***	***AP (Units)***	***MP (Units)***
0	0	–	–
1	–	–	20
2	–	–	26
3	66	–	–
4	–	19	–
5	–	–	4

14. Identity the three phases in the law of variable proportion from following information :

Units of Variable Input	Total Products (Units)
0	0
1	4
2	14
3	22
4	28
5	32
6	34
7	34
8	32

15. If the total fixed cost of a firm is Rs. 24, Complete the following table :

Output (Units)	*AVC (Rs.)*	*TVC (Rs)*	*MC (Rs)*
0	50		
2	40		
3	45		

16. Distinguish between 'Change in Supply' and 'change in quantity supplied'.

17. Differentiate between 'contraction in supply' and 'decrease in supply'.

18. How does change in price of inputs affect the supply of a good.

19. Complete the following table :

Output	*Price (Rs.)*	*MR (Rs.)*	*TR (Rs.)*
0	–	–	10
2	–	4	–
3	–	–	15
4	–	(–)3	–

20. When the price of commodity rises from 10 to 11 per unit, its quantity supplied rises by 100 units. If its price elasticity of supply is 2. Then find out its quantity supplied at increased price.

21. How does change in price of related goods affect the supply of given goods.

22. What is a supply schedule? Explain how does change in technology of producing a good affect the supply of that good.

23. Following statements are true or false. Give reason :

    (a) At the stage of producer's equilibrium, marginal cost will be decreasing.

    (b) AR curves always remain above MR curve.

24. Whether following statements are true or false. Give reasons.

    (a) Marginal revenue falls twice the rate at which average revenue falls.

    (b) Average cost starts increasing when marginal cost, starts increasing.

25. Following statements are true or false. Give reasons :

    (a) Diminishing returns to a factor is applicable only when average product starts falling.

    (b) AC and AVC curves do not intersect each other.

26. Following statements are true or false. Give reasons.

    (a) Supply remains constant in market period.

    (b) When MP falls, AP falls.

27. Explain the geometric method of measuring price elasticity of supply with the help of diagram.

LONG ANSWER TYPE QUESTIONS (6 MARKS)

1. Explain diagrammatically the effect on total output when units of one factor is increased and all other inputs are held constant.

2. On the basis of following information, identity level of output at which producer will be in equilibrium using MR-MC approach and also give reasons :

Output (Units) :	1	2	3	4	5	6
AR (Rs.)	7	7	7	7	7	7
TC (Rs.)	8	15	21	26	33	41

3. What is producer's equilibrium? Explain the condition of producer's equilibrium through the 'marginal cost and marginal revenue' approach. Use diagram.

4. State whether true or false. Give reasons.
   (a) Total product is the area under the marginal product curve.
   (b) When MR falls, AR falls.
   (c) For the first unit of output MC = AVC.

5. State whether True or False. Give reasons.
   (a) When marginal revenue is constant and not equal to zero, then total revenue will also be constant.
   (b) As soon as marginal cost rises, average variable cost also starts rising.
   (c) Total product always increases whether there is increasing returns or Diminishing return to a factor.

6. State whether the following statements are true or false. Give reasons for your answer.
   (a) When total revenue is constant average revenue will also be constant.
   (b) Average variable cost can fall even when marginal cost is rising.
   (c) When marginal cost rises, average cost rises.

7. How can smoking be reduced by the taxation policy of the government? Explain using diagram.

8. Suppose a firm is producing under 3rd phase of law of variable proportion and it is facing heavy loss. Give suggestion to reduce its loss and assure maximum profit.

SOLUTION

13.

Units of Variable input	*TP (Units)*	*AP (Units)*	*MP (Units)*
0	0	0	–
1	20	20	20
2	46	23	26
3	66	22	20
4	76	19	10
5	80	19	4

14.

Units of Variable Input	TP (Units)	MP (Units)	
0	0	0	First Phase
1	4	4	
2	14	10	
3	22	8	
4	28	6	Second Phase
5	32	4	
6	34	2	
7	34	0	
8	32	–2	Third Phase

15.

Output (Units)	*AVC (Rs.)*	*TVC (Rs)*	*MC (Rs)*
0	50	50	50
2	40	80	30
3	45	135	55

19.

Output	*Price (Rs.)*	*MR (Rs.)*	*TR (Rs.)*
1	10	10	10
2	7	4	14
3	5	1	15
4	3	(–3)	12

20. $$\text{Es} = \frac{\text{\% change in Quantity}}{\text{\% change in Price}}$$

$$2 = \frac{\text{\% change in Quantity}}{10\%} \quad \left\{\because \ \text{\% change in Price} = \frac{1}{10} \times 100\right\}$$

20% = % change in Quantity

20% of Q_0 = 100

$$Q_0 = \frac{100}{20\%}$$

Q_0 = 500

New Quantity Supplied Q_1 = 500 + 100 = 600 units

LONG ANSWER TYPE QUESTIONS

2.

Output	**AR (Rs.)**	**TR (Rs.)**	**TC (Rs.)**	**MC (Rs.)**	**MR (Rs.)**
1	7	7	8	8	7
2	7	14	15	7	7
3	7	21	21	6	7
4	7	28	26	5	7
5	7	35	33	7	7
6	7	42	41	8	7

The producer will be in equilibrium at 5th units of output because here all conditions of producer's requlibrium is satisfied i.e., (i) MR = MC and (ii) MC > MR after MR = MC level of output.

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. Define production function.

Ans. The function showing relationship between inputs and output is called production function.

Q. 2. State the changes in marginal product when total product increases at decreasing rate.

Ans. When total product increases at increases at diminishing rate, marginal product decreases but remains positive.

Q. 3. What is breakeven point?

Ans. The point where TR is equal to TC or AR = AC is called breakeven point.

Q. 4. When with the change in price there will be no change in quantity of supply what will be the elasticity of supply.

Ans. Elasticity of supply will be equal to zero $\in_s = 0$.

Q. 5. Define cost.

Ans. Cost refers to the sum of explicit cost, Implicit cost and Normal profit.

Q. 6. Define Marginal Cost.

Ans. Marginal cost refers to change in total cost due to additional unit of a commodity is produced.

Q. 7. Define Market Supply.

Ans. Market Supply refers to the sum total of quantity supplied of a commodity by all sellers or all firms in the market at a certain price and in a given period of time.

3–4 MARKS QUESTIONS

Q. 1. Explain the likely behaviour of total product under the phase of increasing return to a factor with the help of numerical example.

Ans. Increasing return to a factor is the first phase of the Law of return to a factor. When more and more units of a variable factor is combined with fixed factor up to a certain level total physical product increases with increasing rate.

Machine	Unit of Labour	Total Physical Product
1	1	10
1	2	24
1	3	42

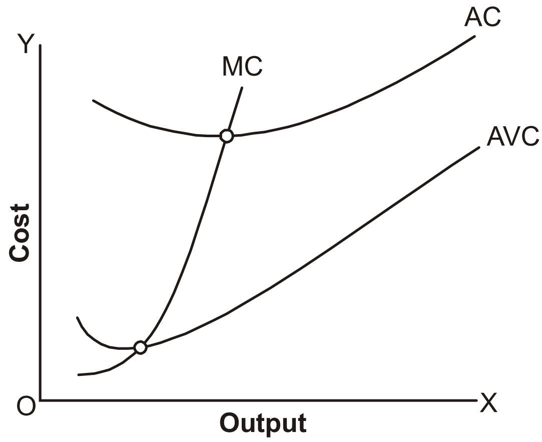
Q. 2. With the help of example distinguish between total fixed cost and total variable cost.

Ans.

Total fixed cost	Total Variable Cost
1. Fixed cost remains constant at each level of output i.e., it do not change with change in in level of output.	1. Variable cost changes with the changes in level output, it increases or decrease as the output change.
2. It can not be zero when output is zero.	2. It is zero when output is zero.
3. Its curve is parallel to x-axis.	3. It curve is parallel to the curve of total cost.
4. Example : Rent, wages of permanent staff.	4. Example : cost of raw material, wages of casual labourer.

Q. 3. Draw average cost, average variable cost and marginal cost curves on a single diagram and explain their relations.

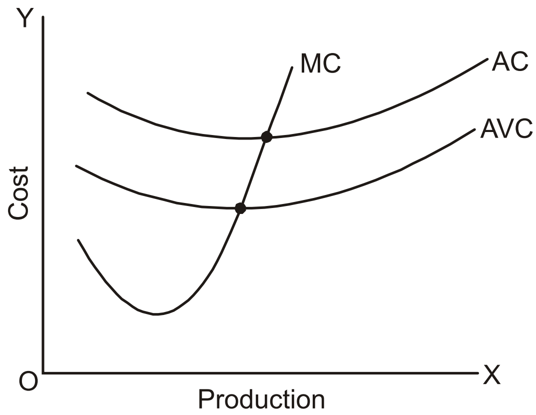
Ans.



Relation of AC, AVC and MC

1. MC intersects AC and AVC at their minimum level.
2. AC and AVC decreases before the intersection by MC, but remain greater than MC.
3. AC and AVC starts to increase after the intersection by MC, and becomes less than MC.
4. As output increases, AC and AVC tends to be closer but the difference between AC and AVC can never be zero.

Q. 4. Draw average cost, average variable cost and average fixed cost curves on a single diagram and explain their relation.



1. AC is the vertical summation of AVC and AFC.
2. The difference between AC and AVC falls as output increases but the difference of AC and AFC increase.
3. As output increases AC and AVC tends to be closer but their curves do not intersect each other because AFC always remains more than zero.

Q. 5. Explain the relation between average revenue and marginal revenue when a firm can sell an additional unit or a good by lowering the price.

Ans. 1. AR and MR both decreases.

2. MR decrease at the rate of twice than AR.
3. MR become zero and negative but AR can never be zero.

Q. 6. Distinguish between 'change in quantity supplied' and 'change in supply'.

Ans.

Change in Quantity Supplied	*Change in Supply*
1. It refers to the change in supply due to change in price of the good	1. It refers to the change in supply due to the change in the price determinants of supply other than price.
2. Determinants of supply other than price remains unchanged.	2. Price of the good remains unchanged.
3. Law of supply apply.	3. Law of supply does not apply.
4. There is upward and downward movement alongwith curve in this situation.	4. Supply curve shifted to leftward or rightward under this supply condition.

Q. 7. Explain how does change in price of input affect the supply of a good.

Ans. **Increase in price of Input :** Increase in price of input is cause of a decrease in the supply of a good because the production cost of a good will increases due to increase in price of input. It will reduced the profit. So producer will decrease the supply of the good.

Decrease in the good : Decrease in price of input is cause of increase in supply because when the price of input decrease the production cost of a good also decreases. Decreases in cost increases the profit margin. It motivate to producer to increase the supply of the good.

Q. 8. Explain how changes in prices of other products influence the supply of a given product.

Ans. The supply of a good is inversely influenced with the change in price of other product which can explain as follows :

A. **Rise in Price of Other product :** When there is rise in the price of other product the production of these product become more profitable due to unchanged cost in comparison of the production of given product. As a result the producer will produce more quantity of other product so the supply of given good will decrease.

B. **Fall in the price of Other Product :** When there is fall in the price of other product the production of these product become less profitable due to unchanged cost in comparison of the production of given product. As a result producer will produce less quantity of other product so the factors of production shifted for the production of given good. It cause an increase in supply of given good.

Q. 9. Explain how technology advancement bring a positive impact in the supply of a given product.

Ans. Technology advancement reduces per unit cost and increase the productivity of given factors of production. Due to these reasons production of given production becomes more profitable.

Q. 10. What is the behaviour of average fixed cost as output is increased? Why is it so?

Ans. AFC falls continuously as output is increased. It is because, even when output is increased TFC remains unchanged.

Q. 11. An individual is both the owner and the manager of a shop taken on rent. Identify implicit cost and explicit cost from this information. Explain.

Ans. Implicit cost : Estimated salary of the owner. Because the owner would have earned this salary if he had worked with a firm not owned by him.

Explicit cost : Rent paid. Because it is actual money expenditure on input.

Q. 12. What is a supply schedule? What is the effect on the supply of a good when Government gives a subsidy on the production of that good? Explain.

Ans. A supply schedule is a schedule that shows the quantity supplied of a commodity at different prices during a period of time.

Subsidy raises revenues, Cost remaining unchanged, Profit rise.

As a result supply increases.

6 MARKS QUESTIONS

Q. 1. Explain the law of variable proportion with the help of diagram/ schedule.

OR

What is the likely behaviour of total product/marginal product when only one input is increased for increasing production? Used diagram/Schedule.

Ans. Law of variable proportion state the impact of change in unit of a variable factor on the physical output. When more and more unit of a variable factor combined with fixed factor then total product increases at increasing rate in the beginning, Then increases at decreasing rate and finally it starts falling.

Phase I : TP increase at an increasing rate

Phase II : TP increases at diminishing rate

Phase III : TP falls

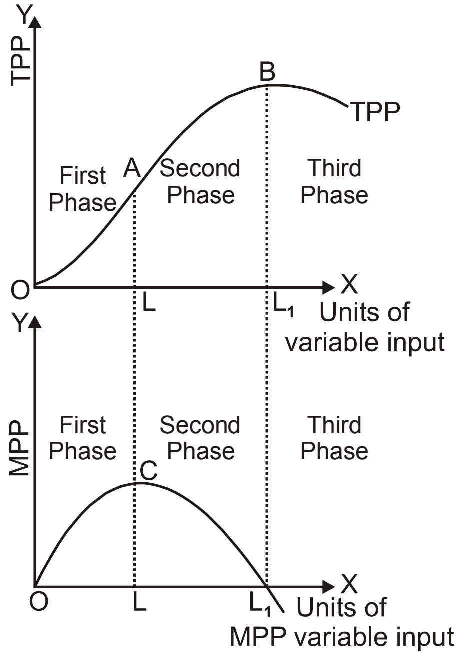
Behaviour of MP

Phase I MP increases and becomes maximum.

Phase II MP decreases and becomes zero.

Phase III MP becomes negative

Machine	*Unit of Labour*	*TPP (Unit)*	*MPP (Unit)*
1	1	3	3
1	2	7	4
1	3	12	5
1	4	16	4
1	5	19	3
1	6	21	2
1	7	22	1
1	8	22	0
1	9	21	–1



First Phase : TPP increases with increasing rate upto A point. MPP also increase and becomes maximum at point C.

Second Phase : TPP increases with diminishing rate and it is maximum at point B. MPP start to decline and becomes zero at D point.

Third Phase : TPP starts to decline and MPP becomes negative.

- ❑ Important instruction for giving the answer of above question.
- ❑ Do not use diagram for the explanation of this question if it is instructed to use schedule and do not use schedule if the explanation of this question asked with the help of diagram.
- ❑ Do not explain the behaviour of marginal product with the help of schedule and diagram. If there is instruction to explain only the behaviour of total product.
- ❑ Do not explain the behaviour of total product with help of schedule and diagram if there is instruction to explain only the behaviour of marginal product.

Q. 2. What is producer's equilibrium? Explain the conditions of producer's equilibrium through the 'marginal cost and marginal revenue' approach. Use diagram/schedule.

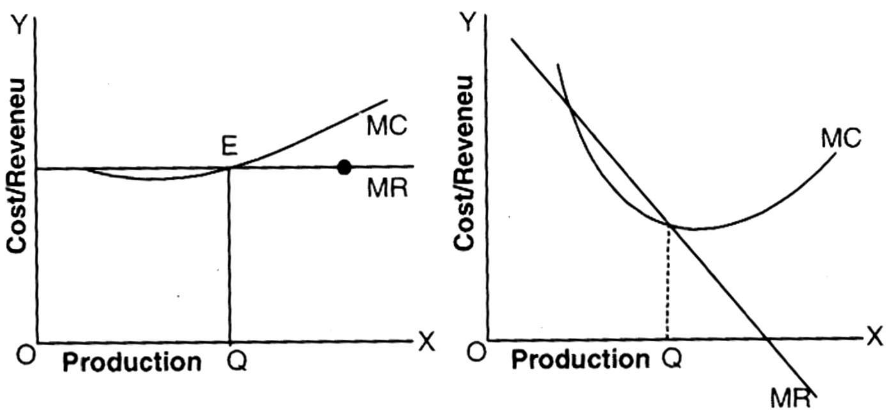
Ans. Producer's equilibrium refer's the stage under which with the help of given factor's of production producer attain the level of production at which he is getting maximum profit. The conditions of producer's equilibrium through the marginal cost and marginal revenue approach are as follows.

1. Marginal cost should be equal to marginal revenue.
2. With the increase in output after equilibrium marginal cost should be greater than marginal revenue.

Output (units)	MR (Rs.)	MC (Rs.)
1	4	5
2	4	4
3	4	3
4	**4**	**4**
5	4	5

OR

Output (Units)	MR (Rs.)	MC (Rs.)
1	10	5
2	8	4
3	6	3
4	4	4
5	2	5



Explanation of Conditions

(i) So longs as MC is less than MR, it is profitable for the producer to go on producing more because it adds to its profits. He stops producing more when MC becomes equal to MR.

(ii) When MC is greater than MR after equilibrium it means the profit will decline if producer will produce more units of the good.

Important instruction for giving the answer of the above question :

- ❑ Use only one schedule/diagram given as above for the explanations.
- ❑ Do not use diagram for the explanation of this question if it is instructed to use schedule and do not use schedule if the explanation of this questions is asked with the help of diagram.

UNIT IV

FORMS OF MARKET & PRICE DETERMINATION

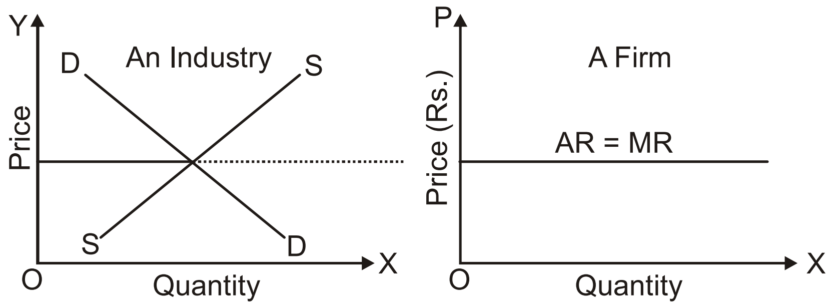
Points to Remember

- ❑ Market is a system through which the buyers and seller of a commodity or service come to contact for sale and purchase of the commodity or service on specific price.

Types of Market

1. Perfect Competition
2. Monopoly
3. Monopolistic competition
4. Oligopoly

- ❑ Perfect competition is that type of market in which there are very large no. of buyers and sellers. Sellers sell homogenous product at constant price.
- ❑ Under perfect competition, price remains constant therefore, average and marginal revenue curves coincide each other and becomes parallel to x-axis.



- ❑ Under perfect competition price is determined by an industry with the forces of demand and supply. No individual firm or buyer can influence the price of the product. So industry is price maker and firm is price taker.

Features of Perfect Competition :

(a) Very large no. of buyers and seller.

(b) Homogeneous product.

(c) Free entry and exit of firms in the market.

(d) Perfect knowledge.

(e) Firm is a Price Taker

MONOPOLY MARKET

- Monopoly is that type of market where there is a single seller, selling a product which does not have close substitute.

Features :

(a) Single Seller

(b) Restrictions on the entry and exit of new firms.

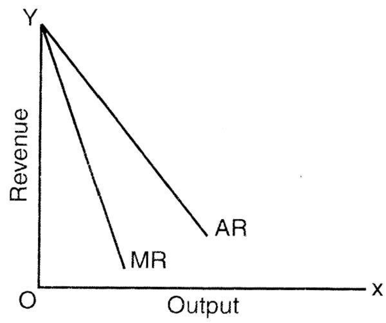
(c) No close substitute products

(d) Price Maker

(e) Price discrimination

AR and MR curve under Monopoly Market

- AR (Demand) curve is left to right downward sloping curve and less elastic than that of monopolistic competition.
- Falling rate of AR is double of MR.



MONOPOLISTIC COMPETITION

It is that type of market under which there are large number of buyers and sellers. Sellers sell differentiated product to the consumer who have imperfect knowledge about the product.

Features :

(a) Large No. of buyers and sellers

(b) **Product Differentiation :** In this feature every firms make its product that rivals on the basis of colour, taste, packing, size and shape.

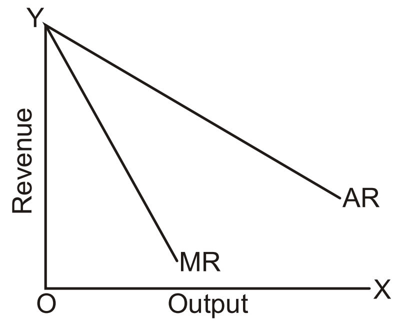
(c) **Selling Cost :** Cost on advertisement and sales promotion.

(d) Freedom of entry and exit of new firm.

(e) Lack of perfect knowledge.

AR and MR Monopolicstic Competition

- ❑ AR (Demand) Curve is left to right downward sloping curve and more elastic / more flatter than that of monopoly.



OLIGOPOLY

- ❑ Oligopoly is the form of market in which there are few sellers or few large firms, mutually dependent for taking price and output decisions.

Features of Oligopoly

(a) Few Sellers

(b) All the firms under oligopoly produce homogeneous or differentiated product.

(c) Under oligopoly demand curve is undefined/indeterminate.

(d) All the firms are interdependent in respect of price determination under oligopoly market.

❑ On the basis of production, oligopoly can be categorised in two categories.

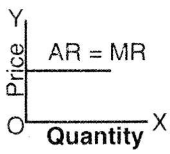
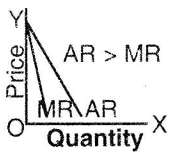
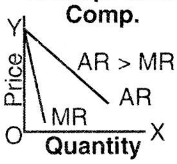
(i) Collusive oligopoly is that form of oligopoly in which all the firms determine price and quantity of output on the basis of cooperative behaviour.

(ii) Non-collusive oligopoly is that form of oligopoly in which all the firms determine the price and quantity of output according to the action and reaction of the firm.

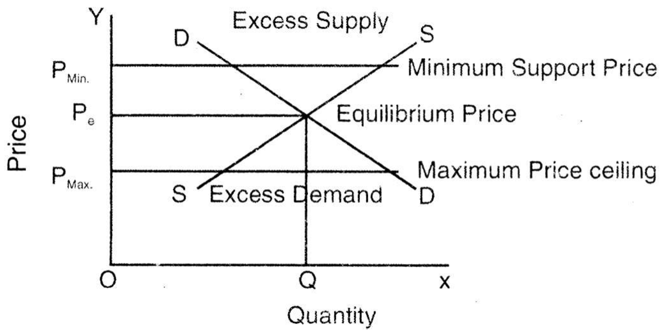
(iii) **Perfect Oligopoly :** If firms produce homogeneous product then it is called perfect oligopoly.

(iv) **Imperfect Oligopoly :** If firms produce heterogenous product it is called imperfect Oligopoly.

FORMS OF MARKET STRUCTURE
- Perfect Competition
  - Perfect Competition
- Imperfect Competition
  - Monopoly
  - Monopolistic Competition
  - Oligopoly

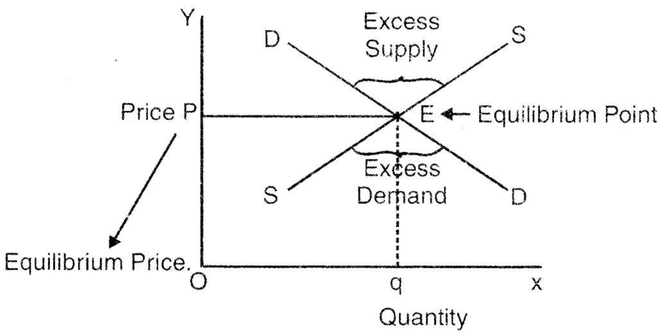
Basis	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
1. Number of sellers	Large	Single	Large	Few
2. Nature of product	Homogeneous	No. Close	Differentiated Product	Homogeneous & differentiated product
3. Entry/Exit of firms	Free entry & exit to firm	Restriction on entry to firm	Free entry & exit	Difficult entry of new firms
4. Firm's Demand Curve	II to x-axis	down ward sloping	down ward sloping	Undefined
5. AR and MR curve	**Perfect** 	**Monopoly** 	**Monopolistic Comp.** 	Indeterminate
6. Selling cost	No required	No required	Very significant	Very significant
7. Degree of price control price	No. Control over price.	Full control overprice	Limited control	Price rigidity

- **Equilibrium Price :** Which corresponds to the equality between market demand and market supply of a commodity.
- Equilibrium quantity which correspondse to the equilibrium price in the market.
- Market equilibrium ixs a state in which market demand is equal to market supply. There is no excess demand and excess supply in the market.



Application of Demand of Supply

(a) **Maximum Price Ceiling :** It mean the maximum price the product are allowed to charge less than equilibrium price. Government imposes such a ceiling when it finds that the demand for necessary goods exceeds its supply. That is, when consumers are facing shortages and equilibrium price is too high. Government does it in the interest of consumers.



(b) **Minimum Price Ceiling :** It means that producers are not allowed to sell, the good below the price fixed by Government, When government finds equilibrium price is too low for the producer then Govt. fixed a price ceiling higher than equilibrium price to prevent the possible loss of the producers. The price is also called minimum support price.

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. In which market AR = MR
   (a) Monopoly (b) Perfect Market
   (c) Monopolistic Market (d) Oligopoly
2. In whch market, restrictions on entry of new firms
   (a) Perfect Competition
   (b) Monopolistic competition
   (c) Monopoly (d) None of the above.
3. Under which market, firm a is price taker
   (a) Perfect Competition
   (b) Monopoly
   (c) Monopolistic Competition
   (d) Oligopoly
4. Under Oligopoly
   (a) Large no. of sellers (b) Few sellers
   (c) Single seller (d) None of above
5. A price at which a consumer is willing to buy and a seller is willing to sell the commodity is called.
   (a) Minimum Price (b) Maximum Price
   (c) equilibrium price (d) None of the above.
6. When a monopoly firm charges different prices from different consumes for the same product is called
   (a) Quantity discrimination (b) Product differential
   (c) Price discrimination (d) Consumer differentiation.
7. Quantity of a commodity which is bought and sold at the equilibrium price is called?
   (a) Maximum quantity (b) Minimum quantity
   (c) Both (a) and (b) (d) Equilibrium quantity

8. At a given price, when demand for commodity is more then supply of the commodity then it is called excess demand. Here given price is :

   (a) less than equilibrium price

   (b) more than equilibrium price

   (c) less than or equal to equilibrium price

   (d) More than or equal to equilibrium price

9. Price ceiling refers to :

   (a) Max. retail price

   (b) Max. price the buyer is willing to pay

   (c) Max. price at which seller is willing to sell.

   (d) Max. price the producer is legally allowed to charge.

10. Fixation of minimum wage below the equilibrium wage rate leads to :

    (a) Unemployment (b) Over employment

    (c) Neither (a) nor (b) (d) Either (a) or (b)

11. Which feature distinguished oligopoly from other market forms

    (a) Interdependence among firms.

    (b) Homogenous product

    (c) Perfect knowledge (d) Large number of buyers

12. Which market form does not exist in real life.

    (a) Perfect competition (b) Monopoly

    (c) Oligopoly (d) Monopolistic competition

Answers

1. (b); **2.** (c); **3.** (a); **4.** (b); **5.** (c); **6.** (c); **7.** (d); **8.** (a); **9.** (d); **10.** (c); **11.** (a); **12.** (a).

Short Answer Type Questions (3-4 Marks)

1. How is the demand curve under monopolistic competition different from demand curve of a firm under perfect competition?
2. How does 'Free entry and exit feature of Perfect competition market affect the profit of a firm.
3. What will happen if the price prevailing in the market is above the equilibrium price.
4. Explain the concept of excess demand with the help of diagram.
5. Differentiate between :
   (a) Collusive and Non-collusive oligopoly.
   (b) Perfect and Imperfect oligopoly.
6. Explain the determination of equilibrium price under perfect competition with the help of schedule.
7. Explain why is the equilibrium price determined only at the output level at which market demand and market supply are equal.
8. In perfect competition AR = MR but in monopoly and monopolistic competition AR > MR, why?
9. In which condition decrease in demand can not change the price of commodity?
10. Explain how firms are interdependent in an oligopoly market.
11. In which competition the availability of close substitutes is present? How does it effect the price?
12. Explain the implication of 'freedom of entry and exit to the firms' under perfect competition.

LONG ANSWER TYPE QUESTIONS (6 MARKS)

1. Explain the characteristics of monopolistic competition.
2. Market for a good is in equilibrium. There is 'increase' in supply of that good. Explain the chain of effects of this change. Use a numerical example.

3. Explain the term market equilibrium. Explain the series of changes that will take place if market price is higher than the equilibrium price.
4. How will a fall in the price of tea affect the equilibrium price of coffee? Explain the chain of effects.
5. Explain the following features of perfect competition.
   - (i) Large number of firms or Sellers and Buyers.
   - (ii) Homogeneous Product.
6. Explain features of Oligopoly.
7. With the help of a diagram explain the effect of 'decrease' in demand of a commodity on its equilibrium price and quantity.
8. There is simultaneous decrease in demand and supply of a commodity, when it result in
   - (i) no change in equilibrium price
   - (ii) a fall in equilibrium price.
9. Suppose under a competitive market equilibrium price is too high for an average consumer in case of essential items. Give suggestion to bring down the equilibrium price upto affordable level for a common man.
10. Now suppose government reduces the rate of excise duty and raise subsidies. What is the likely impact of these on the market of a product. Explain with diagram.

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. Define equilibrium price.

Ans. Equilibrium price refers to that price which equates market demand for a commodity with its market supply.

Q. 2. Define perfect competition.

Ans. Perfect competition refers to a market situation in which (i) there are very large number of buyers and sellers (ii) products are homogeneous and (iii) there is free entry and exit.

Q. 3. What is Cartel?

Ans. A Cartel is a group of firms which jointly set output and price of its product in such a way so as to keep benefit of monopoly.

Q. 4. Define Price Ceiling.

Ans. Price Ceiling refers to the maximum price of a commodity lower than equilibrium price at which the seller can legally sell their product.

Q. 5. What is meant by excess demand for a product.

Ans. Excess demand refers to the situation in which market demand is more than market supply of a commodity at a given price.

3-4 MARKS QUESTIONS

Q. 1. Explain the implication of large number of buyers in a perfect competitive market.

Ans. The implication is that no single buyer is in a position to influence market price on its own because an individual buyer's purchase for negligible proportion of the total purchase of the good in the market.

Q. 2. Explain why are firms mutually interdependent in an oligopoly market.

Ans. Firms are mutually interdependent because an individual firms take decision about price and output after considering the possible reactions by the rival firms.

Q. 3. Explain the implication of 'freedom of entry and exit of the firms' under perfect competition.

Ans. The firms enter the industry when they find that the existing firm earning super normal profits. Their entry raises output of the industry brings down the market price and thus reduce profits. The entry continue till profits are reduced to normal (or zero).On the other hand the firms start leaving industry when they are facing losses. This reduces output of the industry raises market price and reduces losses. The exit continues till the losses are wiped out. Hence in the long run, firms earn only normal profit.

Q. 4. Explain the implication of 'perfect knowledge about market' under perfect competition.

Ans. Perfect knowledge means that both buyers and sellers are fully informed about the market price. Therefore no firm is in a position to charge different price and no buyer will pay a higher price. As a result uniform price prevails in the market.

Q. 5. Why is the demand curve more elastic under monopolistic competition than under monopoly.

Ans. The elasticity of demand is high when the product has close substitutes and elasticity of demand tends to be low when the products have no close substitutes. As we know in monopolistic competition large number of close substitutes are present and in monopoly there is no close substitutes. Hence the demand curve under monopolistic competition is more elastic than that under monopoly.

Q. 6. Why is a firm under perfect competition a price taker while under monopoly a price maker Explain in brief.

Ans. A firm under perfect competition a price taker by the following reasons :

1. **Number of Firms :** The number of firms under perfect competition is so large that no individual firm by changing sale, can cause any meaningful change in the total market

supply. Hence, market price remains unaffected.

2. **Homogeneous Product :** All firms in a perfectly competitive industry product homogeneous product. Hence, price remains same.

3. **Perfect Knowledge :** All the buyers and sellers have perfect knowledge about market price so no firm charge a different price than market price. Hence a uniform price prevails in the market.

A firm under monopoly a price maker by the following reasons :

1. A monopolist is a single seller of the product in the market. Hence it has full control over supply.
2. There are no close substitutes of the monopoly product hence the demand is less elastic or 'inelastic.'
3. There are legal, technical and natural barriers to the entry of new firms so that there is no fear of increase in market supply.

Q. 7. Differentiate between price discrimination and product differentiation.

Ans. **Price Discrimination :** Price discrimination is a situation when a monopolist charges different price from different buyers of the same product. This is generally done to maximise profits.

Product Differentiation : Product differentiation is a situation when different producers under monopolistic competition, try to differentiate their product in terms of its shape, size, packaging, trade mark or brand name. This is done to attract buyers from the rival firms in the market.

Q. 8. Distinguish between perfect competition and monopoly.

Ans.

	Perfect Competition		*Monopoly*
1.	Large number of buyers and sellers.	1.	One seller & large no. of buyers.
2.	Products are homogeneous.	2.	There is no close substitutes of goods.

3.	Free Entry and exit.	3.	Barriers to entry
4.	There is no control over price.	4.	There is full control over market price.

Q. 9. Differentiate between Monopoly and Monopolistic Competition.

Ans.

	Monopoly		*Monopolistic competition*
1.	Single seller and large number of buyers	1.	Large number of buyers and sellers.
2.	No close substitutes	2.	There is product differentiation.
3.	Product Barriers to entry.	3.	Free entry and exit.
4.	Selling cost is zero.	4.	Heavy selling costs are incurred.

Q. 10. What is oligopoly? State its main properties/features.

Ans. **Oligopoly : I**t is a form of the market in which there are a few big sellers of a commodity and a large number of buyers. There is a high degree of interdependence among the sellers regarding their price and output policy.

Following are some principal features of oligopoly :

1. A few firms
2. High degree of interdependence
3. Non-price competition
4. Entry barriers
5. Formation of cartels
6. High selling cost

6 MARKS QUESTIONS

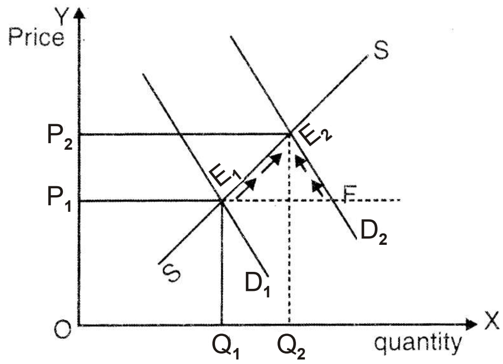
Q. 1. Distinguish between collusive and non-collusive oligopoly. Explain how the oligopoly firms are interdependent in taking price and output decisions.

Ans. Collusive oligopoly is one in which the firms cooperate with each other in deciding price and output where as, noncollusive oligopoly is one in which the firms compete with each other.

The firms are interdependent because each firm takes into consideration the likely reactions of its rival firms when deciding its output and price policy.

It makes a firm dependent on other firms. The firm may have to reconsider the change in the light of the likely reactions.

Q. 2. Market for a good is in equilibrium. There is an 'increase' in demand for this good. Explain the chain of effects of this change. Use diagram.



Ans. Increase in demand shifts the demand curve from D_1 to D_2 to the right leading to excess demand E_1 F at the given price OP_1.

Since the consumers will not be able to buy all they want to buy at this price, there will be competition among buyers leading rise in price.

As price rises, demand starts falling (along D_2) and supply, starts rising (along S) as shows by arrows in the diagram.

The quantity rises to OQ_2 and price to OP_2.

Q. 3. Market for a good is in equilibrium. There is simultaneous 'decrease' both in demand and supply of the good. Explain its effect on market price.

Ans. There are three possibilities :

1. If the relative (percentage) decrease in demand is greater than the decrease in supply, price will fall. The price will fall because of excess supply in the market.

2. If the relative (percentage) decrease in demand is less than the decrease in supply price will rise. The price will rise because of eccess demand in the market.

3. If the relative (percentage) decrease in demand is equal to the decrease in supply price will remain unchanged.

   The price will remain unchanged because there is neither excess demand nor excess supply in the market.

Q. 4. Explain why the equilibrium price of commodity is determined at that level of output at which its demand equals its supply.

Ans. Suppose demand is greater than supply. Since the buyers will not be able to buy all what they want, there will be competition among the buyers. It will have on upward influence on the price. As a result demand will start falling and supply rising. It will go on till demand is equal to supply again. It demand is less than supply. Since the sellers will not able to sell all what they want, there will be comeptition among the sellers. It will have a downward influence on the price. As a result demand will start rising and supply falling. It will go on till demand is equal to supply again.

Hence, the equilibrium price of a commodity is determined at that level of output at which its demand equals its supply.

Q. 5. Suppose the demand and supply curves of a commodity x in a perfectly competitive market are given by Qd = 700 – P and Qs = 500 + 3P. Find the equilibrium price and equilibrium quantity.

Ans. At equilibrium price

Quantity demanded (Qd) = Quantity supplied (Qs)

$$700 - P = 500 + 3P$$

$$-P - 3P = 500 - 700$$

$$-4P = -200$$

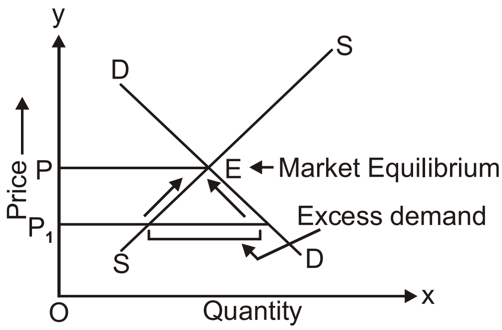
$$P = 50$$

Equilibrium Quantity (demand side) = 700 – P = 700 – 50 = 650

Equilibrium Quantity (supply side) = 500 + 3P = 500 + 150 = 650

Q. 6. With the help of diagram, show the situation of exess demand. Explain in steps how excess demand reaches to equilibrium.

Ans.



Excess demand is a situation when price of a good is less than the equilibrium price. It leads to competition among buyers which push the price upwards which leads to contraction in market demand and expansion in market supply. Due to it price rise, excess demand wiped out.

UNIT V

NATIONAL INCOME AND RELATED AGGREGATES

Points to Remember

- **Goods :** In economics a goods is defined as any physical object. natural or man made, that could command a price in the market. Goods are items that are tangible, such as books, pen, shoes, car etc.
- **Services :** An economic activity that is intangible, is not stored and does not result in ownership. A service is consumed at the point of sale. Such as banking, insurance, postal service etc.
- **Consumption Goods :** Those final goods which are used by the consumers to satisfy human wants directly. All goods and services purchased by consumers are consumer goods.
- **Capital Goods :** There final goods which are used by the producers in production of goods and services. They are not fully consumed during the process of production. These goods are used for generating income.
- **Final Goods :** Those goods which are purchased either for final consumption by consumers (consumers goods) or for investment by producers (capital goods) are not for resale or further processing. All services used by the consumers are final goods.
- **Intermediate Goods :** Those goods and services which are purchased for as a raw material for further production or for resale in the same year. These goods do not fulfill needs of mankind directly. Services used by the producers are intermediate goods. e.g. Service of Lawyers, Mechanics, Charted Accountants etc.
- **Investment :** Value of addition made to the physical stock of capital during a period of time (financial year) is called investment.

It is also called capital formation.

- **Depreciation :** means fall in value of fixed capital goods due to normal wear and tear, expected obsolescence and efflux of time. It is also known as consumption of fixed capital. Depreciation can be calculated by dividing the value of fixed capital by expected life in years.
- **Gross Investment :** Total addition made to physical stock of capital during a period of time. It includes depreciation. It is also known as Gross Capital formation.
- **Net Investment :** Net addition made to the real stock of capital during a period of time. It excludes depreciation. Net Investment = Gross investment – Depreciation.
- **Stocks :** Variables whose magnitude is measured at a particular point of time are called stock variables. e.g., Wealth, assets, money, Inventory etc. A stock variable is nothing but an accumulated sum of flows.
- **Flow :** Variables whose magnitude is measured over a period of time are called flow variable. Eg. National income, change in stock etc.
- **Circular flow of income :** It refers to continuous flow of goods and services and money income between firms and households in two sector economy. It is circular in nature. It has neither any end and nor any beginning point. Real flow shows the flow of produced goods and services and factor services between firms and households. Money flow shows the flow of consumption/ investment expenditure and factor payments between firms and households.
- **Leakage :** It is the amount of money which is withdrawn from circular flow of income. For e.g. Taxes, Savings and Import.
- **Injection :** It is the amount of money which is added to the circular flow of income. For e.g., Govt. Exp., investment and exports.
- **Economic Territory :** Economic (or domestic) Territory is the geographical territory administrated by a Government within which persons, goods and capital circulate freely.
- **Scope of Economic Territory :**

(a) Political frontiers including territorial waters and airspace.
(b) Embassies, consulates, military bases etc. located abroad.
(c) Ships and aircraft operated by the residents between two or more countries.
(d) Fishing vessels, oil and natural gas rigs operated by resi dents in the international waters.

- **Normal Resident of a Country :** is a person or an institution who normally resides in a country and whose centre of economic interest lies in that country.
- **Factor Income :** Income earned by the factors of production (Labour, Land, Capital and Enterpreneurship) for rendering factor services in the production process. e.g., Rent, Interest, wages and profit.
- **Transfer payments :** refers to income received without rendering any productrive service in return. They are one sided payments made without getting anything in return e.g., old age pension, taxes, scholarships etc.
- **Capital gain :** An increase in the value of capital assets or financial assets over the time that gives it a higher worth than the purchase price. The gain is not realized until the asset is sold.
- **Interest on National Debt :** Interest paid by the govt. on the borrowings taken to meet the fiscal deficit of Government. It is considered for consumption purpose and not paid from any production activity therefore it is not included in GDP. It is considered as a transfer payment.
- **Compensation of employees :** Payment to labour factor (employees and workers) in cash or kind for providing factor services during the production of goods and services. It includes salary, wages, bonus, pension, contribution by emplyer in social sercurity schemes etc.
- **Operating Surplus :** During the operation of production money left after the payment of compensation of Employees is called operating surplus. It is the sum of Rent, Interest and Profit.

- **Subsidies :** A subsidy is an amount of money given directly to firms by the government to encourage production and consumption. It reduce the market price.
- **Value of Output :** Market value of all goods and services produced by an enterprise during an accounting year. Value of Output = Sales + Change in Stock.
- **Value added :** It is the difference between value of output of a firm and value of intermediate goods bought from the other firms during a particular period of time. Value added=value of output-Intermediate consumption.
- **Domestic Income (NDP_{FC}) :** It is the factor income accuring to owners of factors of production for suppling factor services with in domestic territory during an accounting year.

  NDP_{FC} = GDP_{MP} – Depreciation – NIT.
- **Gross Domestic Product at Market Price (GDP_{mp}):** is the market value of all the final goods and services produced by all producing units located in the domestic territory of a Country during an Accounting year.
- **Net Domestic Product at Market Price (NDP_{mp}) :** NDP_{MP} = GDP_{MP} – Depreciation (Consumption of fixed capital)

NATIONAL AGGREGATES

- **Gross National Product at Market Price (GNP_{MP})** is the market value of all the final goods and services produced by normal residents (in the domestic territory and abroad) of a country during an accounting year. GDP_{MP} + NFIA = GNP_{MP}
- **National Income (NNP_{FC}) :** It is the sum total of all factors incomes which are earned by normal residents of a country in the form of wages. Rent, Interest and profit during an accounting year.

  NNP_{FC} = NDP_{FC} + NFIA = National Income.

Some Important Relations

- Gross = Net + Depreciation (consumption of fixed capital)

- National = Domestic + NFIFA (Net factor income from abroad)
- Market Price = Factor Cost + NIT (Net Indirect Tax)
- Net Indirect Tax (NIT) = Indirect Tax – Subsidies
- Net Factor Income from Abroad (NFIFA) = It is diffrerence b/w factor income received/earned by normal residents of a country and factor income paid to nonresidents of the country.

Components of NFIA

1. Net Compensation of Employees
2. Net Income from Property and enterpreneurship
3. Net Retained earning of resident companies abroad

Methods of estimation of National Income

Value Added Method (Product Method) :

Gross Value Added at Market Price (GVA_{MP})

= Gross Domestic Product at Market Price (GDP_{MP})

= Sales + change in stock – Intermediate Consumption.

OR

= Value of output – Intermediate consumption

- National Income = NNP_{FC} = GDP_{MP} – Depreciation + NFIFA – NIT

  Steps to be followed :

  1. Write Sales value given (Add sales of all sectors if given sector wise)
  2. Add : Change in stock (Closing stock – opening stock if given separately).
  3. Subtract : Intermediate consumption (avoid capital goods)

     You have reached GDP_{MP}

     National Income (NNP_{FC}) = GDP_{MP} – Depreciation + NFIFA – NIT

- **Income Method (Factor Income distribution method):** Domestic Income (NDP_{FC}) = Compensation of Employees + Operating Surplus + Mixed Income

  National Income (NNP_{FC}) = NDP_{FC} + NFIFA

  Steps to be followed :

  1. Write compensation Employees (if not given add salary, wages, bonus, contribution by employer in social security schemes).
  2. Add : Operating Surplus (If not Given add interest, Rent & Royalty and Profit).
  3. Add : Mixed Income of self employed. You have reached NDP_{FC}

     National Income (NNP_{FC}) = NDP_{FP} + NFIFA

- **Expenditure Method :**

  GDP_{MP} = C + G + I + (X – M)

  Steps to be followed :

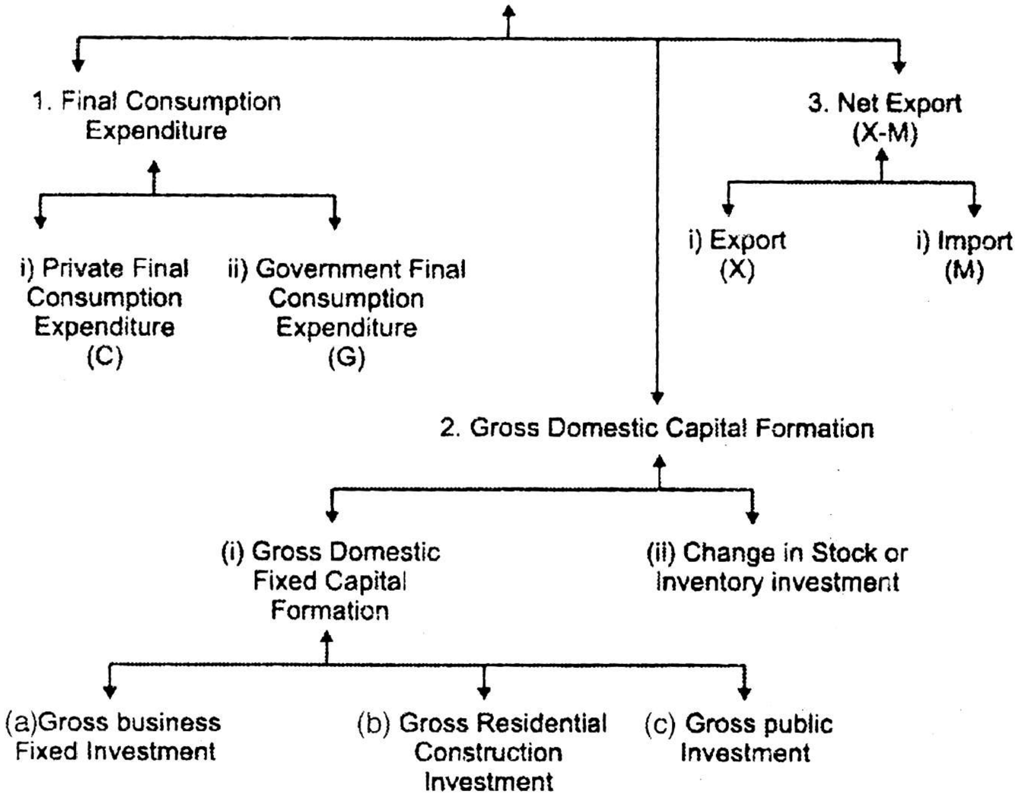
  1. Write Private Final Consumption Expenditure
  2. Add : Government Final Consumption Expenditure
  3. Add : Gross Domestic Capital Formation
  4. Add : Net Exports (Export – Imports)

     You have reached GDP_{MP}

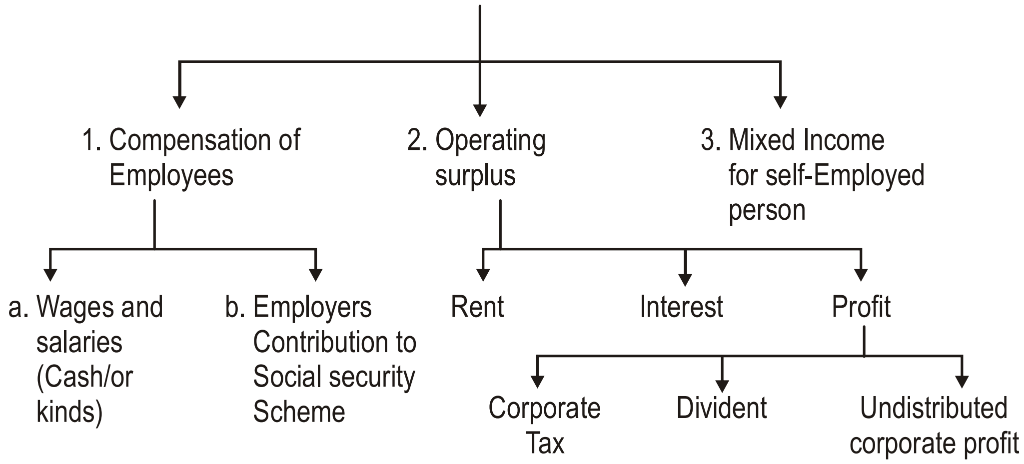
     National Income (NNP_{FC}) = GDP_{MP} – Depreciation + NFIFA – NIT

- **Problem of Double Counting :** Counting the value of a commodity more than once while estimating national income is called double counting. It leads to overestimation of national income. So, it is called problem of double counting.

Components of Final Expenditure



Components of Domestic Income



Components of NFIA

1. Net Compensation of Employees
2. Net Income from Property and enterpreneurship
3. Net Retained earning of resident companies abroad

❑ **Net National Disposable Income (NNDI) :** It is defined as net national product at Market price (NNP_{MP}) plus net current transfer from rest of the world.

NNDI = NNP_{MP} + Net current transfers from rest of the world.

OR

= National Income + Net indirect tax + Net current transfers from the rest of the world.

❑ **Gross National Disposable Income (GNDI)**

= GNP_{MP} + Net current Transfers from rest of the world.

❑ Net National Disposable Income (NNDI)

= GNDI – Depreciation.

❑ **Personal Disposable Income from National Income (NNP_{FC})**

Personal Disposable Income from National Income (NNP_{FC})

National Income (NNP_{FC})

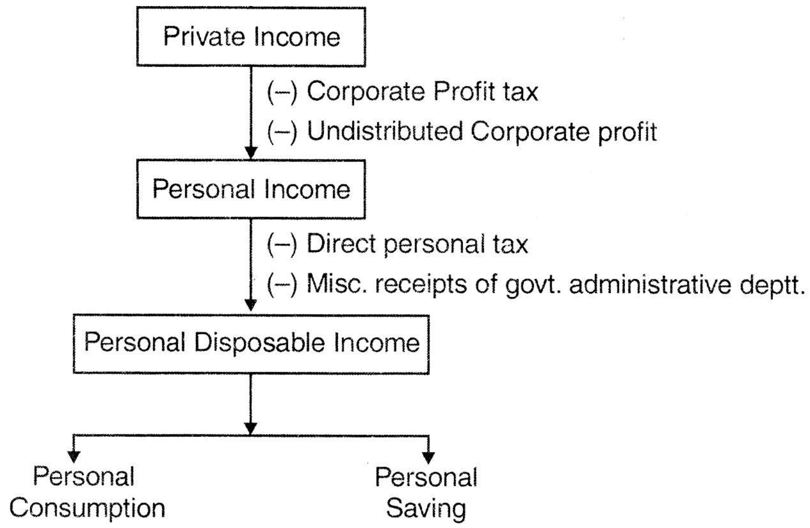
↓ – NFIA

Domestic Income (NDP_{FC})

↓ (–) Income from property and enterprenureship accruing of govt. administrative department
(–) Savings of non departmental enterprises

Domestic Factor Income Accruing to Private Sector

↓ (+) NFIA
(+) Interest on National debt
(+) Current transfers from Govt.
(+) Net Current transfers from R.O.W.



- **Private Income :** Private Income is estimated income of factor and transfer incomes from all sources to private sector (households and firms) within and outside the country.

- **Personal Income :** It refers to income received by household from all sources. It includes factor income and transfer income.

- **Personal Disposable Income :** It is that part of Personal income which is available to the households for disposal as they like.

  PDI = Consumption + savings

- **GDP and Welfare :** In general Real GDP and Welfare are directly related with each other. A higher GDP implies that more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people. There are two types of GDP :

- **Real GDP :** When the goods and services are produced by all producing units in the domestic territory of a country during an A/c. year and valued these at base year's prices or constant price, it is called real GDP or GDP at constant prices. It changes only by change in physical output not by change price level. It is called a true indicator of economic devleopment.

- **Nominal GDP :** When the goods and services are produced by all producing units in the domestic territory of a country during an a/c year and valued these at current year's prices or current prices, it is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It is not considered a true indicator of economic development.

- Conversion of Nominal GDP into Real GDP

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index}} \times 100$$

Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

- **Welfare** mean material well being of the people. It depends on many economic factors like national income, consumption level quantity of goods etc and non-economic factor like environmental pollution, law and order etc. the welfare which depends on economic factors is called economic welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare. Conclusion thus GDP and welfare directly related with each other but limitations in taking GDP as welfare measure are as follows :

1. **Externalities :** Externalities refer to benefits or harms of an activity caused by a firm or an individual, for which they are not paid or penalized. For example, environmental pollution caused by industrial plants is a negative externality and building a flyover is a positive externality.
2. **Composition of GDP :** GDP does not exhibit the structure of the product. If the increase in GDP in mainly due to increased production of war equipment's and ammunitions, then such asn increase cannot improve welfare in economy.
3. **Distribution of GDP :** When GDP is unevenly distrubuted, increase in GDP does not increase welfare.
4. **Non-monetary exchanges :** Many activities in an economy are not evaluated in monetary terms, they are not included in GDP, due to non availability of data. However, such activities influence the economic welfare of people of the economy.

Finally, it can be concluded that GDP may not be taken as a satisfactory measure of economic welfare due to above mentioned limitations, yet it does reflect some index of economic welfare.

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. National Income is the sum of factor income accuring to :

   (a) Nationals (b) Economic territory

   (c) Residents

   (d) Both residents and non residents

2. A 'resident' of a country is one :

   (a) who was born in that country

   (b) who lives in that country

   (c) who is the citizen of that country

   (d) who lives, earn, spend and accumulates in that country.

3. When goods and services are produced in a year valued at current years prices is called

   (a) Real GDP (b) GDP at constant prices

   (c) National Product (d) GDP at current prices

4. Which is correct?

   (a) GNPmp > GDPmp when NFIA < 0.

   (b) GNPmp > GDPmp when NFIA = 0.

   (c) GNPmp > GDPmp when FIFA < FITA.

   (d) GNPmp > GDPmp when NFIA > 0.

5. Which of the following is not a transfer payment?

   (a) Indirect taxes (b) Subsidy

   (c) Scholarship (d) Dividend

6. When the value of a product is counted more than once then it is called double counting. As a result national income is :

(a)	Under-estimated	(b)	Over-estimated
(c)	Correctly-estimated	(d)	None of the above

7. Which is not a component of NFIFA?
   (a) Net compensation of employees
   (b) Net income from property and enterpreneurship.
   (c) Net retained earning of resident companies abroad.
   (d) Net export.
8. Which one of the following is not a component of Gross Domestic Fixed Capital formation ?
   (a) Gross Public Investment
   (b) Inventory Investment
   (c) Gross residential construction investment
   (d) Gross business fixed investment
9. Which one of the following is a stock variable :

(a)	Income	(b)	Savings
(c)	Investment	(d)	Money supply

10. Market price is less than factor cost when :

(a)	Firm is suffering losses	(b)	Indirect taxes < subsidy
(c)	Indirect taxes > subsidy	(d)	Indirect taxes = subsidy.

11. Which of the following is not a part of National Income :
    (a) Profit earned by S.B.I. branch in New York
    (b) Salary paid to Indian working in Japan Embassy
    (c) Interest paid on loan taken by a firm in India.
    (d) Fees paid to German consultant by Delhi Metro.
12. Which of the following is included in GDP :
    (a) Purchase of Petrol for taxi
    (b) Refrigerator purchased by ice-cream vendor

(c) Payment made to lawyer by firm.

(d) TV purchased by electornic dealer for resale.

13. Purchase of AC by a restaurant is :

(a) Consumption expenditure on durable goods

(b) Consumption expenditure on non-durable goods.

(c) Intermediate expenditure

(d) Final expenditure

14. Value added is

(a) Sale price – Purchase price

(b) Sales + Stock + Purchase

(c) Sales + change in Stocks – Intermediate costs

(d) Value of output – Purchases.

15. Operating surplus is :

(a) Profit + Interest (b) Profit + Rent

(c) Profit + Rent

(d) Profit + Rent +Royalty + Interest

Answers

1. (c); **2.** (d); **3.** (d); **4.** (d); **5.** (d); **6.** (b); **7.** (d); **8.** (b); **9.** (d); **10.** (b); **11.** (d); **12.** (b); **13.** (d); **14.** (c); **15.** (d).

Short Answer Type Questions (3-4 Marks)

1. Distinguish between real and nominal gross domestic product.
2. Explain the basis of classifying goods into intermediate and final goods. Give suitable examples.
3. Distinguish between consumer goods and capital goods with examples?
4. Explain how distribution of G.D.P. is its limitation as a measure of economic welfare.

5. Explain circular flow of income.

6. Distinguish between 'factor income' and 'tranfer income.

7. Classify the following into stock and flow :

   (i) Money supply (ii) Depreciation

   (iii) Investment (iv) Pocket money

8. Define operating surplus. State its components.

9. How can externalities be a limitation of using gross domestic product as an index of welfare.

10. Giving reasons, classify the following into intermediate and final goods :

    (i) Machines purchased by a dealer of machines.

    (ii) A car purchased by a house hold.

11. Distinguish between stock and flows. Give an example of each.

12. What is meant by a normal resident? State which of the following are treated as normal resident of India.

    (i) An American working in the office of WHO located in India.

    (ii) Indian working in U.S.A. embassy located in India.

13. Which of the following is factor income from abroad for an Indian resident and why?

    (a) Interest income received by Indian resident on the bonds of companies operating in USA.

    (b) Remittances by Indians settled abroad to their families in India.

14. Explain why subsidies are added to and indirect taxes deducted from domestic product at market price to arrive at domestic product at factor cost.

15. Giving reasons, explain how are the following treated in estimating national Income by the income method.

    (a) Interest on a car loan paid by an individual

(b) Interest on a car loan paid by a Govt. owned company.

16. Why do we include the imputed value of goods but not services while estimating production for self consumption?

17. Define NFIA., write its components.

18. Distinguish between domestic product and national product. When can domestic product be more than National Product.

Long Answer Questions (6 Marks)

1. How will you treat the following while estimating national income of India

   (a) Dividend received by an Indian from his investment in shares of a foreign company

   (b) Money received by a family in India from relatives working abroad.

   (c) Interest received on loan given to a friend for purchasing a car.

2. Giving reason explain how the following should be treated in estimation of national income :

   (i) Payment of interest by a firm to a bank

   (ii) Payment of interest by a bank to an individual.

   (iii) Payment of interest by an individual to a bank.

3. Explain the problem of double counting in estimating national income, with the help of an example. Also explain two alternative ways of avoiding the problem.

4. Distinguish between real gross domestic product and nominal gross domestic product. Can real gross domestic product be used as an index of welfare of the people? Give two reasons.

5. How will you treat the following in estimating national income of India? Give reasons for your answer.

   (a) Value of bonus shares received by share holders of a company.

(b) Fees received from students.

(c) Interest received on loan given to a foreign company in India.

6. Explain the steps of measuring national income by income method.

7. Giving reasons, categories following into transfer income and factor income.

   (a) Compensation received from the employer.

   (b) Old age pension. (c) Imputed rent.

8. Giving reasons explain whether the following are included in domestic product of India.

   (i) Profit earned by a branch of foreign bank in India.

   (ii) Payment of salaries to its staff by an embassy located in New Delhi.

   (iii) Interest received by an Indian resident from firms which are situated abroad.

9. How will you treat the following, while estimating national income. Give reasons for your answer.

   (i) Capital gain on sale of house.

   (ii) Prize won in lottery.

   (iii) Interest on public debt.

10. While estimating national income. How will you treat the following. Give reason for your answer.

   (i) Imputed rent of self occupied house.

   (ii) Interest received on debentures.

   (iii) Financial help received by flood victims

NATIONAL INCOME AND RELATED AGGREGATES

NUMERICAL EXERCISE

1. Calculate "Sales" from the following data : (Rs. in Lakh)

(i)	Net value added at factor cost	560
(ii)	Depreciation	60
(ii)	Change in Stock	(–)30
(iv)	Intermediate cost	1000
(v)	Exports	200
(vi)	Indirect taxes	60

2. Calculate NVA_{FC} from the following data (Rs. Crore)

(i)	Susbidy	40
(ii)	Sales	800
(iii)	Depreciation	30
(iv)	Exports	100
(v)	Closing stock	20
(vi)	Opening stock	50
(vii)	Intermediate purchases	500
(viii)	Purchases of machinery for own use	200
(ix)	Import of raw material	60

3. From the following information about a firm in an economy, calculate GVA_{MP} of the firm. (Rs. Crore)

(i)	Domestic Sales	300
(ii)	Exports	100
(iii)	Production for self-consumption	50
(iv)	Purchases from firm X	110
(v)	Purchases from firm Y	70

(vi)	Imports of raw materials	30
(vii)	Change in stock	60

4. Calculate Gross National Disposable Income and NNP_{FC} from the given data (Rs. Crore)

(i)	Personal Tax	100
(ii)	Net Indirect Tax	90
(iii)	Corporate Tax	40
(iv)	Personal disposable Income	1100
(v)	Savings of non-departmental enterprises	60
(vi)	Net factor income from abroad	5
(vii)	Consumption of fixed capital	70
(viii)	National Debt Interest	30
(ix)	Retained earning of private corporate sector	10
(x)	Net current transfer to the rest of the world	10
(xi)	Current transfer from government	50
(xii)	Income from property and enterprenuership accruing to govt. admitt. deptt.	80

5. Calculate (a) NNP_{FC} by expenditure method and (b) NNP_{FC} by value added method : (Rs. Crore)

(i)	Net Domestic capital formation	250
(ii)	Net Export	50
(iii)	Private final consumption expenditure	900
(iv)	Value of output	
	(a) Primary ector	900
	(b) Secondary sector	800
	(c) Territory sector	400
(v)	Value of inrermediate consumption	

	(a) Primary sector	400
	(b) Secondary sector	300
	(c) Teritory sector	100
(vi)	Consumption of fixed capital	80
(vii)	Indirect Tax	100
(viii)	Government final consumption expenditure	100
(ix)	Subsidy	10
(x)	Net factor income from abroad	(-)20

6. From the following data calculate National Income by income and expenditure method : (Rs. Crore)

(i)	Government final consumption expenditure	100
(ii)	Subsidies	10
(iii)	Rent	200
(iv)	Wages and salaries	600
(v)	Indirect Taxes	60
(vi)	Private final consumption expenditure	800
(vii)	Gross domestic capital formation	120
(viii)	Social security contribution by employers	55
(ix)	Royalty	25
(x)	Net factor income paid to abroad	30
(xi)	Interest	20
(xii)	Net domestic capital formation	110
(xiii)	Profit	130
(xiv)	Net Export	70

7. Calculate 'Intermediate consumption' from the following data :

(Rs. Lakh)

(i)	Value of output	200

(ii)	Net value added at factor cost	80
(iii)	Sales tax	15
(iv)	Subsidy	5
(v)	Depreciation	20

8. Calculate Net National Disposable Income and NNP_{FC} from the following data : (Rs. Crore)

(i)	Factor Income earned from Abroad	15
(ii)	Private Final Consumption expenditure	600
(iii)	Depreciation	50
(iv)	Govt. Final Consumption expenditure	200
(v)	Net current transfer to Abroad	–5
(vi)	Net domestic fixed capital formation	110
(vii)	Net factor income to Abroad	10
(viii)	Net import	–20
(ix)	Net Indirect Tax	70
(x)	Change in stock	–10

9. Calculate (a) GDP_{MP} (b) Factor income earned from Abroad : (Rs. Crore)

(i)	GNP_{FC}	2800
(ii)	Profit	500
(iii)	Export	40
(iv)	Compensation of Employees	1500
(v)	Change in Stock	50
(vi)	Net Indirect Tax	250
(vii)	Net domestic capital formation	650
(viii)	Gross domestic fixed capital formation	700
(ix)	Net current transfers from rest of the world	90

(x)	Factor income paid to abroad	120
(xi)	Interest	400
(xii)	Rent	300

10. Calculate (a) Domestic Income (b) Compensation of employers. (Rs. Crore)

(i)	Net factor income from abroad	–20
(ii)	Net exports	10
(iii)	Net indirect taxes	50
(iv)	Rent and royalty	20
(v)	Consumption of fixed capital	10
(vi)	Private final consumption expenditure	400
(vii)	Corporate tax	10
(viii)	Interest	10
(ix)	Net domestic capital formation	50
(x)	Dividends	22
(xi)	Government final consumption expenditure	100
(xii)	Undistributed profits	5
(xiii)	Mixed income	23

11. Calculate Net National Product at Market Price and Private Income (Rs. Crore)

(i)	Net current transfers to abroad	10
(ii)	Private final consumption expenditure	500
(iii)	Current transfers from government	30
(iv)	Net factor income to abroad	20
(v)	Net exports	(–)20
(vi)	Net indirect tax	120
(vii)	National debt interest	70

(viii)	Net domestic capital formation	80
(ix)	Income accruing to government	60
(x)	Government final consumption expenditure	100

12. Calculate value of output from the following data : (Rs. Crore)

(i)	NVA_{FC}	100
(ii)	Intermediate consumption	75
(iii)	Excise duty	20
(iv)	Subsidy	5
(v)	Depreciation	10

13. Calculate NDP_{FC} and Private income from the following (Rs. Crore)

(i)	Domestic product accruing to government sector	300
(ii)	Wages and salaries	1000
(iii)	Net current transfer to abroad	–20
(iv)	Rent	100
(v)	Interest on public debt	30
(vi)	Interest paid by production unit	130
(vii)	Corporation Tax	50
(viii)	Current transfer by government	40
(ix)	Contribution to social security by employers	200
(x)	Dividends	100
(xi)	Undistributed profit	20
(xii)	Net factor income from abroad	–10

14. Calculate GDP_{FC} and factor income to abroad from following data : (Rs. Crore)

(i)	Compensation of employees	800
(ii)	Profit	200

(iii)	Dividends	50
(iv)	Gross National Product at Market price	1400
(v)	Rent	150
(vi)	Interest	100
(vii)	Gross Domestic fixed capital formation	200
(viii)	Net domestic capital formation	200
(ix)	Change in stock	50
(x)	Factor income from abroad	60
(xi)	Net indirect taxes	120

15. Find National Income and Personal Disposable Income :

(Rs. Crore)

(i)	Undistributed profits	70
(ii)	Gross National Disposable income	1000
(iii)	Net current transfers to abroad	20
(iv)	Consumption of fixed capital	100
(v)	Corporation tax	200
(vi)	Indirect tax	250
(vii)	current transfer from government	50
(viii)	Subsidies	60
(ix)	Private Income	800
(x)	Personal tax	150

NUMERICAL EXERCISE

1. Sales = (i) – (iii) + (iv) + (ii) + (vi)

   = 560 – (–30) + 1000 + 60 + 60

   = Rs. 1710 Lakh

2. NVA_{FC} = Sales + ΔS – IC – NIT – Depr.

= (ii) + (v – vi) – (vii) + (i) – (iii)

= 800 + (–30) – 500 + 40 – 30

= Rs. 280 lakh.

3. GVA_{MP} = Sales + Change in stock – IC

= [(i) + (ii) + (iii)] + (vii) – [(iv) + (v) + (vi)]

= (300 + 100 + 50) + 60 – [110 + 70 + 30]

= Rs. 300 crore.

4. NNP_{FC} = (iv) + (iii) + (ix) + (i) + (v) + (xii) – (viii) + (x) – (xi)

= 1100 + 40 + 10 + 100 + 60 + 80 – 30 + 10 – 50

Rs. 1320 Cr.

GNDI = 1320 + (ii) + (vii) – (x)

= 1320 + 90 + 70 – 10 = 1470 Cr.

5. NNP_{FC} (Expenditure Method)

= (i) + (ii) + (iii) + (viii) – (vii) + (ix) – (vi) + (x)

= 250 + 50 + 900 + 100 – 100 + 10 – 80 + (–20)

= Rs. 1110 Cr.

NNP_{FC} (Value added method)

= (iv) – (v) – (vi) – (vii) + (ix) + (x)

= (900 + 800 + 400) – (400 + 300 + 100) – 80 – 100 + 10 + (–20)

= Rs. 1110 Cr.

6. National Income NNP_{FC} (Income Method)

= (iv) + (viii) + (iii) + (ix) + (xi) + (xii) – (x)

= 600 + 55 + 200 + 25 + 20 + 130 + (–30)

= Rs. 1000 Cr.

National Income (Exp. Method)

= (vi) + (i) + (vii) + (xv) – (vii – xiii) – (v – ii) – (x)

$= 800 + 100 + 120 + 70 – 10 – 50 – 30$

$= \text{Rs. } 1000 \text{ Cr.}$

7. Intermediate consumption

$= \text{Value of output} – NVA_{FC} – NIT – \text{Depreciation}$

$= 200 – 80 – (15 – 5) – 20$

$= 200 – 80 – 10 – 20$

$= \text{Rs. } 90 \text{ Lakh.}$

8. $NNP_{FC} = (ii) + (iv) + [(vi) + (x)] – (viii) – (ix) – (vii)$

$= 600 + 200 + [110 + (–10)] – (–20) – 70 – 10$

$= 840 \text{ Cr.}$

$NNDI = NNP_{FC} + (ix) – (v)$

$= 840 + 70 – (–5) = 915 \text{ Cr.}$

9. (a) $NDP_{FC} = (iv) + (ii) + (xi) + (xii)$

$= 1500 + 500 + 400 + 300$

$= 2700$

$GDP_{MP} = NDP_{FC} + \text{depreciation} + NIT$

$= 2700 + [(viii + v) – vii] + (vi) (\because \text{dep.} = GDCF – NDCF)$

$= 2700 + [(700 + 500) – 650] + 250$

$GDP_{MP} = \text{Rs. } 3050 \text{ Cr.}$

(b) Factor Income from abroad (FIFA)

$GNP_{FC} = GDP_{MP} – NIT + NFIA$

$2800 = 3050 + 250 + NFIA$

$2800 = 2800 + (FIFA – FITA)$

$0 = FIFA – 120.$

$FIFA = \text{Rs. } 120 \text{ Cr.}$

10. (a) Domestic Income = (ii) + (vi) + (ix) + (xi) – (iii)

$= 10 + 400 + 50 + 100 – 50$

= Rs. 510 Cr.

(b) Compensation of employees

= Domestic Income – (iv) – (viii) – (vii) – (x) – (xii) – (xiii)

= 510 – 20 – 30 – 10 – 22 – 5 – 23

= Rs. 400 Cr.

11. NNP_{MP} = (ii) + (viii) + (vii) + (v) – (iv)

= 500 + 100 + 80 + (–20) – (20)

= Rs. 640 Cr.

Private Income = (NNP_{MP} – vi) – (ix) + (iii) + (vii) – (i)

= 640 – 120 – 60 + 30 + 70 – 10

= Rs. 550 Cr.

12. Value of output

NVA_{FC} = VO – IC – NIT – Depreciation

VO = NVA_{FC} + IC + NIT + Depreciation

= 100 + 75 + (20 – 5) + 10

VO = Rs. 200 Cr.

13. NDP_{FC} = (ii + ix) + (iv + vi + vii + x + xi)

= (1000 + 200) + (100 + 130 + 50 + 100 + 20)

NDP_{FC} = Rs. 1600 Cr.

Private Income = NDP_{FC} (i) + (xii) – (iii) + (v) + (viii)

= 1600 – 300 + (–10) – (–20) + 30 + 40

= 1600 – 300 – 10 + 20 + 30 + 40

= Rs. 1380 Cr.

14. (a) GDP_{FC} = (i) + (ii) + (v) + (vi) + [(vii + ix) – viii]

= 800 + 200 + 150 + 100 + [(200 + 50) – 200]

GDP_{FC} = Rs. 1300 Cr. [$\because$ Dep = GDCF – NDCF]

(b) Factor income to abroad

$GNP_{MP} = GDP_{FC} + NIT + NFIA$

$1400 = 1300 + 120 + FIFA - FITA$

$1400 = 1300 + 120 + 60 - FITA$

$1400 - 1480 = - FITA$

Rs. 80 Cr.= FITA

15. $GNDI = NNP_{FC} + NIT - NCTROW + Depreciation$

$1000 = NNC_{FC} + 190 - (20) + 100$

$NNP_{FC} = 1000 - 190 + 20 - 100$

= Rs. 730 Cr.

PDI = (ix) – (i) – (v) – (x)

= 800 – 70 – 200 – 150

= Rs. 380 Cr.

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. What are the two types of circumar flows ?

Ans. The two types of circular flows are : (i) Real flow (ii) Money flow

Q. 2. Define stock variables.

Ans. Stock variables refer to the variables, which are measured at a particular point of time.

Q. 3. Define consumption goods?

Ans. Consumption goods refer to those goods which satisfy the wants of the consumer directly.

Q. 4. Define current transfers.

Ans. Current transfer refers to tranfers made out of the current income of the payer and added to the current income of the recipient.

Q. 5. Define capital formation.

Ans. Capital formation refers to addition to the capital stock of an economy.

Q. 6. Defined mixed income.

Ans. Mixed income refers to the income generated by own account worker and unincorporated enterprises.

Q. 7. Why do export form a part of domestic income?

Ans. Exports are produced within the domestic territory, therefore it form a part of domestic income.

Q. 8. What is real gross domestic product.

Ans. When gross domestic product of a given year is estimated on the basis of price of the base year, it is called real GDP.

Q. 9. When is value of output equal to value added?

Ans. Value of output is equal to value added if there are zero intermediate costs.

Q. 10. Define national income.

Ans. National income refers to net money value of all the final goods and services produced by the normal residents of a country during a period of one year.

3-4 MARKS QUESTION WITH ANSWER

Q. 1. Calculate gross value added of factor cost :

(i)	Units of output sold (units)	1000
(ii)	Price per unit of output (Rs.)	30
(iii)	Depreciation (Rs.)	1000
(iv)	Intermediate cost (Rs.)	12000
(v)	Closing Stock (Rs.)	3000
(vi)	Opening Stock (Rs.)	2000
(vii)	Excise duty (Rs.)	2500
(viii)	Sales Tax (Rs.)	3500

Ans. GVA_{FC} (i × ii) + (v – vi) – (iv) – (vii + viii)

= (1000 × 30) + [3000 – 2000] – 12000 – [2500 + 3500]

= Rs. 13000

Q. 2. Calcualte Net Value added at factor cost :

(i)	Consumption of Fixed Capital (Rs.)	600
(ii)	Import Duty (Rs.)	400
(iii)	Output sold (units)	2000
(iv)	Price per unit of output (Rs.)	10
(v)	Net change in stock (Rs.)	(–)50
(vi)	Intermediate cost (Rs.)	10000
(vii)	Subsidy (Rs.)	500

Ans. NVA_{FC} = (iii × iv) + v – vi – ii + vii – i

= (2000 × 10) + (–50) – 10000 – 400 + 500 – 600

= Rs. 9450.

Q. 3. Find Net Value added at market price :

(i)	Output sold (units)	800
(ii)	Price per unit of utput (Rs.)	20
(iii)	Excise duty (Rs.)	1600
(iv)	Import duty (Rs.)	400
(v)	Net Change in Stock (Rs.)	(–)500
(vi)	Depreciation (Rs.)	1000
(vii)	Intermediate Cost (Rs.)	8000

Ans. NVA_{mp} = (i × ii) + v – vii – vi

= (800 × 20) + (–500) – 8000 – 1000 = Rs. 6500.

Q. 4. Assuming real income to be Rs. 200 Crore and price index to be 135, Calculate nominal income.

Ans. $$\text{Real Income} = \frac{\text{Nominal Income}}{\text{Price Index}} \times 100$$

$$\text{Nominal Income} = \frac{200 \times 135}{100} = \text{Rs. } 270 \text{ Cr.}$$

Q. 5. Given nominal income to be Rs. 375 Crore and price index 125 calculate real income.

Ans. $$\text{Real Income} = \frac{\text{Nominal Income}}{\text{Price Index}} \times 100$$

$$= \frac{375 \times 100}{125}$$

Real Income = Rs. 300 Crore.

Q. 6. If the real gross product is Rs. 200 and the nominal gross product is Rs. 210, calculate the price index (base = 100)

Ans. Real GDP $= \dfrac{\text{Nominal GDP}}{\text{Price Index}} \times 100$

Price Index $= \dfrac{\text{Nominal GDP}}{\text{Real GDP}} \times 100 = \dfrac{210}{200} \times 100$

Price Index = 105

Q. 7. Giving reasons classify the following into intermediate products and final products :

(i) Computer purchased by a school.

(ii) Cold drinks purchased by a school canteen.

Ans. (i) It is final product because it is purchased for final investment.

(ii) These are intermediate products because these are taken for resale in the same year.

Q. 8. Giving reasons, explain the treatment assigned to the follwing while estimating national income.

(i) Family members working free on the farm owned by the family.

(ii) Payment of interest on borrowings by general government.

Ans. (i) Imputed salaries of these members will be included in national income.

(ii) It will not be included in national income because it is non-factor payment as it is considered that general government borrows only for consumption purpose.

Q. 9. Giving reasons, explain the treatment assigned to the following while estimating national income.

(i) Payment of pocket money by parents.

(ii) Interest free loan given by employer to employee.

Ans. (i) Not included, as it is transfer payment from parents to children.

(ii) Included, as it is treated in national income because it is part of compensation of employees in kinds.

Q. 10. Explain the basis of classifying goods into intermediate and final goods. Give suitable examples.

Ans. Goods which are purchased by a prodution unit from other production units and meant for resale or for using up completely during the same year are called intermediate goods. For example : raw material.

Goods which are purchased for consumption and investment are called final goods.

For Example : Purchase of machinery for installation in factory.

Q. 11. Giving reason classify the following into intermediate and final goods. (i) Machine Purchased by a dealer of machine. (ii) A car purchased by a household.

Ans. (i) It is an intermediate good because it is meant for resale in the market.

(ii) It is a final good because it is meant for final consumption.

Q. 12. How will you treat the following in estimating national income of India? Give reasons for your answer.

(i) Value of bonus shares received by shareholders of a company.

(ii) Interest received on loan given to a foreign company in India.

Ans. (i) It is not included in national income because it is the return of financial capital and not of the goods and services.

(ii) It is included in the national income as interest is a factor income and a part of domestic income.

Q. 13. Government spends on child immunization programme. Analyse its impact on gross domestic product and welfare of the people.

Ans. Government expenditure on child immunization programme raises GDP because it is government's is final consumption expenditure. It also raises welfare of the people because child immunization programme improve health and thus raise efficiency of the people.

Q. 14. Sale of petrol and diesel cars is rising particularly in big cities. Analyse its impact on Gross Domestic Product and Welfare.

Ans. Final sales of cars raises GDP, because final sales are final products. Cars provide convenience in transportation but at the same time it causes traffic jams, air pollution and noise pollution reducing the welfare of the people. Pollution reducing the welfare of the people. Pollution thus, has bad effects on the health of the people.

6 MARKS QUESTIONS

Q. 1. How will you treat the following while estimating national income of India? Give reasons.

Ans. (a) Divident received by an Indian from his investment in shares of a foreign company.

(b) Money received by a family in India from relatives working abroad.

(c) Interest received on loans given to a friend for purchasing a car.

(d) Divident received by a foreigner from investment in shares of an Indian company.

(e) Profit earned by a branch of an Indian Bank in Canada.

(f) Scholarship given to Indian students studying in India by a foreign company.

(g) Fees received from students.

(h) Profits earned by branch of a Foreign Bank in India.

(i) Interest paid by an individual on a loan taken to buy a car.

(j) Expenditure on machines for installation in a factory.

(k) Government expenditure on street lighting.

(l) Increase in prices of the shares of a company.

(m) Interest received by an Indian resident from firms abroad.

(n) Expenditure incurred by a foreign tourist in the country.

(o) Construction of a new house.

(p) Rent paid by embassy of Japan in India to an Indian resident.

(q) Imputed rent of self occupied house

(r) Interest received on debentures.

(s) Financial help received by flood victims.

(t) Furniture purchased by household.

Ans. (a) It is factor income from abroad so will be included in national income.

(b) It is transfer receipts, so it is not includeed in national income.

(c) Not included in National Income, because it is a non-factor receipt as it is used for consumption.

(d) included as it is a factor income to abroad.

(e) It is a part of NFIA and will be included in national income.

(f) It is transfer receipts, so it is not included in national income.

(g) It is included in national income because it is a part of the private/final consumption expenditure of the house hold.

(h) included in national income because it is part of factor income to abroad.

(i) Not included because it is a non-factor income as loan is not used for production but for consumption.

(j) Included because it results in flow of income through productive activities.

(k) Includes, because it is final consumption expenditure by government.

(l) Not included, because it is capital gain and nothing to do with production.

(m) Included, as it is the part of NFIA.

(n) Included, as it is export for the country.

(o) Included, because it is currently produced output.

(p) included as it is paid to an Indian resident out side the domestic territory of a country. It will be included in NFIA.

(q) Included, as a part of rent as it is payment to self for housing services.

(r) Included, because it is a factor earning.

(s) Not included as it is a transfer payment.

(t) Included, because it is a private final consumption expenditure.

Q. 2. How will you treat the following while estimating domestic factor income of India? Give reasons.

(i) Remittances from non-resident Indian to their families in India.

(ii) Rent paid by the embassy of France in India to a resident Indian.

(iii) Profit earned by branches of Foreign Bank in India.

(iv) Payment of salaries to its staff by embassy located in India.

(v) Interest received by an Indian resident from firms abroad.

(vi) Scholarships given by the Government of India.

Ans. (i) Not included as it is a transfer payment

(ii) Not included because French embassy in India does not fall within the domestic territory of India.

(iii) Included because it falls with in the domestic territory of India.

(iv) Not included as an embassy located in India is not fall with in the domestic territory of India.

(v) Not included in domestic income as it is does not fall with in the domestic territory of India.

(vi) Not inclued, as it is transfer payment.

Q. 3. Giving reasons explain how should the following be treated in estimating gross domestic product at market price?

(i) Fees to a mechanic paid by a firm.

(ii) Interest paid by an individual on a car loan taken from a bank.

(iii) Expenditure on purchasing a car for use by a firm.

Ans. (i) Fees paid to mechanic by a firm is not included because it is an intermediate cost of the firm.

(ii) Interest paid by an individual is not included because the loan is taken to meet consumption expenditure and therefore interest paid on such a loan is not a factor payment.

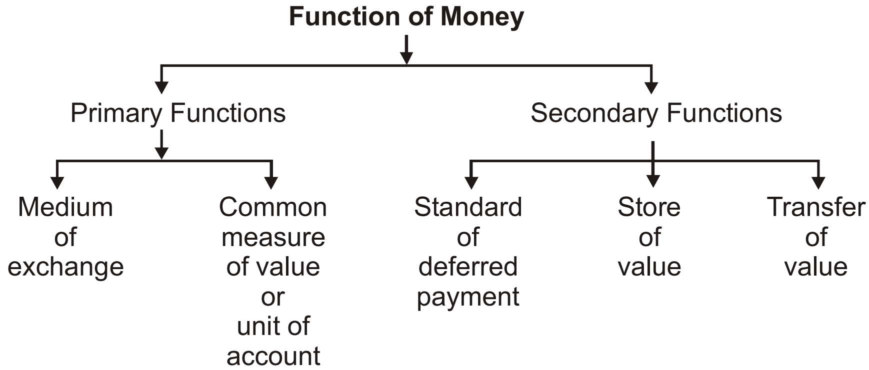
(iii) Expenditure on purchase a car by a firm is included because it is an investment expenditure, a final expenditure.

UNIT VI

MONEY AND BANKING

Points to Remember

- **Money :** Money may be defined as anything which is generally acceptable as a medium of exchange and also acts as common measures of value, store of value and standard of deferred payment.



- **Barter Exchange :** It is a system of exchange in which goods are directly exchanged one with other without the use of money.
- **Difficulties involved in the Barter Exchange**
  1. Absence of a common unit.
  2. The lack of double coincidence of wants
  3. Lacks of any satisfactory units to engage in contracts involving future payments.,
  4. Does not provide for any method of storing generalised purchasing power.
  5. Lack of divisibility.
- **Supply of Money :** Total stock of money (currency notes, coins and demand deposite of banks) in circulation are held by the public at a given point of time.

- **Measures of Money Supply = Currency held by Public + Demand Deposit of a Bank**

  M = C + DD + OD

- **Commercial Bank :** Commercial Bank is a financial institution who accepts deposits from the general public and provide loans facilities for investment with the aim of earning profit.

- **Demand Deposit :** Demand deposit are those deposit which can be withdrawn from the bank on demand or by writing a cheque any time.

- **Central Bank :** The central Bank is an apex institution of monetary and banking system of country. It makes monetary policy of the country in public interest. It manages, supervises and facilitiates the banking system of the country.

Bank

Central Bank	**Commercial Bank**
Is an apex institution of monetary and banking system of account	Is a financial institution which accepts deposits from the general public and giving loans for investment

- **Functions of Central Banks**

  1. Bank of Issue
  2. Banker of the Government
  3. Banker's Bank and Supervisor.
  4. Controller of Credit.

- **Cash Reserve Ratio (CRR) :** This refers to the proportion of total deposit of the commercial bank which they must keep as cash Reserves with Central Bank.

- **Statutory Liquidity Ratio (SLR) :** This refers to liquid assest of the commercial banks which they must maintain (on daily basis) as a minimum percentage of their total deposits.

MONEY CREATION OR CREDIT CREATION BY COMMERCIAL BANKS

Commercial Bank's demand deposits are a part of money supply. Commercial banks lend money to the borrowers by opening demand deposit account in their names. The borrowers are free to use this money by writing cheques. According to definition demand deposits are a part of money supply. Therefore, by creating additional demand deposits bank create money. Money creation depends upon two factor : Primary deposits and Legal Reserve Ratio (LRR). Deposit Multiplier = 1/LRR Total Deposit creation = Initial deposit × 1/LRR.

- ❑ **Repo Rate :** It is the rate of interest at which the Central Bank gives short-period loan to the commercial banks.
- ❑ **Reverse Repo Rate :** It is the rate of interest at which the central bank of a country borrows money from commercial banks.

MULTIPLE CHOICE QUESTIONS

1. The merit of issuing notes with RBI can be seen in

   (a) Uniformity in note issue (b) Stabilityy in currency

   (c) Control of credit (d) All of the above.

2. Money supply consists of

   (a) Currency (b) Deposit

   (c) Both currency and Deposits

   (d) None of the above

3. Which are is qualitative instrument of RBI?

   (a) Cash Reserve Ratio (b) Repo Rate

   (c) Moral sausion (d) Open market operation

4. Which is the legal tender money?

   (a) Cheque (b) Credit Card

   (c) Rupees (d) Demand Draft

5. There is inflationary situation in India, what step RBI should take?

(a) Issuing more currency (b) Increase in Bank rate

(c) Decrease in CRR (d) Decrease in SLR

Answers

1. (d); **2.** (c); **3.** (c); **4.** (c); **5.** (b).

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Explain the function of money as 'Unit of account'.
2. How does money solve the problem of double coincidence of wants?
3. Explain 'Store of Value' function of money.
4. What are open market operations? What is their effect on availability of credit?
5. Explain the concepts of repo-rate and reverse repo-rate.
6. Distinguish between SLR and CRR. Explain the Role of SLR and CRR in credit control.
7. How does changes in Bank rate affect money creation by commercial Bank? Explain.
8. State the role of Central Bank as a banker of the Government.
9. State any four functions of money.
10. Explain the 'Standard of Deferred Payment'.
11. How Central Bank is controller of Credit?
12. Explain how does following helps to control the credit creation.
    (i) Open market operation
    (ii) Margin requirement of loans.
13. What is meant by statutory liquidity ratio (SLR)? State the effect of rise in rate of SLR on creation of credit.
14. Explain 'currency authority' and 'controller of credit' functions of central bank.
15. Explain effect of increase in bank rate on credit creation by commercial banks.

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. What are demand deposits?

Ans. Demand deposits refers to those deposits which are repayable by the banks on demand.

Q. 2. Define cash reserve ratio.

Ans. This refers to the proportion of total deposit of the commercial bank, which they must keep as cash reserves with central bank.

Q. 3. Define money supply.

Ans. Money supply refers to the total volume of money held by public at a particular point of time in an economy.

Q. 4. State the components of money supply.

Ans. (1) currency (coins and notes). (2) Demand Deposits.

Q. 5. Define Bank Rate.

Ans. Bank Rate is the rate at which the central ban of a country lends money to commercial banks to meet their long term needs.

Q. 6. What is a Central bank?

Ans. Central Bank is an apex body that controls, operates regulates and directs the entire banking and monetary structure of the country.

3-4 MARKS QUESTIONS

Q. 1. Explain the significance of the 'Store of Value' function of money.

OR

State the importance of the 'Store of Value' function of money.

Ans. People save a part of their earnings for use in future. But in what form Money fulfills this need of the people. Money as a store of value means that money is an asset and can be stored for use in future one can hold one's earnings until the time one wants to spend it. This is the store of value function of money.

Q. 2. Explain the 'Unit of Account' function of money?

Ans. The 'Uniut of Account' function of money is also called the 'measure of value' function. Money as a unit of account means a standard unit for quoting prices. It makes money a powerful medium of comparing prices of goods and services.

Q. 3. Explain the 'Medium of Exchange' function of money?

Ans. Money as a medium of exchange means money as a means of payment for exchange of goods and services. Goods and services are exchanged for money when people sell things. Money is exchanged for goods and services when people buy things. The medium of exchange function of money solves the problem of double coincidence of wants inherent in the barter system of trade.

Q. 4. Explain the 'Government's Banks' function of a Central Bank.

Ans. A Central Bank conducts the banking account of government departments. It performs the same banking functions for the government as Commercial Bank performs for its customers. It accepts their deposits and undertakes inter-bank transfer. It also gives loans to the government. A Central Bank also provides various services as agent of the government. It manages public debt. It also gives advice to the government regarding money market, capital market, government loans and economic policy matters.

Q. 5. Explain the ‘lendr of last resort’ function of the Central Bank.

Ans. When commercial banks fail to meet their financial requirements from other sources, they approach the central bank to give loans and advances as lender of the last-resort. Central bank assists these banks through discounting of approve securities and bills of exchange.

Q. 6. Explain the problem of double coincidence of wants faced under barter system. How has money solved it?

Ans. Barter system can work only when both buyer and seller are ready to exchange each other's goods. A can exchange goods with B only, when A has what B wants and B has what A wants.

Use of money allows purchase and sale to be conducted independently of each other. This function of money facilitates trade and helps in conducting transactions in an economy.

6 MARKS QUESTION WITH ANSWER

Q. 1. What do you mean by credit/money creation? Explain the process of money creation by the commercial banks with the help of a numerical example.

Ans. Money creation is a process in which a Commercial Bank creates total deposits many times the initial deposits.

The capacity of Commercial Bank to create depends on two factors :

1. Amount of initial fresh deposit
2. Legal Reserve Ratio LRR

Money Multiplier $= \frac{1}{\text{LRR}}$

Money Creation = Initial Deposit × Money multiplier.

Working : Suppose (i) Initial Deposit = Rs. 1000

(ii) LRR = 20%

As required, the bank keeps 20% i.e., Rs. 200 as cash reserve and lend the remaining Rs. 800. Those who borrow use the money for making payments. As assumed those who receive these payments put the money back into their bank accounts. This creates a fresh deposit of Rs. 800. The bank again keep 20% i.e., Rs. 160 and lend Rs. 640. In this way the money goes on multiplying leading to total money creation of Rs. 5000.

Money Creation = Initial Deposit $\times \frac{1}{\text{LRR}}$

$$= 1000\,\frac{1}{0.2} = \text{Rs.}5000$$

UNIT VII

DETERMINATION OF INCOME & EMPLOYMENT

Points to Remember

- AD refers to total value of all final goods and services that are planned to buy by all the sectors of the economy at a given level of income during a period of time. AD represents the total expenditure on goods and services in an economy during a period of time.
- Components of Aggregate demand are :
  - (i) Household consumption expenditure (C).
  - (ii) Investment expenditure (I)
  - (iii) Govt. consumption expenditure (G).
  - (iv) Ne export (X – M).

    Thus, AD = C + I + G + (X – M)

    In two sector economy AD = C + I.
- As refers to total value of all final goods and services that are planned to be produced by all the producing units in the economy during a given period of time. It is also the value of total output available in an economy during a given period of time.

  AS = C + S
- Aggregate supply represents the national income of the country.

  AS = Y (National Income)
- Consumption function shows functional relationship between income and consumption.

  C = f(Y)

where C = Consumtion

Y = National Income

f = Functional relationship

Equation of Consumption Function

$$C = \overline{C} + MPC \cdot Y$$

$\overline{C}$ = Autonomous consumption.

$\overline{C}$ does not get changed/affected by change in income. Consumption expenditure at zero level of income is called autonomous consumption. It is income inelastic.

- ❑ Consumption function (propensity to consume) is of two types :
  - (a) Average propensity to consume (APC)
  - (b) Marginal propensity to consume (MPC)
- ❑ **Average propensity to consume (APC) :** It refers to the ratio of consumption expenditure to the corresponding level of income.

$$APC = \frac{\text{Consumption}(C)}{\text{Income}(Y)} = \frac{C}{Y}$$

Important Points about APC

(i) **APC is more than 1 :** as long as consumption is more than national income. It means before the break-even point, APC > 1,

(ii) **APC = 1,** at the break-even point, consumption is equal to national income.

(iii) **APC is less than 1 :** beyond the break-even point. Consumption is less than national income.

(iv) **APC** falls with increase in income.

(v) **APC can never be zero :** because even at zero level of national income, there is authnomous consumption.

- ❑ **Marginal Propensity to Consume (MPC) :** Marginal propensity to consume refers to the ratio of change in consumption expenditure to change in income.

$$MPC = \frac{\text{Change in Consumption}}{\text{Change in Income}} = \frac{\Delta C}{\Delta Y}$$

Important Points about MPC

- **Value of MPC varies between 0 and 1 :** But if the entire additional income is consumed, then $\Delta C = \Delta Y$, making MPC = 1. However, if entire additional income is savd, than $\Delta C = 0$, making MPC = 0.

- Saving function refers to the funtion refers to the functional relationship between saving and national income.

  $S = f(Y)$

  Equation of Saving function

  $S = \overline{C} + MPS.Y$

  where S = saving

  Y = National Income

  f = Functional relationship.

- Saving function (Propensity to Save) is of two types

  (i) Average Propensity to Save (APS)

  (ii) Marginal Propensity to Save (MPS)

- **Average Propensity to Save (APS) :** Average propensity to save refers to the ratio of savings to the corresponding level of income.

  $$APS = \frac{\text{Savings}}{\text{Income}} = \frac{S}{Y}$$

- **Important Point about APS**

  1. **APS can never be 1 or more than 1 :** As saving can never be equal to or more than income.
  2. **APS can be zero :** At break even point C = Y, hence S = 0.
  3. **APS can be negative :** At income levels which are lower than the break-even point, APS can be negative when consumption exceeds income.

4. APS rises with increases in income.

- **Marginal Propensity to Save (MPS) :** Marginal propensity to save refers to the ratio of change in saving to change in total income.

$$\text{MPS} = \frac{\text{Change in Savings}}{\text{Change in Income}} = \frac{\Delta S}{\Delta Y}$$

- **MPS varies between 0 and 1,** but

  (i) if the entire additional income is saved. In such a case, $\Delta S = \Delta Y$, then MPS = 1.

  (ii) If the entire additional income is consumed. In such a case, $\Delta S = 0$, then MPS = 0.

- **Relationship between APC and APS**

  The sum of APC and APS is equal to one. It can be proved as under we know :

$$Y = C + S$$

  Dividing both sides by Y, we get

$$\frac{Y}{Y} = \frac{C}{Y} + \frac{S}{Y}$$

$$1 = \text{APC} + \text{APS} \begin{bmatrix} \text{APC} = \dfrac{C}{Y} \\ \text{APS} = \dfrac{S}{Y} \end{bmatrix}$$

$$\text{APC} + \text{APS} = 1.$$

  because income is either used for consumption or for saving.

- **Relationship between MPC and MPS**

  The sum of MPC and MPS is equal to one. It can be proved as under :

  We know

$$\Delta Y = \Delta C + \Delta S$$

Dividing both sides by ΔY, we get

$$\frac{\Delta Y}{\Delta Y} = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}$$

$$1 = MPC + MPS \qquad \left[\because \frac{\Delta C}{\Delta Y} = MPC, \frac{\Delta S}{\Delta Y} = MPS\right]$$

MPC + MPS = 1 because total increment in income is either used for consumption or for saving.

- Capital Formation / Investment refers to increase the stock of capital goods during a financial year.
- The investment expenditure is classified under two heads :

  (i) Induced investment (ii) Autonomous investment.

- **Induced Investment :** Induced investment refers to the investment which depends on the profit expectations and is directly influenced by income level (only for reference).
- **Autonomous Investment :** Autonomous investment refers to the investment which is not affected by changes in the level of income and is not induced solely by profit motive. It is income inelastic.
- **Ex-Ante Savings :** Ex-ante saving refers to amount of savings which all the household intended to save at different levels of income in the economy at the beginning of period. It is also known as planned savings.
- **Ex-Ante Investment :** Ex-ante investments refers to amount of investment which all the firms plan to invest at different levels of income in the economy at the beginning of the period. It is also known as planned investment.
- **Ex-Post Saving :** Ex-post savings refer to the actual or realised savings in an economy during a financial year at end of the period.
- **Ex-Post Investment :** Ex-post investment refers to the actual or realised investment in an economy during a financial year at the end of the period.

- Equilibrium level of income is determined only at the point where AD = AS or S = I. But it cannot always be at full employment level also. It can be at less than full employment level or over full employment level.
- Full employment is a situation when all those who are able and willing to work at prevailing wage rate, get the opportunity to work.
- Voluntary unemployment is a situation where person is able to work but not willing to work at prevailing wage rate.
- Involuntary unemployment is a situation where worker is able and willing to work at prevailing wage rate but does not get work.
- Investment multiplier (K) is the ratio of change in income (ΔY) due to change in investment ΔI.

$$K = \frac{\Delta Y}{\Delta I} \quad \text{or} \quad K = \frac{1}{1 - MPC} \quad \text{or} \quad K = \frac{1}{MPS}$$

- Value of Investment multiplier lies b/w 1 to infinity.
- Excess demand refers to a situation when aggregate demand exceeds aggregate supply corresponding to full employment.
- Inflationary gap is the gap by which actual aggregate demand exceeds the level of aggregate demand required to establish full employment. It measures the amount of excess of aggregate demand.
- **Deficient Demand :** When AD falls short of AS at full employment it is called deficient demand.
- Deflationary gap is the gap by which actual aggregate demand is less than the level of aggregate demand required to establish full employment. It measures the amount of deficiency of aggregate demand.

Methods to control excess demand or deficient demand

1. Fiscal Measures or Fiscal Policy
   - Change in Tax
   - Change in Public expenditure
   - Change in Public borrowing
   - Deficit financing (Printing new notes)
2. Monetary Measures or Monetary Policy
   1. Quantitative measures
      - Bank rate / Repo Rate
      - Reverse repo rate
      - Open Market Operation
      - Legal Reserve Ratio
   2. Qualitative/Selective measures
      - Marginal requirement
      - Rationing of credit

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. When all the able bodied people who are willing to work at prevailing wage rate but not getting work then it is called

   (a) Voluntary Unemployment

   (b) Involuntary unemployment

   (c) Under employment (d) None of the above

2. Which of the following can become negative

   (a) APC (b) APS

   (c) MPC (d) MPS

3. Consumption function is the functional relation b/w.

   (a) income and saving (b) price level and consumption

   (c) income and consumption

   (d) income, saving and consumption.

4. Value of investment multiplier directly related to MPC but inversely related with

   (a) APC (b) MPS

   (c) APS (d) None of the above.

5. Which of the following are consequences of Deficient demand :

(a) Increase in Involuntary Unemploment

(b) Decrease in employment and output level

(c) Both (a) and (b) (d) None of the above.

6. Which one of the following is the quantitative measures of monetary policy?

(a) Repo rate (b) Open market operation

(c) SLR (d) All of the above

7. When AD falls short of AS at full employment level of output then it is called

(a) excess demand (b) deficient demand

(c) inflationary gap (d) all of the above.

8. When value of MPC is 0.75 then the value of investment multiplier is

(a) K = 4 (b) K = 5

(c) K = 2 (d) K = 3

9. At the break event point

(a) APC = 1 (b) C = Y

(c) saving = 0 (d) all of the above

10. The consumption expenditure which is affected by change in income is called

(a) Autonomous consumption

(b) Minimum consumption

(c) Induced consumption (d) None of the above

11. Value of Investment multiplier (K) can be more than 5, if

(a) MPC = MPS = 0.5 (b) MPC $\leq$ 0.8

(c) MPC $\geq$ 0.8 (d) MPS < 0.2

12. APC = MPC, when

(a) % change in Income > % change in consumption

(b) % change in Income = % change in consumption

(c) % change in Income < % change in consumption

(d) None of the above.

Answers

1. (b); **2.** (b); **3.** (c); **4.** (b); **5.** (c); **6.** (d); **7.** (b); **8.** (a); **9.** (d); **10.** (c); **11.** (d); **12.** (b)

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Define aggregate demand. State its components.
2. Distinguish between average propensity to consume and marginal propensity to consume with the help of numerical examples.
3. Define full employment, voluntary unemployment and involuntary unemployment.
4. What is meant by investment multiplier? Explain the relationship between MPC and K?
5. State briefly the effect of excess demand and output, employment and price.
6. Explain the role of Bank rate in influencing the availability of credit in an economy.
7. Give the meaning of excess demand? Explain any two fiscal measures to correct excess demand.
8. What do you mean by repo rate and reverse repo rate. How do these help to control deficient demand.
9. Explain with the help of diagram the concept of under-employment equilibrium.
10. Explain the concept of consumption function.
11. Briefly explain the relationship between MPC and MPS.
12. Giving reasons, state whether the following statements are true or false :

(i) When marginal propensity to consume is zero, the value of investment multiplier will also be zero.

(ii) Value of average propensity to save can never be less than zero.

13. Can an economy be in equilibrium when there is unemployment in the economy? Explain.

14. How does change in marginal requirement controls the dituations of excess and deficient demand?

15. What do you mean by open market operations? How does it control the availability of credit in the economy.

16. Does an excess fo AD over AS always imply a situation of inflationary gap? Explain.

17. What happens if AD > AS prior to the full empoyment level of output?

18. State whether the following statement are true or false. Give reason for your answer.

(a) When investment multiplier is 1, the value of MPC is zero.

(b) The value of average propensity to save can never be greater than 1.

19. Giving reasons, state whether the following statements are true or false :

(i) When marginal propensity to consumer is zero, the value of investment multiplier will also be zero.

(ii) Value of average propensity to save can never be less than zero.

20. Find national income from the following : autonomous consumption = Rs. 100, marginal propensity to consume = 0.80, invstment = Rs. 50.

21. Calculate APS and MPS from the following table :

Income (Rs. 000) :	0	100	200	300	400
Consumption (Rs. 000) :	40	120	200	280	360

Expenditure

22. Complete the table

Income (Rs.)	*MPC (Rs.*	*Saving (Rs.)*	*APS (Rs.)*
0	–	–90	–
100	0.6	–	–
200	0.6	–	–
300	0.6	–	–

LONG ANSWER TYPE QUESTIONS (6 MARKS)

1. Why must aggregate demand be equal to aggregate supply at the equilibrium level of income and output? Explain with the help of a diagram?
2. Explain the equilibrium level of income with the help of saving and investment curves. If planned saving exceed planned investment, what changes will bring about the equality between them?
3. Explain the working of multiplier with the help of a numerical example.
4. When planned investment is more than planned savings, what will be its impact on income and employment. Explain with the help of diagram.
5. Distinguish between excess demand and deficient demand.
6. In an economy S = – 50 + 0.5Y is the saving function (where S - saving and Y = national income) and invstment expenditure is 700. Calculate.
   (i) Equilibrium level of national income
   (ii) Consumption expenditure at equilibrium level of national income.
7. In an economy consumption function (C) = 75 + 0.9y and investment expenditure of Rs. 400 crore. Calculate :

(i) Equilibrium level of income

(ii) Saving at equilibrium level of national income.

8. Given below is the consumption function in an economy.

   C = 100 + 0.5 Y

   Wth the help of a numerical example show that in this economy, as income increases APC will decrease.

9. Draw a straight line saving curve from the given consumption curve, explaining the steps of derivation. Show a point on the consumption curve at which APC is equal to 1.

10. Briefly explain the concept of under employment equilibrium with the help of diagram. How increase in investment helps in achieving, full employment equilibrium?

11. What is 'deficient demand' in marcoeconomics? Explain the role of open market operations in correcting it.

12. Explain the step taken in derivation of the saving curve from the given consumption curve use. Use diagram.

13. If MPC in the economy is 0.8. Complete the folowing table :

Income (Rs.) (Y)	***Consumption (Rs.) (C)***	***Saving (Rs.) (S)***	***Investment (Rs.) (I)***	***AD (C+I)***	***AS (C+S)***
0		–60	40		
100			40		
200			40		
300			40		
400			40		
500			40		
600			40		
700			40		

14. In an economy total autonomous spending $\overline{A}\left(\overline{C}+\overline{I}\right)$ is Rs. 50 and MPS is 0.2. Equilibrium level of income is Rs. 4000 crore,

find planned AD and also explain that economy is in equilibrium?

15. At a result of increase in investment by Rs. 100 Crore, national income rises by Rs. 500 crore. Find out marginal propensity to consume and value of investment multiplier.

16. We know that value of investment multiplier directly depends upon MPC. More MPC means more value of investment multiplier. It leads to more generation of national income Why does under developed economy is less even though there is more MPC? Explain.

ANSWER OF 3 MARKS QUESTIONS

24. $K = \dfrac{1}{1 - MPC} = \dfrac{1}{1 - 0.8} = \dfrac{1}{0.2} = 5$

$\Delta Y = K.\Delta I = 5 \times 50 =$ Rs. 250 Crore

25.

Income (Rs. 1000)	*Consumption Expenditure (Rs. 1000)*	*MPC (DC/DY)*	*APS (S/Y)*
0	40	–	–
100	120	0.8	–0.2
200	200	0.8	0
300	280	0.8	0.067
400	360	0.8	0.1

26.

Income	*MPC*	*Savings*	*APS*
0	–	–90	–
100	0.6	–50	–0.5
200	0.6	–10	–0.05
300	0.6	30	0.1

6 MARKS QUESTIONS

8. (a) Y = Rs. 1500 (b) C = Rs. 800

9. (a) Y = Rs. 4750 (b) S = Rs. 400

17.

Income (Y)	***Consumption (C)***	***Saving (S)***	***Investment (I)***	***AD (C+1)***	***AS (C+S)***
0	60	–60	40	100	0
100	140	–40	40	180	100
200	220	–20	40	260	200
300	300	0	40	340	300
400	380	20	40	420	400
500	460	40	40	500	500
600	540	60	40	580	600
700	620	80	40	660	700

18. Given MPS = 0.2

MPC = 0.8 $C = \overline{C} + 0.8Y$

AD = C + 1 Given

$= \overline{C} + 0.8Y + \overline{I} \qquad \overline{C} + \overline{I} = \overline{A} = 50$

$= \overline{A} + 0.8Y$

AD = 50 + 0.8Y

AD = 50 + 0.8 × 4000

= 3250

In Equilibrium

AS = AD

Y = AD

$4000 \neq 3250$

Economy will not be in equilibrium because AD is not equal to AS.

21. $K = \frac{\Delta Y}{\Delta I} = \frac{500}{100} = 5$

K = 5

$$K = \frac{1}{1 - MPC}$$

$$5 = \frac{1}{1 - MPC}$$

5 – 5 MPC = 1

5 = 1 + 5 MPC

5 – 1 = 5 MPC

4 = 5 MPC

$$MPC = \frac{4}{5} = 0.8$$

MPC = 0.8.

EXAM ORIENTED QUESTIONS WITH ANSWERS

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. Theory of Determination of Income and Employment is based on :

   (a) Ex-ante (b) Ex-Post

   (c) both (a) and (b) (d) None of the above

2. MPS equals :

   (a) $\frac{S}{Y}$ (b) $\frac{\Delta C}{\Delta Y}$

   (c) $\frac{\Delta S}{\Delta Y}$ (d) $\frac{\Delta S}{Y}$

3. Which unemployment is not taken into account for determining the labour force of the country :

   (a) Disguised unemployment

   (b) Involuntary Unemployment

   (c) Voluntary Unemployment

   (d) Seasonal Unemployment

4. Excess demand leads to :

   (a) Increase in the level of employment

   (b) Decrease in the level of employment

   (c) No change in the level of employment

   (d) None of the above

5. The consumption curve will be a straightline while

(a) APC is falling while MPC is rising.

(b) APC is falling and MPC is also falling.

(c) APC is falling but MPC is constant.

(d) APC is constant and MPC is rising.

6. Inflationary gap is corrected by central bank through

   (a) raising bank rate (b) govt securities selling

   (c) raising LRR (d) All of the above

7. Which one is the fiscal measure of correcting the gap between AD and AS at full employment

   (a) Open market operation (b) Marginal requirement

   (c) Public expenditure (d) Bank Rate

8. When the equality occurs between AD and AS before full employment equilibrium then it is called

   (a) over full employment equilibrium

   (b) under employment equilibrium

   (c) equilibrium remain unchanged

   (d) Both (a) and (b)

9. As a result of increase in investment of Rs. 1000 in the economy, total national income raises by Rs. 5000. What is the value of investment multiplier?

   (a) 4 (b) 3

   (c) 5 (d) 2

10. Increase in cash reserve ratio will lead to :

   (a) Fall in Aggregate Demand

   (b) Rise in Aggregate Demand

   (c) No change in Aggregate Demand

   (d) None of these.

Answers

1. (a); **2.** (c); **3.** (c); **4.** (c); **5.** (c); **6.** (d); **7.** (c); **8.** (b); **9.** (c); **10.** (a).

VERY SHORT ANSWER QUESTIONS (1 MARK)

Q. 1. What is 'aggregate supply' in macroeconomics?

Ans. Aggregate supply is the value of total quantity of final goods and services planned to be produced in an economy during a period.

Q. 2. Define Marginal propensity to consume.

Ans. MPC is the ratio of change in consumption expenditure' to 'change in income'.

Q. 3. Give meaning of full employment.

Ans. Full employment is a situation in which all those who are able and willing to work at the prevailing wage rate. Find work.

Q. 4. Define Cash Reserve Ratio (CRR).

Ans. CRr can be defined as the ratio (or fraction) of bank deposits that a commercial bank is required to keep with the central bank.

Q. 5. Define Repo Rate.

Ans. Repo rate is the rate of interest charged by central bank on short term loans given to commercial banks.

Q. 6. Value of MPC can never exceed. Why?

Ans. Because increase in consumption can never exceed increase in income.

Q. 7. What is Break even point?

Ans. A point where savings are zero (S = 0) and consumption (C) = Income (Y), is called Break even point.

3-4 MARKS QUESTIONS WITH ANSWERS

Q. 1. In an economy the MPC is 0.75. Investment expenditure in the economy increase by Rs. 75 Crore. Calculate total increase in national income.

Ans. $K = \frac{1}{1 - MPC} = \frac{1}{1 - 0.75}$

K = 4

$K = \frac{\Delta Y}{\Delta I}$

$4 = \frac{\Delta Y}{75}$

$\Delta Y = 4 \times 75 = 300$ Crore.

Q. 2. An economy is in equilibrium. Its consumption function is C = 300 + 0.8Y and investment is Rs. 700 find national income.

Ans. C = 300 + 0.8Y

Y = C + I

Y = 300 + 0.8Y + 700

0.2Y = 1000

Y = 5000

National Income = Rs. 5000

Q. 3. Giving reasons' state whether the following statements are true or false.

1. When MPC is zero, the value of investment multiplier will also be zero.
2. Value of APS can never be less than zero.
3. When MPC > MPS, the value of investment multiplier will be greater than 5.
4. The value of MPS can never be negative.
5. When investment multiplier is 1, then value of MPC is zero.
6. The value of APS can never be greater than 1.

Ans.
1. False because when MPC = 0

   Value of investment multiplier is one K = 1/(1 – MPC).
2. False because APS is negative when there are dissavings
3. True, if MPC is greater than 0.8 or false if MPC > 0.5 but not greater than 0.8.

4. True, since MPS = $\Delta S/\Delta Y$ and with increase in Income Savings can not decrease.
5. True, because K = 1/1 – MPC = 1/1 – 0 = 1.
6. True, because savings can't be greater than Income.

Q. 4. Explain the distinction between voluntary and involuntary employment.

Ans. Voluntary unemployment is a situation where person is able to work but not willing to work at prevailing wage rate. Involuntary unemployment is a situation where worker is able and willing to work at prevailing wage rate but does not get work.

Q. 5. Explain the relationship between investment multiplier and MPC?

Ans. K = 1/(1 – MPC), it shows direct relationship between MPC and the value of multiplier. Higher the proportion of increased income spend on consumption, higher will be value of investment multiplier.

Q. 6. Saving curve of an economy makes a negative intercept of Rs. 30 Crores and 20% of the increased income is saved. Give saving and consumption function.

Ans. $\overline{C}$ = Rs. 30 Crore

MPS = 0.2

$S = -\overline{C} + (1-b)y$

= – 30 + 0.2Y

MPC = 1 – 0.2 = 0.8

Consumption $C = \overline{C} + by$

Function C = 30 + 0.8Y

6 MARKS QUESTIONS WITH ANSWER

Q. 1. Explain the role of the following in correcting deficient demand in an economy.

1. Open Market Operation
2. Bank Rate

Ans. 1. Open market operation refer to the sale and purchase of securities by the Central Bank. In case of deficient demand when AD falling short of AS at full employment, the Central Bank buys securities in the open market and makes payment to the sellers. The money flow out of the Central Bank and reaches the Commercial Bank as deposits. This raises the lending capacity of the banks, people can borrow more. This will raise AD.

2. Incase of deficient demand Central Bank decrease the bank rate which the Central Bank charges on the loan given to commercial bank. This forces the Commercial Banks to reduce lending rate. Since borrowing become cheaper and people borrow more. This will raise AD.

Q. 2. Explain the role of the following in correcting 'Excess Demand in an Economy'.

1. Bank Rate 2. Open Market Operation

Ans. 1. To correct excess demand Central Bank can rise the bank rate. This forces Commercial Bank to increase lending rates. This reduces demand for borrowing by the public for investment and consumption. Aggregate demand falls.

2. When there is excess demand. Central Bank sells securities. This leads to flow of money out of the Commercial Banks to the Central Bank. This reduces deposits with the banks leading to decline in their lending capacity. Borrowing decline. AD declines.

Q. 3. Explain the role of following in correcting the deflationary gap in an economy.

1. Govt. Expenditure 2. Cash Reserve Ratio

Ans. 1. In a situation of deflationary gap or deficient demand the govt. should raise its expenditure i.e., there will be more economic activities in the economy like, building of roads, bridges, canal etc. This will raise the level of employment. It will in turn increase the income and the purchasing power of community. Thus aggregate demand will rise.

2. During deficient demand, Central Bank reduces the CRR.

The result of reducing CRR will be seen in the surplus cash reserves with the banks which can be offered for credit. This will have expansionary effectr on the credit position of the banks leading to increase in their lending capacity. As a result borrowing will increase and AD will rise.

Q. 4. Explain the role of margin requirements for correcting the deflationary gap.

Ans. Deflationary gap refers to a situation when at full employment level of income AD falls short of AS. It is also called deficient demand.

Margin requirements refers to the margin on the security provided by the borrower. In case of deflationary gap, Central Bank lowers the margin. As a result the borrowing capacity of the borrowers increase. This will raise AD.

Q. 5. In an economy 75% of the increase in income is spent on consumption. Investment increased by Rs. 1000 Crore. Calculate.

1. Total increase in income
2. Total increase in consumption expected.

Ans. MPC = 75% = 75/100 = 3/4.

MPC = 1 – 3/4 = 1/4 K = 4

1. $\Delta Y = \Delta I \times K$

DY = 1000 × 4

= 4000 Crores

2. $\text{MPC} = \frac{\Delta C}{\Delta Y}$

$0.75 = \frac{\Delta C}{4000}$

$0.75 \times 400 = \Delta C$

$\Delta C = 3000$ Crores

Q. 6. In an economy equilibrium level of income of Rs. 1200 Crores. The ratio of MPC to MPS is 3 : 1. Calculate the additional investment needed to reach a new equilibrium level of income of Rs. 2000 crores.

Ans. $\text{MPC} = \frac{3}{4} = 0.75$

K = 1/(1 – MPC) = 1/(1 – 0.75) = 4

ΔY = 2000 – 1200 = 800 Crores

K = ΔY / ΔI

4 = 800 / ΔI

ΔI = 200 Crores

Q. 7. Differentiate between Repo Rate & Bank Rate.

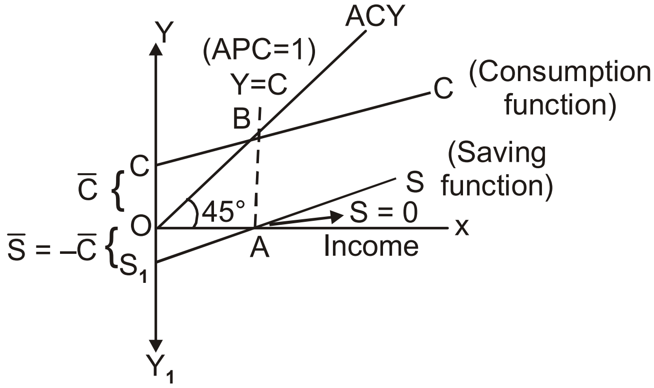
Ans. Repo Rate is concerned with short-term lending by the Central Bank to commercial banks and is governed by the short term interest rate. While Bank rate is applicable to long term lending by the central bank to commercial banks and is governed by the long-term interest rate.

Q. 7. Explain the steps taken in derivation of the saving curve from the given consumption curve. Use diagram.

Ans. Consumption and saving are the two components of income. i.e., Y = C + S. At all income levels total of consumption and savings is equal to income. This means consumption and income are complementary to one another. If consumption function is known then saving cure can easily be made.

Steps

1. Draw a line at 45° from the origin.
2. This will intersect consumption curve CC at point B. Consumption (C) = Income (Y) at Point B.
3. Draw a parpendicular from Pt. B on X-axis. Foot of the perpendicular meets x-axis at point A. Savings is zero at Point A.
4. Now take a point S, on the negative on y-axis such that OS, equal OC, So S_1 is the initial point of saving.
5. In the last, draw a line from S_1 to A, and extend it upto S. Thus SS_1 is the required saving curve.

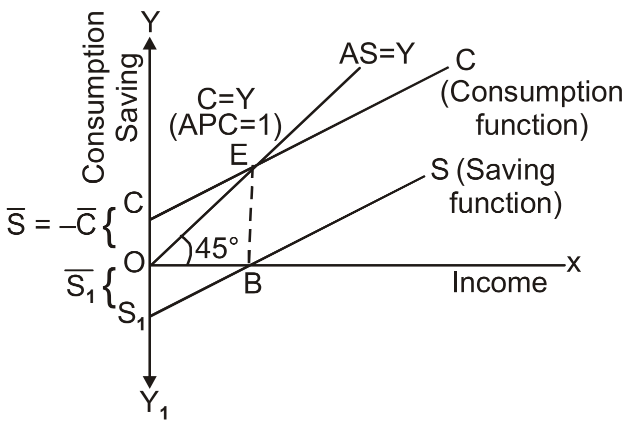


Q. 9. Explain the steps taken in derivation of the consumption curve from the given saving curve. Use diagram.

Ans. For the saving curve S_1S, consumption curve can be drawn.

Steps

1. First of all, draw a line at 45° from the origin.
2. Take a point C on the y-axis positive intercept such that OS_1 = OC. Thus C is the initial point of the consumption curve.
3. Point B on the x-axis represents zero saving. Draw a perpendicular from B point which intersect as line at E. At Point E, consumption (C) = Income (Y).
4. In the last, draw a line connecting C and point E. Thus Cc is the required consumption curve.

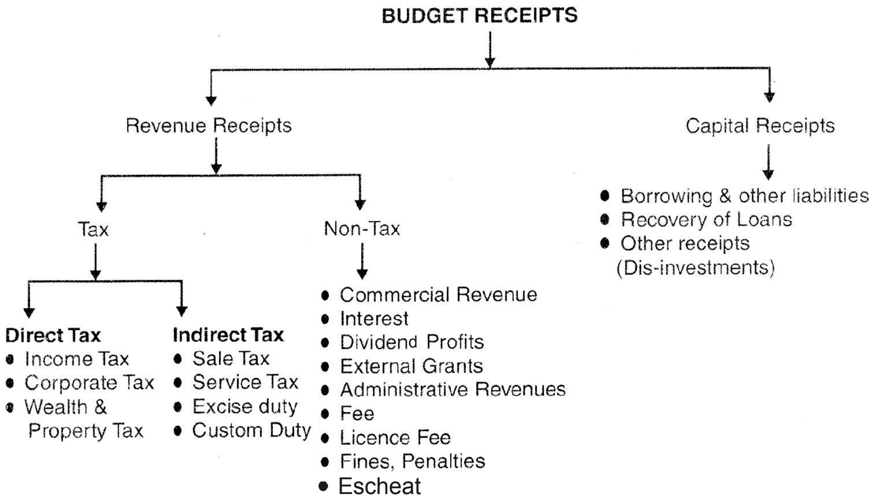


UNIT VIII

GOVERNMENT BUDGET AND THE ECONOMY

Points to Remember

- ❑ Budget is a financial statement showing the expected receipt and expenditure of Govt. for the coming fiscal or financial year.
- ❑ Main objectives of budget are :
  - (i) Reallocation of resources.
  - (ii) Redistribution of income and wealth
  - (iii) Economic Stability
  - (iv) Management of Public enterprises.
  - (v) Economic Growth
- ❑ There are two components of budget :
  - (a) Revenue budget (b) Capital budget
- ❑ Revenue Budget consists of revenue receipt of Govt. and expenditure met from such revenue.
- ❑ Capital budget consists of capital receipts and capital expenditure.



- **Direct Tax :** When Government imposes a tax on a person and paid by the same person is called direct tax. Its burden cannot be shifted to others. For example : Income Tax, Property Tax.

- **Indirect Tax :** When Government imposes a tax on a person but partially or wholly paid by other person is called indirect tax. Its burden can be shifted to others. For example : Sales Tax, Excise duty.

- **Revenue Receipts :**

  (i) Neither creates liabilities for Govt.

  (ii) Nor causes any reduction in assets.

- **Capital Receipts :**

  (i) It creates liabilities or (ii) It reduces assets of the Govt.

BUDGET EXPENDITURE

Revenue Expenditure	***Capital Expenditure***
e.g. Interest Payment, subsidies, Defence Services, Salaries etc.	*e.g.* Construction of school building * Repayment of loans Purchasing of shares, land and Machines etc.

- **Revenue Expenditure :**

  (i) Neither creates assets (ii) Nor reduces liabilities

- **Capital Expenditure :**

  (i) It creates assets (ii) It reduces liabilities.

- Revenue deficit when total revenue expenditure exceeds total revenue receipts.

- **Revenue Deficit :** Total revenue expenditure > Total revenue receipts

- **Implications of Revenue Deficit are :**

  (i) It leads to repayment burden in future without investment.

  (ii) It shows wasteful expenditures of Govt. on administration.

  (iii) It increase the burden of taxes.

- **Fiscal Deficit :** Total expenditures – Total Receipts excluding borrowing.
- **Fiscal Deficit :** When total expenditure exceeds total receipts excluding borrowing.
- **Implications of Fiscal Deficits are :**
  - (i) It leads to inflationary pressure.
  - (ii) A country has to face debt trap.
  - (iii) It reduces future growth and development.
- **Primary Deficit :** By deducting Interest payment from fiscal deficit we get primary deficit.
- **Primary Deficit :** Fiscal deficit – Interest payments.

MULTIPLE CHOICE QUESTIONS

1. Disinvestment by Government means :
   (a) selling of its fixed capital assets
   (b) selling of shares of Public Enterprise held by it
   (c) selling of its building (d) All the above
2. Which one is Direct Tax
   (a) Service tax (b) Excise duty
   (c) Corporation tax (d) Entertainment tax
3. If budgetary deficit is nil and borrowing and other liabilities are 70 crore, what is the amount of fiscal deficit?
   (a) Nil (b) 30 crore
   (c) Can't say (d) 70 crore
4. Payment of interest is
   (a) Revenue expenditure (b) Capital expenditure
   (c) Primary deficit (d) Fiscal deficit
5. If in a budget, Revenue deficit is Rs. 50,000 and borrowings are Rs. 75,000 crore. How much is the fiscal deficit ?

(a) 50,000 crore (b) 75,000 crore

(c) 25,000 crore (d) 1,25,000 crore

6. It borrowing and other liabilities are added to the budget deficit, we get ...

   (a) Revenue deficit (b) Capital deficit

   (c) Primary deficit (d) Fiscal deficit

7. Which is the example of Administrative non-tax Revenue of Central Government?

   (a) Profit from PSUs (b) Disinvestment

   (c) Excise duty (d) Recovery of loan.

8. Capital receipt may come from

   (a) Market borrowing (b) Provident fund

   (c) Recoveries of loan (d) All the above.

9. Which are is capital expenditure of govt.

   (a) Salaries of Staff (b) Payment of Interest

   (c) Purchase of machinery (d) Subsidy

10. Fiscal Deficit always leads to

    (a) Increase in borrowings (b) Inflationary Pressure

    (c) Crowding out (d) All the above

11. Borrowings in Governments Budget is :

    (a) Revenue Deficit (b) Fiscal Deficit

    (c) Primary Deficit (d) Deficit in Taxes

Answers

1. (d); **2.** (c); **3.** (d); **4.** (a); **5.** (b); **6.** (d); **7.** (a); **8.** (d); **9.** (c); **10.** (d); **11.** (b).

SHORT ANSWER TYPE QUESTIONS (3–4 MARKS)

1. Explain the allocation of resources objective of Govt. budget.

2. What is the difference between revenue budget and capital budget?

3. What is meant by revenue receipts? Explain the components of revenue receipts of the Govt.

4. Distinguish between direct tax and indirect tax.

5. What are capital receipts? What are the main components of the capital receipts?

6. Give the meaning of revenue deficit and fiscal deficit. What problems can the fiscal deficit create?

7. Distinguish between revenue expenditure and capital expenditure with an example of each.

8. Explain the "redistribution of income" objective of Govt. Budget.

9. Explain the 'Economic stability' objective of Govt. budget.

10. Under which situations deficit budget is beneficial for the economy.

11. Are fiscal deficits necessarily inflationary? Give reasons in support of your view.

12. How can surplus budget be used during inflation.

13. Giving reasons, classify the following as direct and indirect taxes.

    (i) Entertainment tax (ii) Corporation tax

    (iii) Excise tax (iv) Capital gains tax

14. From the following data about a government budget find (a) revenue deficit, (b) fiscal deficit and (c) primary deficit.

		(Rs. arab)
(i)	Plan capital expenditure	120
(ii)	Revenue expenditure	100
(iii)	Non-plan capital expenditure	80
(iv)	Revenue receipts	70
(v)	Capital receipts net of borrowing	140
(vi)	Interest payments	30

15. Distinguish between :

(i) Capital expenditure and Revenue expenditure

(ii) Fiscal deficit and Primary deficit.

16. Why does the Fiscal Deficit equal to borrowings.

LONG ANSWER QUESTIONS

17. Classify the following into revenue receipts and capital receipts give reasons :

(a) Dividends earned from Indian Oil Corporation.

(b) Loan taken from USA for the infrastructural developments

(c) Receipt of grant from Bill gates foundation for AIDS patients.

(d) Profit of ONGC, a public enterprises.

(e) Funds raised from public in the form of National Saving certificates.

(f) License and court fee received by the Govt. of India during year 2015-16.

18. Classify the following into revenue expenditure and Capital expenditure Give reasons.

(i) Repayment of loan to the World Bank

(ii) Salary paid to Army Officers.

(iii) Interest paid on National Debt

(iv) Construction of roads under the Pradhan Mantri's Gramin Sadak Yojnas

(v) Financial grant given to Nepal for earthquake tragedy.

(vi) Expenditure on constructions of Bullet train.

HINTS

14. (i) Indirect tax

(ii) Direct Tax

(iii) Indirect tax

(iv) Direct tax

15. (a) Revenue deficit = Rs 30 arab

(b) Fiscal deficit = Rs 90 arab

(c) Primary deficit = Rs 60 arab

18. (a) Revenue Receipts

(b) Capital Receipts

(c) Revenue Receipts

(d) Revenue Receipts

(e) Capital Receipts

(f) Revenue Receipt

19. (i) Capital Expenditure

(ii) Revenue Expenditure

(iii) Revenue Expenditure

(iv) Capital Expenditure

(v) Revenue Expenditure

(vi) Capital Expenditure

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. Why is recovery of loans treated as a capital receipts?

Ans. Because it reduces assets of the government.

Q. 2. Why are borrowing a capital receipt?

Ans. Because they create a liability for the government.

Q. 3. Give two examples of revenue receipts?

Ans. (i) Tax receipts (ii) Income from Public enterprises

Q. 4. Define Government Budget.

Ans. Government Budget is an annual statement of estimated receipts and expenditure during a fiscal year.

Q. 5. Define revenue Budget.

Ans. Revenue Budget is the statement of estimated revenue receipts and estimated revenue expenditure during a year.

Q. 6. Define disinvestment.

Ans. It refers to the selling of shares of PSU held by the government.

Q. 7. What is capital budget.

Ans. Capital Budget shows estimated capital receips and capital expenditure during a fiscal year.

Q. 8. What is direct tax? Give an example.

Ans. A direct tax is one final burden of which falls on that very person who is liable to pay it to the government. Example : Income tax.

Q. 9. What is Indirect tax? Give two examples.

Ans. An Indirect tax is that tax which is initially imposed on and paid by one individual, but the burden of which is passed over to some other person who ultimately bears it.

Example : (i) Sales tax (ii) VAT.

3-4 MARKS QUESTIONS WITH ANSWERS

Q. 1. Explain the 'redistribution of income' objective of a government budget.

OR

Explain how the government budget can help in a fair distribution of income in the economy.

Ans. Budgetary policies are useful medium to reduce inequalities of income or the fair distribution of income. Government can use tax policy and public expenditure as a tool. Government can reduce the disposable income and wealth of Rich by imposing heavy tax and can spend more on providing free services to the poor. It raise the disposable income and welfare of the poor.

Q. 2. Explain the "Reallocation of resources" objective of a government budget.

Ans. Through its Budgetary policy the government directs the allocation of resources in a manner such that there is a balance between the goal of profit maximisation and social welfare. Government can provide subsidy and reduction in tax rate to motivate investment into areas where private sector initiative is not coming.

Q. 3. Distinguish between revenue receipts and capital receipts with the help of example :

Ans.

Revenue Receipts	*Capital Receipts*
1. These receipt do not create any liability for government.	1. These receipt create liability for the Govt.
2. These receipts do not cause any reduction in assets.	2. These receipts cause a reduction in assets of the Govt.
3. Example : Tax receipts	3. Example : Loan by Govt., disinvestment.

Q. 4. Distinguish between Revenue Expenditure and Capital Expenditure with the help of example :

Ans.

Revenue Expenditure	*Capital Expenditure*
1. These expenditure do not increase govt. assets	1. These expenditure increase the govt. assets.
2. These expenditure do not cause any reduction in govt. liability	2. These expenditure cause reduction in govt. liability.
3. Example : Transfer payment by government.	3. Example : Repayment of loan by government.

Q. 5. Distinguish between Direct and Indirect Tax :

Ans.

Direct Tax	*Indirect Tax*
1. Direct tax is a tax whose liability to pay and incidence lie on the same person.	1. The liability to pay and incidence of indirect tax do not lie on the same person.
2. Its incidence can not be shifted to some other person.	2. Its incidence can be shifted to some other person.
3. Example : Income Tax	3. Excise duty, VAT

Q. 6. What is meant by fiscal deficit. Write its implications.

Ans. Fiscal deficit is equal to excess of total expenditure over the sum of revenue receipts and capital receipts excluding borrowings i.e., Fiscal deficit means borrowing of the government.

Fiscal Deficit : Total expenditure – Total receipts net of borrowings.

Implication of Fiscal Deficit :

1. It increase the supply of money in the economy.
2. It increase financial burden for future generation.
3. It is cause of inflation.

Q. 7. What is revenue deficit? State its implications.

Ans. Revenue deficit is the excess of total revenue expenditure over total revenue receipts.

Implication : 1. It implies that government is dis-saving.

2. It implies that the government is spending more than the current income.

3. A high revenue deficit gives a warning signal to the government to either curtail its expenditure or increase its revenue.

Q. 8. Calculate (1) Revenue deficit (2) Fiscal Deficit (3) Primary Deficit by following Data : (Rs. Crore)

1.	Capital Receipts other than borrowings	95
2.	Revenue Expenditure	100
3.	Interest payment	10
4.	Revenue Receipts	80
5.	Capital Expenditure	110

Ans. 1. Revenue deficit = Revenue expenditure – Revenue Receipts

= 100 – 80 = Rs. 20 Crore.

2. Fiscal Deficit = (Recenue Expenditure + Capital Expenditure) – Revenue Receipts – Capital receipts net of borrowings

= 100 + 110 – 80 – 95 = Rs. 35 Crore.

3. Primary deficit = Fiscal Deficit – Interest Payment

= 35 – 10 = Rs. 25 Crore.

UNIT IX

BALANCE OF PAYMENT

Points to Remember

- The balance of payment is a comprehensive and systematic records of all economic transaction between normal residents of a country and rest of the world during an accounting year.

ACCOUNTS OF BALANCE OF PAYMENTS

Current Account	Capital Account
The current account records exports and imports of goods and services and unilateral transfers.	It records of all such transactions between normal residents of a country and rest of the world which relate to sale and purchase of foreign assets and liabilities during an accounting year.

Components of Current Account	*Components of Capital Account*
1. Visible items (import and export of goods).	1. Foreign Direct investment and portfolio investment.
2. Invisible items (import and export of services).	2. Loans
3. Unilateral transfers	3. Change in foreign exchange reserve.

- The components of current account do not cause a change in assets or Liabilities status of the residents of a country or its Government.
- The components of Capital accounts cause in change in assets or Liability status of the residents and the Government of a country.
- Balance of trade is the net difference of import and export of all visible items between the normal residents of a country and rest of the world.

- Autonomous items are those items of balance of payment which are related to such transaction as are determined by the motive of profit maximisation and not to maintain equilibrium in balance of payments. These items are generally called 'Above the Line items' in balance of payment.
- Accommodating item refers to transactions that take place because of other activity in Balance of Payment. These transactions are meant to restore the Balance of Payment identity. These items are generally called 'Below the Line items'.
- **Deficit of BOP Account :** When total inflows of foreign exchange on account of autonomous transactions are less than total outflows on account such transaction then there is a deficit in BoP.
- **Foreign Exchange Rate :** Foreign exchange rate refers to the rate at which one unit of currency of a country can be exchanged for the number of units of currency of another country.

SYSTEM OF EXCHANGE RATE

Fixed exchange rate | Flexible exchange rate

- **Fixed Exchange Rate :** In fixed exchange rate system, the rate of exchange is officially fixed or determined by Government or Monetary Authority of the country.
- **Merits of Fixed Exchange Rate**
  (i) Stability in exchange rate
  (ii) Promotes capital movement and internatinal trade.
  (iii) No scope for speculation.
- **Demerits of Fixed Exchange Rate**
  (i) Need to hold foreign exchange reserves.
  (ii) No automatic adjustment in the 'Balance of payments'
  (iii) Enhance dependence on external sources.

- **Flexible or Floating Exchange Rate :** In a system of flexible exchange rate (also known as floating exchange rates), the exchange rate is determined by the forces of market demand and market supply of foreign exchange.
- The demand of foreign exchange have inverse relation with flexible exchange rate. If flexible exchange rate rise the demand of foreign exchange falls and Vice versa.
- **Sources of Demand for Foreign Exchange**
  - (a) To purchase goods and services from the rest of world.
  - (b) To purchases financial assets (i.e., to invest in bonds and equity shares) in a foreign country.
  - (c) To invest directly in shops, factories, buildings in foreign countries.
  - (d) To send gifts and grants to abroad.
  - (e) To speculate on the value of foreign currency.
  - (f) To undertake foreign tours.
- The supply of foreign exchange have positive relation with foreign exchange rate. If foreign exchange rate rises the supply of foreign exchange rate also rises and vice versa.
- **Source of Supply of Foreign Exchange**
  - (i) Direct purchase by foreigners in domestic market.
  - (ii) Direct investment by foreigners in domestic market.
  - (iii) Remittance by non-residents living abroad.
  - (iv) Flow of foreign exchange due to speculative purchases by N.R.I.
  - (v) Exports of goods and services.
- **Merits of Flexible Exchange Rate**
  - (i) No need to hold foreign exchange reserves
  - (ii) Leads to automatic adjustment in the 'balance of paymnts'.
  - (iii) To increase the efficiency in the economy by achieving optimum resources allocation.

(iv) To remove obstacles in the transfer of capital and trade.

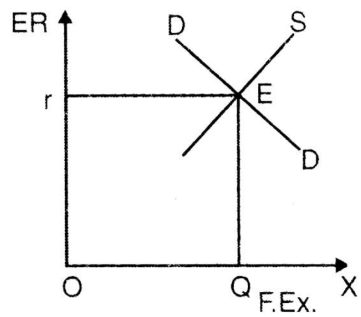
- **Demerits of Flexible Exchange Rate**

  (i) Fluctuations in future exchange rate.

  (ii) Encourages speculation.

  (iii) Discourages international trade and investment.

- **Determination of Equilibrium Foreign Exchange Rate :** Equilibrium foreign exchange rate is the rate at which demand for and supply of foreign exchange are equal. Under free market situation, it is determined by market forces i.e., demand for and supply of foreign exchange. There is inverse relation between demand for foreign exchange and exchange rate. There is direct relationship b/w supply of foreign exchange and exchange rate. Due to above reasons demand curve downward sloping and supply curve is upward sloping curve Graphically intersection of demand. Curve and supply curve determines the equilibrium foreign exchange rate (i.e., or).



- **Devaluation of a Currency :** When government or monetary authority of a country officially lowers the external value of its domestic currency (in respect of all other foreign currency) is called devaluation of a currency. It takes place by government order under fixed exchange rate system.

- **Revaluation of a currency :** When government or monetary authority of a country officially raises the external value of its domestic currency (in respect of all other foreign currency) is called revaluation. It takes place by government order under fixed exchange rates system.

- **In currency depreciation** there is a fall in the value of domestic currency, in term of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.
- **In currency appreciation,** there is a rise in the value of domestic currency in terms of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.
- **Managed floating system** is a system in which the central bank allows the exchange rate to be determined by market forces but intervenes at times to influence the rate. When central bank finds the rate is too high, it starts selling foreign exchange from its reserve to bring down it. When it finds the rate is too low. It starts buying to raise the rate.

MULTIPLE CHOICE QUESTIONS

1. Which item is an intangible item in balance of payments statement?

   (a) Export of food grains (b) Imports of crude oil

   (c) Banking services provided in other countries

   (d) Import of steel by steel industry

2. Which one deal with debts and claims of a country?

   (a) Balance of capital account

   (b) Balance of trade account

   (c) Balance of current account

   (d) Balance of Services

3. Capital account may be

   (a) Private capital (b) Banking capital

   (c) Official Capital (d) All the above

4. Current account of BOP records transactions is relating to

   (a) Exchange of goods (b) Exchange of services

   (c) Unilateral transforms (d) All the above

5. In currency depreciations, there is

   (a) Fall in the value of domestic currency in temrs of foreign currency

   (b) No change in the value of domestic currency

   (c) Rise in the value of domestic currency in terms of foreign currency

   (d) Decrease in the production of goods in domestic country.

6. Major functions of foreign exchange market are

   (a) International transfer of foreign currency

   (b) Providing credit for foreign trade

   (c) Hedging foreign exchange rate

   (d) All of the above

7. Buyers and Sellers of foreign exchange are

   (a) Central Bank (b) Commercial Bank

   (c) Brokers (d) All the above

8. Which one country manipulates exchange rate against the interest of other country, is known as

   (a) Managed floating (b) Dirty floating

   (c) Wide band (d) Crawling peg.

9. How exports are affected during appreciations of currency?

   (a) Increases (b) Decreases

   (c) Remains constant (d) None of the above.

10. Increase in the value of domestic currency by the govt. is called

   (a) Depreciation (b) Devaluation

   (c) Revaluation (d) Appreciation

Answers

1. (c); **2.** (a); **3.** (d); **4.** (d); **5.** (a); **6.** (d); **7.** (d); **8.** (b); **9.** (b); **10.** (c).

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Write any three points of difference between BOT and BOP.
2. Distinguish between current account and capital account of BOP.
3. How can deficit in BOP be financed?
4. What are the components of the current accountn of the balance of payment account?
5. For the given exchange rates state which currency is appreciating and which one is depreciating

Old Exchange Rate	*New Exchange Rate*	*Appreciating Currency*	*Depreciating Currency*
1£ = $1	1£ = $2	–	–
1€ = 3$	1€ = 2$	–	–
1HK$ = Rs. 20	1HK$ = Rs. 18	–	–
1US$ = 100¥	1US$ = 102¥	–	–

6. Distinguish between autonomous and accommodating transaction in the balance of payment account. Give an example each.
7. Give three reasons why people desire to have foreign exchange.
8. Give any three/four sources of supply of foreign exchange.
9. Explain the relationship between foreign exchange rate and demand for it.
10. Explain the relationship between foreign exchange rate and supply of foreign exchange.
11. Explain the terms 'appreciation and depreciation of currency.'
12. Explain the merits and demerits of fixed exchange rate.
13. Explain the merits and demerits of flexible exchange rate.
14. How is flexible exchange rate determined in a free market economy? Explain with the help of diagram.
15. Higher the foreign exchange rate, lower the demand for foreign exchange. Explain why?

16. Lower the foreign exchange rate, higher the demand for foreign exchange. Explain why?
17. Explain the impact of Devaluation of domestic currency on the export and imports of an economy.
18. Give the meaning of fixed, flexible and managed floating exchange rate.
19. Why the demand for foreign exchange falls when the foreign exchange rate rises explain with the help of an example.

6 MARKS QUESTIONS

1. Explain the distinction between Autonomous and Accommodating transations in balance of payments. Also explain the concept of balance of payments 'deficit' in this context.
2. What is balance of payments account? Name three components each of its current account and capital account.
3. How is balance of trade different from balance of payments? State the items not included in balance of trade.
4. Classify whether the following transactions are to be accounted in the current account or capital accounts of India's BOP.
   (a) Purchase to TISCO shares by a foreign resident
   (b) Sale of Indian Skirts in Germany
   (c) Infosys borrowing from a US Bank
   (d) Money sent by an Indian to her friend in Canada
   (e) Purchase of Land in England
   (f) Gifts received from a relative in USA.
5. Giving reasons state whether the following statements are true or false:
   (i) Excess of foreign exchange receipts over foreign exchange payments on account of accommodating transactions equals deficit in the balance of payments.
   (ii) Export and import of machines are recorded in capital account of the balance of payments account.

HINTS

5. *Appreciating currency* | *Depreciating currency*

	Appreciating currency	*Depreciating currency*
(i)	£	$
(ii)	$	€
(iii)	Rs.	HK $
(iv)	US $	¥

LONG QUESTIONS HINT

4. Capital account (a), (c) and (e)

   Current account (b), (d) and (f)

Exam. Oriented Questions with Answer

VERY SHORT ANSWER QUESTION (1 MARK)

Q. 1. Define foreign exchange rate.

Ans. Foreign exchange rate is the price of a foreign currency in terms of domestic currency.

Q. 2. What is foreign exchange?

Ans. Any currency other than the doemstic currency.

Q. 3. What is balance of payment accounts?

Ans. It is a systematic record of all economic transactions between the residents of a country and the rest of the world in a given period (one year) of time.

Q. 4. State two sources of supply of foreign exchange.

Ans. Exports and Foreign Tourism.

Q. 5. State two sources of demand of foreign exchange.

Ans. Import of goods and services and to get education in abroad.

Q. 6. What does a deficit in balance of trade indicate.

Ans. Deficit in balance of trade indicates that the imports of good are greater than the exports.

Q. 7. What is fixed exchange rate?

Ans. When rate of exchange is fixed by the government in an economy.

Q. 8. Define flexible exchange rate.

Ans. The rate of exchange in terms of other currencies are determined by market forces of demand and supply.

Q. 9. Define managed floating exchange rate.

Ans. It is a system in which the Central Bank or government allow the exchange rate to determined by market forces but they take decisions to intervene whenever they feel it appropriate.

3 - 4 Mark Questions

Q. 1. State the compoennts of capital account of balance of payment.

Ans. 1. Borrowing and lending to and from abroad.

2. Investment to and from abroad.

3. Change in foreign exchange reserves.

Q. 2. What are the components of current account of the BOP account?

Ans. 1. Exports and imports of goods

2. Exports and imports of services

3. Unilateral transfers

Q. 3. Explain the meaning of deficit in BOP.

Ans. When autonomous foreign exchange payments exceeds autonomous foreign exchange receipts, the difference is called balance of payments deficit.

Q. 4. Distinguish between devaluation and depreciation of domestic currency.

Ans. When government or authorities reduce the price of domestic currency in terms of all foreign currencies is called devaluation. The fall in market price of domestic currency (due to demand and supply in the market) in terms of a foreign currency is called depreciation.

Q. 5. When price of a foreign currency rises its supply also rises. Explain? Why?

Ans. If exchange rate increases, this will make domestic country's goods cheaper to foreigners. The demand for our exports will rise. It implies more supply of foreign exchange.

SAMPLE PAPER

MODEL TEST PAPER

Subject : Economics

[Time : 3 Hrs.] **[M.M. : 100]**

General Instruction :

(i) All questions in both the sections are compulsory.

(ii) Marks for questions are indicated against each questions.

(iii) Questions No., 1-5 and 16-20 are very short answer questions carrying 1 mark each.

(iv) Question No. 6-8 and 21-23 are short answer questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.

(v) Questions No. 9-11 and 24-26 are also short answer questions carrying 4 marks each. Answer to them should not normally exceed 70 words each.

(vi) Questions No. 12-15 and 27-30 are long answer questions carrying 6 marks each. Answer to them should not normally exceed 100 words each.

(vii) Answer should be brief and to the point and above word limit be adhered to as far as possible.

Section – A

1. What happens to the difference between Average total cost and Average variable cost as production is increased? 1

2. When 5 units of a goods are sold, total revenue is Rs. 100. When 6 units are sold, marginal revenue is Rs. 8. At what price are 6 units sold? 1

(a) Rs. 28 per unit (b) Rs. 20 per unit

(c) Rs. 18 per unit (d) Rs. 12 per unit

3. Differentiated products is a charactristics of 1

(a) Monopolistic competition only

(b) Oligopoly only

(c) Both monopolistic competition and oligopoly

(d) Monopoly

4. Marginal revenue of a firm is constant throughout under: 1

(a) Perfect competition (b) Monopolistic competition

(c) Oligopoly (d) All the above

5. Define monopoly. 1

6. A consumer consumes only two goods X and Y. The marginal Rate of substitution is 1. Prices of X and Y are Rs. 3 and Rs. 4 per unit respectively. Is the consumer in equilibrium? What will be future reaction of the consumer? Give reasons. 3

7. A consumer spends Rs. 400 on a good priced at Rs. 8 per unit. When its price rises by 25 percent, the consumer spends Rs. 500 on the good. Calculate the price elasticity of demand by the Percentage method. 3

OR

What will be effect of 10 percent rise in price of a good on its demand if price elasticity of demand is (a) zero (b) –1 (c) –2.

8. Distinguish between cooperative and non-cooperative oligopoly. 3

9. Explain the effect of change in income of a consumer on demand of a good. 4

OR

Explain any two factors that affect price elasticity of demand.

10. Define marginal product. State the behaviour of marginal product when only one input is increased and other inputs are held constant. 4

11. Explain the effect of rise in the input prices on the supply of a good. 4

12. Why do central problems of an economy arise? Explain the central problem of "For whom to produce"? 6

13. A consumer consumes only two goods X and Y. Explain the conditions of consumer's equilibrium using Marginal utility Analysis. 6

OR

Explain three properties of indifference curves.

14. What is producer's equilibrium? Expain the conditions of producer's equilibrium through the 'marginal cost and marginal revenue approach'. Use diagram. 6

For Blind Students:

What is producer's equilibrium? Explain the Conditions of producer's equilibrium through the marginal cost and marginal revenue approach. Use schedule.

15. Explain the implications of the following :

(a) Product differentiation in monopolistic competitions

(b) Large number of sellers in perfect competition.

Section – B

16. Define Gross Investment. 1

17. Primary deficits equals : 1

(a) Borrowings (b) Interest payments

(c) Borrowing less interest payment

(d) Borrowing and interest payment both.

18. Capital loss is 1

(a) Normal wear and tear of fixed capital goods.

(b) Foreseen obsolescence

(c) unforeseen obsolescence

(d) All the above

19. Foreign exchange transactions which are independent of other

transactions in the Balance of Payments Account are called: 1

(a) Current transactions (b) Capital transactions

(c) Autonomous transactions

(d) Accommodating transactions

20. What are revenue expenditure in a government budget? 1

21. Assuming real income to be 400 and price index be 100, calculate nominal income. 3

OR

If nominal income is Rs. 500 and price index is 125, calculate real income.

22. Explain how controlling money supply is helpful in reducing excess demand. 3

23. What is aggregate demand? State its compoents. 3

24. Explain the role of cash Reserve Ratio in controlling credit creation. 4

25. Explain the 'Unit of Account' function of money. How has it solved the related problem created by barter? 4

OR

Explain the 'Standard of deferred payment' function of money. How has it solved the related problem created by barter?

26. Sale of petrol and diesel cars is rising particularly in big cities. Analyse its impact on gross domestic product and welfare. 4

27. What is the difference between direct tax and indirect tax? Explain the role of government budget in influencing allocation of resources. 6

OR

What is the difference between revenue receipts and capital receipts? Explain how taxes and government expenditure can be used to influence allocation of resources.

28. Calculate Net National Product at Market Price and Private Income. 4,2

		(Rs. Crores)
(i)	Net current transfers to abroad	10
(ii)	Private final consumption expenditure	500
(iii)	Current transfers from government	30
(iv)	Net factor income to abroad	20
(v)	Net exports	(–)20
(vi)	Net indirect tax	120
(vii)	National debt interest	70
(viii)	Net domestic capital formation	80
(ix)	Income accruing to government	60
(x)	Government final consumption expenditure	100

29. Indian investors borrow from abroad. Answer the following : 6

(a) In which sub-account and on which side of the Balance of Payment Account will this borrowing be recorded? Give reason.

(b) Explain what is the impact of this borrowing on exchange rate.

30. Derive the two alternative conditions of expressing national income equilibrium. Show these equilibrium conditions on a single diagram. 6

For Blind Students

Derive the two altenative conditions of expressing national income equilibrium show these equilibrium conditions in a schedule.

Hints : Section – A

1. The difference between ATC and AVC decreases
2. (c)
3. (c)
4. (a)
5. Monopoly refers to a market situation where there is a single seller selling a product which has no close substitutes.

7. | Price | Expenditure | Demand |
|---|---|---|
| 8 | 400 | 50 |
| 10 | 500 | 50 |

$$Ed = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} \Rightarrow \frac{0}{2} \cdot \frac{Q}{50}$$

$$\boxed{Ed = 0}$$

OR

(a) Zero or no change

(b) 10% fall

(c) 20% fall

Section – B

16. **Gross Investment :** Total addition made to physical stock of capital during a period of time. It includes depreciation.

17. (c)

18. (c)

19. (c)

20. **Revenue expenditure :** It neither creates assets nor reduces liabilities of the Govt.

21. $$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index}} \times 100$$

$$\text{Nominal GDP} = \frac{400 \times 100}{100} \Rightarrow \text{Nominal GDP} = 400$$

OR

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index}} \times 100$$

$$= \frac{500 \times 100}{125} = 400$$

Real GDP = 400

28. NNP_{MP} = (ii) + (x) + (viii) + (v) – (iv)

= 500 + 100 + 80 + (–20) – (20).

= Rs. 640 Crore.

Private Income = (NNP_{MP} – (vi) – (ix) + (iii) + (vii) – (i)

= 640 – 120 – 60 + 30 + 70 – 10

= Rs. 550 Crore.

DELHI – 2016

MODEL TEST PAPER

Subject : Economics

[Time : 3 Hrs.] **[M.M. : 100]**

(i) Please check that this question paper contains 16 printed pages.

(ii) Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.

(iii) Please check that this question paper contains **30** questions.

(iv) **Please write down the Serial Number of the question before attempting it.**

(v) 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m. the students will read the question paper only and will not write any answer on the answer-book during this period.

General Instruction :

(i) All questions in both the sections are compulsory.

(ii) Marks for questions are indicated against each questions.

(iii) Questions No., 1-5 and 16-20 are very short answer questions carrying 1 mark each.

(iv) Question No. 6-8 and 21-23 are short answer questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.

(v) Questions No. 9-11 and 24-26 are also short answer questions carrying 4 marks each. Answer to them should not normally exceed 70 words each.

(vi) Questions No. 12-15 and 27-30 are long answer questions carrying 6 marks each. Answer to them should not normally exceed 100 words each.

(vii) Answer should be brief and to the point and above word limit be adhered to as far as possible.

Section – A

1. What is the relation between marginal cost and average variable cost when marginal cost is rising and average variable cost is falling? 1

2. Suppose total revenue is rising at a constant rate as more and more units of a commodity are sold, marginal revenue would be : 1

   (a) Greater than average revenue

   (b) Equal to average revenue

   (c) Less than average revenue

   (d) Rising

3. When does 'increase' in demand take place? 1

4. 'Homogenous products' is a characteristic of : (Choose the correct alternative) 1

   (a) Perfect competition only (b) Perfect oligopoly only

   (c) Both (a) and (b) (d) None of the above

5. There is inverse relation between price and demand for the product of a firm under : (choose the correct alternative). 1

   (a) Monoply only (b) Monopolistic competition only

   (c) Both under monopoly and monopolistic competition

   (d) Perfect competition only

6. A consumer consumes only two goods X and Y. Marginal utilities of X and Y are 5 and 4 respectively. The prices of X and Y are Rs. 4 per unit and Rs. 5 per unit respectively. Is the consumer in equilibrium? What will be the further reaction of the consumer? Explain. 3

7. Price elasticity of demand of good X is –2 and of good Y is –3. Which of the two goods is more price elastic and why? 3

8. What is maximum price ceiling? Explain its implications. 3

OR

Explain the chain effects, if the prevailing market price is below the equilibrium price.

9. Explain the effect of change in prices of the related goods on demand for the given good. 4

10. Define production function. Distinguish between short run and long run production functions. 4

OR

Define cost. Distinguish between fixed and variable costs. Give one example of each.

11. A producer supplies 80 units of a good at a price of Rs. 10 per unit. Price elasticity of supply is 4. How much will he supply at Rs. 9 per unit? 4

12. Assuming that no resource is equally efficient in production of all goods, name the curve which shows production potential of the economy. Explain, giving reasons, its properties. 4

13. Explain the conditions of consumer's equilibrium using indifference curve analysis. 6

14. Explain the distinction between "Change in quantity supplied" and "change in supply". Use diagram. 6

For Blind Candidates in lieu of Q.No.14

Explain the distinctions between "change in quantity supplied" and "change in supply" use schedule.

15. Explain the implications of the following in a perfectly competitive market : 6

(a) Large number of buyers.

(b) Freedom of entry and exit to firms

OR

Explain the implications of the following in an oligopoly market :

(a) Inter-dependence between firms

(b) Non-price competition.

Section – B

16. Define Stocks. 1

17. Depreciation of fixed capital assets refers to : (choose the correct alternative) 1

(a) Normal wear and tear

(b) Foreseen obsolescence

(c) Normal wear and tear and foreseen obsolescence

(d) Unforeseen obsolescence

18. What is revenue expenditure? 1

19. Fiscal Deficit equals : (Choose the correct alternative) 1

(a) Interest payments (b) Borrowings

(c) Interest payments less borrowing

(d) Borrowing less interest payments

20. Foreign exchange transactions dependent on other foreign exchange transactions are called : (choose the correct alternative). 1

(a) Current account transactions

(b) Capital account transactions

(c) Autonomous transactions

(d) Accommodating transaction

21. Find net value added at factor cost : 3

(Rs. Lakh)

(i) Durable use producer goods with a life span of 10 years 10

(ii) Single use producer goods 5

(iii) Sales 20

(iv) Unsold output produced during the year 2

(v) Taxes on production 1

22. Distinguish between marginal propensity to consume and average propensity to consume. Give a numerical example. 3

OR

Explain the role of taxation in reducing excess demand.

23. In an economy investment is increased by Rs. 300 crore. If marginal propensity to consume is 2/3, calculate increase in national income. 3

24. Government incurs expenditure to popularize yoga among the masses. Analyse its impact on gross domestic product and welfare of the people. 4

25. Explain the 'store of value' function of money. How has it solved the related problem created by barter? 4

OR

Explain the 'unit of account' function of money. How has it solved the related problem created by barter?

26. Explain how open market operations are helpful in controlling credit creation. 4

27. What is government budget? Explain how taxes and subsidies can be used to influence allocation of resources. 6

OR

Define revenue receipts in a government budget. Explain how government budget can be used to bring in price stability in the economy.

28. Given consumption curve, derive saving curve and state the steps taken in the process of derivation. Use diagram. 6

For Blind Candidates in lieu of Q.No. 28

Explain the Components of consumptions function. Derive saving function from consumption function.

29. (a) In which sub-account and on which side of balance of payments account will foreign investments in India be recorded? Give reasons. 3

(b) What will be the effect of foreign investments in India on exchange rate? Explain. 3

30. Find National income and private income : 6(4,2)

		(Rs. Crores)
(i)	Wages and salaries	1000
(ii)	Net current transfers to abroad	20
(iii)	Net factor income paid to abroad	10
(iv)	Profit	400
(v)	National debt interest	120
(vi)	Social security contribution by employers	100
(vii)	Current transfers from government	60
(viii)	National income accruing to government	150
(ix)	Rent	200
(x)	Interest	300
(xi)	Royalty	50

SENIOR SCHOOL CERTIFICATE EXAMINATION

March 2016

MARKING SCHEME : ECONOMICS (DELHI)

Expected Answer / Value Points

General Instructions :

1. Please examine each part of a question carefully and allocate the marks allotted for the part as given in the marking scheme below. TOTAL MARKS FOR ANY ANSWER MAY BE PUT IN A CIRCLE ON THE LEFT SIDE WHERE THE ANSWER ENDS.
2. Expected suggeste answers have been given in the Marking Scheme. To evaluate the answers the value points indicated in the marking scheme be followed.
3. For questions asking the candidate to explain or define, the detailed explanations and definitions have been indicated alongwith the value points.
4. For mere arithmetical errors, there should be minimal deduction. Only ½ mark be deducted for such an error.
5. Wherever only two / three or a 'given' number of examples / factors / points are expected only the first two / three or expected number should be read. The rest are irrelevant and must not be examined.
6. There should be no effort at 'moderation' of the marks by the evaluating teachers. The actual total marks obtained by the candidate may be of no concern to the evaluators.
7. Higher order thinking ability questions are assessing student's understanding/analytical ability.

General Note : In case of numerical question no mark is to be given if only the final answer is given.

A1	Expected Answer / Value Points	Distribution of Marks
1.	MC is less than AVC	1
2.	(b) Equal to Average Revenue	1
3.	When demand increases due to any factor than own price of the good **OR** naming a factor e.g. rise in price of substitute or any other.	1
4.	(c) Both perfect competition and perfect oligopoly	1
5.	(c) Both monopoly and monopolistic competition	1
6.	The consumer is not in equilibrium because : $\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$ or $\frac{5}{4} > \frac{4}{5}$ The consumer will buy more of X and less of Y because per rupee MUx is higher than per rupee MUy and continue to do so till MUx falls and MUy rises enough to make $MU_x = MU_y$.	2
7.	Y is more price elastic because one percent fall (rise) in price will lead to higher percent i.e., rise (fall) in demand. **(or any other relevant explanation)**	3
8.	Maximum price of a good refers to the maximum price of a good a seller is allowed to charge by government.	1
	(Diagram not required)	
	Since such a price is below the equilibrium price, it leads to shortage because demand is greater than supply at this price. The shortage in turn may lead to black marketing **(diagram not required)**	2
	OR	
	When marke tprice is below the equilibrium price demand becomes greater than supply and excess demand emerges. Since buyers will not be able to buy all they want to buy there is competition between buyers leading to rise in price. Rise in price causes fall in demand and rise in supply. This	

continues till the price reaches equilibrium again.
(Diagram not required) 3

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9. Related goods are of two types : substitutes and complements. When price of the substitute good rises (falls), demand for the given good rises (falls) because the given good becomes relatively cheaper (dearer) than the substitute good. 2

When price of the complementary good rises (falls) its demand falls (rises). Demand for the given good falls (rises) because the two goods are used jointly. 2

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10. **Production function** refers to mathematical relation between physical inputs and physical output. 1

Short run production function refers to a situation when output is increased by changing only one input while keeping other inputs unchanged. 1½

Long run production function refers to a situation when output is increased by increasing all the inputs simultaneously and in the same proportion. 1½

OR

Cost : in economics means the sum of actual money expenditure on inputs and imputed expenditure on inputs supplied by the owner including normal profit. 1

Fixed cost : refers to cost which remains unchanged as output is increased. For example rent, interest etc. (any one). 1½

Variable cost : refers to cost which rises as output is increased. For example cost of raw material etc. (any one) 1½

---

11. $$Es = \frac{P}{Q} \times \frac{\Delta Q}{\Delta P}$$ 1

$$4 = \frac{10}{80} \times \frac{\Delta Q}{-1}$$ 2

$$\left.\begin{aligned} 10\Delta Q &= -320 \\ \Delta Q &= -32 \end{aligned}\right\}$$ ½

New Supply = Q + ΔQ = 80 + (–32) = 48 ½

(No marks if only the final answer is given)

---

12. The curve is called production possibilities frontier or curve 1

Properties

1. **PPF slopes downwards from left to right** 1

   It is because to produce more quantity of one good, some quantity of other good has to be sacrificed because resources are limited. 1½

2. **PPF is Concave** **1**

   This implies that slope of the curve (i.e., marginal rate of transformation) increases as we move along the curve from left to right. MRT increases because no resource is equally efficient in production of all goods so that to obtain more quantity of one good, the quantity of the other good is sacrificed at an increasing rate. 1½

---

13. Given that two goods are X and Y, the two canditions are

1. $MRS = \frac{P_x}{P_y}$ 1

2. MRS declines as more of a commodity X is consumed. 1

Explanation :

(i) Suppose $MRS > \frac{P_x}{P_y}$. It means that consumer is willing to pay more for an extra unit of X as compared to what market price is. The consumer consumes more and more of good X and less of good Y till MRS falls enough to be equal to the market price and the consumer is in equilibrium. 3

(ii) Unless MRS declines continuously as more and more 1 of X is consumed, it will not be equal to $\frac{P_x}{P_y}$ and consumer will not reach equilibrium again.

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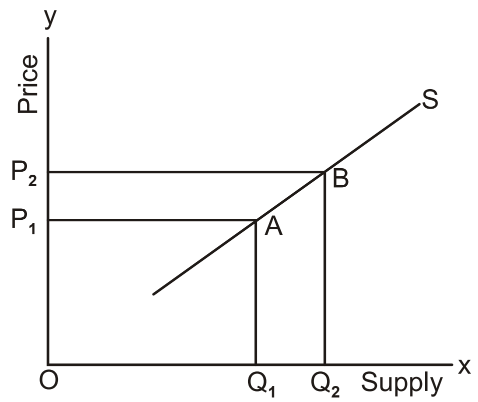
14. **"Change in quantity supplied"** means change in supply due to change in own price of the good. 1

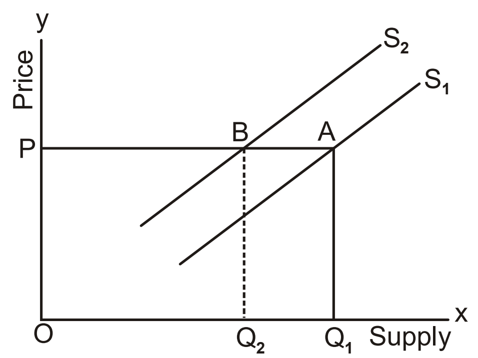
Diagrammatically, it implies movement along the supply curve. When the producer moves from A to B, the rise in quantity from OQ_1 to OQ_2 is on account of rise in price from OP_1 to OP_2.



(Answer based on downward movement is also correct) 2

"Change in suply" means change in supply due to change in any factor other than the own price of the good. 1

Diagrammatically, it means shift of supply curve when producer moves from A to B, the price remains unchanged at OP while the supply curve shift from S_1 to S_2 supply curve. When the producer from S_1 to S_2 and the quantity falls from OQ_1 to OQ_2. 2



(Answer based on shift to the right is also correct)

For blind candidates :

"Change in quantity supplied" means change in supply due to change in own price of the good. 1

Price	Supply (Units)	2
10	100	
11	120	

"Change in supply" means change in supply due to change in any factor other than the own price of the good. 1

Price	Supply (Units)	2
10	100	
10	120	

12. (a) **Large number of buyers :** implies that number of buyers is large enough so that each individual buyer has a negligible share in market demand for the good. The implication is that no individual buyer is in a position to influence the market price on its own by changing demand. 3

(b) **Freedom of entry and exit to firms :** Implies that there are no obstacles for the firms to move into and out of industry. The implication is that when existing firms are making profits, new firms enter, raise the output of industry, bring down the market price enough for the firm to earn just only normal profit in the long run. The opposite happens if the existing firms are facing losses. 3

OR

(a) **Interdependence between firms** in an oligopoly market implies that an individual firm takes into consideration the likely reaction of its rival firms before making a move to change price or output. It is possible because it is assumed that rival firms may react. 3

(b) **Non-price competition** means competition between firms by means other than changing price, like free gift, home service, customer care etc. The firms in oligopoly do so to avoid price war because the firm who starts the price war may be the ultimate loser. 3

Section B

16. Stock are the variables whose magnitude is measured at a point of time. 1

17. **(c)** Normal wear and tear and foreseen obsolescence. 1

18. **Revenue expenditure :** refers to the expenditure that neither creates any asset nor reduces any liabilities. 1

19. **(b)** Borrowings 1

20. **(d)** Accommodating transactions. 1

21. NVA_{FC} = Sales + unsold output – Single use producer goods – Depreciation – Taxes on production 1½

$20 + 2 - 5 - \left(\frac{10}{10}\right) - 1$ 1

= 20 + 2 – 5 – 1 – 1

= Rs. 15 Lakh ½

22. MPC is the ratio of change in consumption expenditure (ΔC) to change in total income (ΔY). 1

Suppose $\Delta C = 70$ and $\Delta Y = 100$ then MPC $= \frac{70}{100} = 0.7$ ½

(or any other example)

APC is ratio of total consumption expenditure (C) to total income (Y). 1

Suppose C = 80 and Y = 100 then APC $= \frac{80}{100} = 0.8$ ½

(or any other example)

OR

By raising taxes government can reduce personal disposable income of the people. This in turn will reduce private consumption expenditure depending upon MPC. This will reduce aggregate demand. 3

23. $\Delta Y = \Delta I \dfrac{1}{1 - MPC}$ 1½

$= 300 \dfrac{1}{1 - \frac{2}{3}}$ 1

= 300 × 3 = Rs. 900 crore ½

(Answer based on ΔY = K × ΔI is also correct)
(No Marks if only the final answer is given)

24. Government expenditure on popularising yoga raises GDP because it is government's final consumption expenditure. It also raises welfare of the people because yogic exercise improve health and thus raise efficiency of the people. 4

25. **Store of value** function of money means that money can be used as an asset for storing value. It further means that the stored money can be used for purchases et. in future. 4
It is so because money comes in convenient denominations, easily movable from one place to another and can easily be used for transactions.

OR

Unit of account function of money means that money can be used for quoting prices or recording transactions. This removes the difficulty of keeping accounts and makes possible the existence of financial institutions. 4

26. **Open market operations :** refers to selling and buying of government securities by the central bank. Selling securities in the open market flows money out of commercial banks and into central banks. This reduces demand deposits with the commercial banks and lowers their capacity to create credit. Borrowing from banks becomes less and money supply is reduced. 4

27. Government budget is a statement showing estimated government expenditures and receipts during a financial year. 1

Government can influence encouraging production of selected goods and services by providing tax concessions. For example electricity generation etc. Government can also give subsidies to enterprises who are willing to undertake production in backward areas etc. In this way government budget can be used to influence allocation of resources in the country. Increasing taxes and reducing subsidies have the opposite effect. 5

OR

Revenue receipts are the receipts which neither create liabilities nor lead to reduction in assets. 1

Stability in the economy means keeping fluctuations in general price level within limits. When there is inflation, government can reduce its own expenditure to bring down the price level.When there is deflation government can increase its own expenditure to fight it. Government can also use taxes and subsidies to ifluence personal disposable income and bring in economic stability in the country. 5

28. Given consumption curve CC' the steps in derivation of saving curve are:

1. Take OS equal to OC.
2. Draw a perpendicular from B to intersect X-axis at B'.
3. Joint S and B' and extend it to derive saving curve SS'

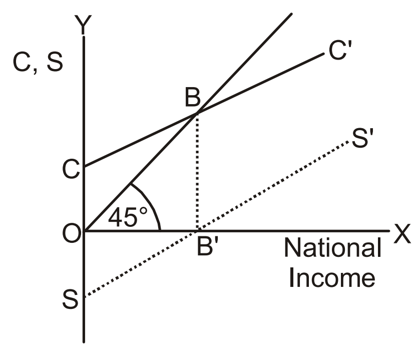


Diagram 3

Steps 1×3

For blind Candidates.

Consumption function is C = $\overline{C}$ = MPC(Y)

Where C = total consumption expenditure.

$\overline{C}$ - Autonomous consumption expenditure

MPC = Marginal Propensity Consume 3

Y = Income

Derivation

C = $\overline{C}$ + MPC(Y)

Deduct both side of the equation from Y

Y – C = Y – [$\overline{C}$ + MPC(Y)]

S = Y – $\overline{C}$ – MPC(Y)

S = –$\overline{C}$ + Y – MPC(Y)

= –$\overline{C}$ + Y (1 – MPC)

= $\overline{C}$ + MPS (Y) 3

29. **(a)** Foreign investment will be recorded in the capital account of the BOP a/c because these give rise to foreign exchange liabilities. 1½

Foreign investment will be recorded on the credit side because these bring foreign exhcange. 1½

(b) Foreign investment adds to supply of foreign exchange. Demand remaining unchanged, it brings downwards influence on exchange rate. 3

28.	N.I. = (i + vi) + (ix + xi) + x + iv – iii	2
	= 1000 + 100 + 200 + 50 + 300 + 400 – 10	1½
	= Rs. 2040 Crore	½
	Pr. I. = N.I. – (viii) – ii + v + vii	1
	= 2040 – 150 – 20 + 120 + 60	½
	= Rs. 2050 Crore	½

(No Marks if only the final answer is given)