Multiple Choice Practice Questions/Answer for ONLINE/OMR AITT-2020

2nd Year Mech. Motor Vehicle Trade Theory

HEAVY VEHICLES

1. Generally heavy vehicles are considered as above gross vehicle weight rating (GVWR) capacity of (A)1500 Kg, (B) 3000 Kg, (C)- 4500 Kg, (D)-6000 Kg

2. Which of these falls under Heavy passenger vehicles category based on its capacity?
   (A) Trucks, (B) Buses, (C) Cars, (D) Motorcycles.

3. Which of these falls under Heavy commercial vehicles category based on its capacity?
   (A) Trucks, (B) Buses, (C) Cars, (D) Motorcycles.

4. A delivery van falls under the category of which type of vehicle.
   (A)Heavy passenger vehicle (B) light passenger vehicle (C) heavy goods vehicle (D) light goods vehicle

5. A truck also often called as
   A) Trailer B) Lorry C)Van D) Carriage

6. A compartment from which the driver of a heavy earthmoving machinery operates is called
   A) Cage B) Cab C) Cart D) Core

7. Modern truck are mostly powered by ……Engines
   A) Petrol B) CNG C) Diesel D) LPG

8. A truck used as liquefied petroleum gas container is termed as
   A) Rigid Truck B) Haulage Truck C) Trailer Truck D) Tipper

9. The heavy vehicle factory (HVF) is located at Avadi in
   A) Mumbai B) Kolkata C) Hyderabad D) Chennai

10. Vehicle without body is called ……
    A) Wheel, B) Axle C) Frame D) Chassis

11. Which of the following is called power plant of a vehicle?
    A) Axle B) Chassis C) Wheel D) Engine

12. Which of the following Diesel engines are used in heavy motor vehicle?
    A) TC Engines B) TCAC Engines C) CRDI Engines D) All of these

13. Which is the Indian manufacture truck?
    A) Ashok Leyland B) Hindustan Motors C) Premier Automobiles D) All of these

14. Full name of LMV is _____ .
    A) Light medium vehicle, B) Light motor vehicle, C) length motor vehicle, D) None

15. HTV mean …….. .
    A) Heavy truck Motor B)Heavy Transport Vehicle C) None of these D) All of these

16. Which of the following is not a major heavy vehicle manufacturer in India?
    A) TATA Motors B) Ashok Leyland C) Volvo D) All of these

17. The different parts of vehicle are _____
    A) Chassis B) Body C) Both of them D) None of these

18. What is the final unit in transmission system?
    A) Gear box B) Final drive C) Differential D)Rear Axle

19. Which is the Indian manufacture of Jeeps?
    A) Ashok Leyland B) Hindustan motors C) Mahindra and Mahindra D) None of these

20. India manufacture of tractors are ……..
A) Eicher B)Escorts C)Gujarat tractor D) all of the above

21. Which of the following system is used for transmit power from engine to wheels?
A) Suspension system B) Steering system C) power trains systems D) fuel System

22. Which of the following system is used for control the vehicle?
A) Brake and Steering system B) Suspension system C) fuel System D) Cooling System

23. Which of the following system is used for absorb the shocks while vehicle moving on the road?
A) Steering system B) Suspension System C) Brake System D) None of these

24. The part of the vehicle holds the passenger and the cargo to be transported known as
A) Chassis B) Hull C) cabin D) None of these

25. In commercial vehicle layouts engine is located forward, rear or under floor mainly to
A) better utilizes the space B) have better weight distribution C) Both of these D) None of these

ANSWERS - HEAVY VEHICLES

1- C,2-B ,3-A ,4-D,5-B,6-D,7-C,8-B,9-D,10-D,11-D,12-D,13-D,14-B,15-B,16-D,17-C,18-B,
19- C, 20-D, 21-C,22-A,23-B,24-B,25-B

CLUTCH

1. The following provides a smooth means of disengagement and engagement between the engine and the remainder of transmission system.
A. Clutch, B. Gearbox, C .Propeller shaft, D. Differential

2. A machine member used to connect engine shaft to gear box is called
(A) Differential, (B) clutch, (C) flywheel, (D) propeller shaft

3. The clutch plate is hold in between _____ and pressure plate.
(A) Flywheel (B) Gear box (C) Engine (D) Crankshaft

4. The coefficient of friction for the clutch facing is approximately
(A) 0.1(B) 0.4(C) 0.8(D) 1.2

5. Which type of clutch does not require clutch pedal?
(A)Single plate (B)Multi plate, (C)Centrifugal, (D)Cone

6-The following is not a Friction clutch
(A)Fluid clutch (B) Centrifugal clutch (C) Cone clutch (D) Disc clutch

7-The following is known as positive clutch
(A)Single plate clutch, (B) Cone clutch, (C) Dog clutch, (D) Centrifugal clutch

8-The following type of arrangement is used in synchromesh type gear box
(A) Single plate clutch, (B) Fluid clutch, (C) Dog clutch, (D) Semi-centrifugal clutch

9-The torque which a clutch can transmit, depends upon the
(A) coefficient of friction, (B) spring force, (C) contact surfaces, (D) all of the above

10-In Disc clutch, the clutch disc acts as a
(A) driving member, (B) driven member, (C) neutral member, (D) any of the above

11-In Disc clutch, engine flywheel acts as a

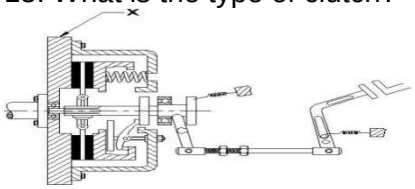
(A) Driving plate, (B) driven plate, (C) pressure plate, (D) none of the above

12-The following type of spring(s) is (are) employed in the pressure plate
(A)Coil springs, (B) Diaphragm type conical spring, (C) both (A) and (B), (D) none of these

13. clutch is usually designed to transmit maximum torque which is
(A) Equal to the maximum engine torque(B) 80 percent of the maximum engine torque(C) 150 percent of the maximum engine torque(D) none of these

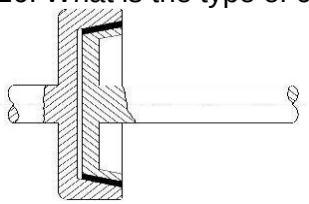
14. Free pedal play in car clutches is about
(A) 3 mm(B) 30 mm(C) 60 mm(D) 100 mm

15. What is the type of clutch?



A .Cone clutch, B. single plate clutch with coil spring,
C. Diaphragm clutch, D. Multi plate dry weight clutch

16. What is the type of clutch?



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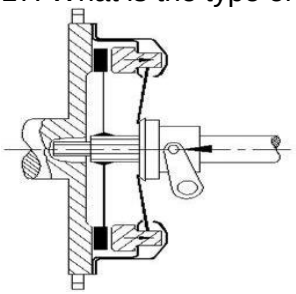
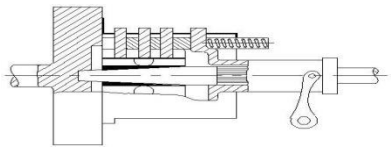


A .Cone clutch, B. single plate clutch with coil spring, C. Diaphragm clutch, D. Multi plate dry weight clutch

18. What is the type of clutch?



A .Cone clutch, B. single plate clutch with coil spring, C. Diaphragm clutch, D. Multi plate dry weight clutch

19. What is noise free clutch?
A .Cone clutch, B. single plate clutch with coil spring,
C. Diaphragm clutch, D. Multi plate dry weight clutch

20. What is the advantage of dog clutch?
A. No possibility of slip, B. more frictional area,
C. less pedal force to operate.
D. Easy maintenance and repair.

21. If the clutch disc is not completely released when clutch pedal is fully depressed, _____ occurs.
(A) Clutch Drag (B) Chatter (C) Pedal Pulsation (D) Clutch slippage

22. Belleville spring is the other name for _____
(A) Leaf spring (B) Diaphragm spring (C) Cushion spring (D) Coil spring

23.The inertia of the rotating parts of the clutch should be
(A) Minimum (B) Maximum(C)zero(D) none of the above

24. The maximum value of axial force at the clutch which a driver can apply while driving, without getting fatigued is approximately
(A) 10 N (B) 100 N (C) 500 N (D) 5000 N

25. The maximum intensity of pressure which the clutch facing can withstand without being damaged is about
(A) 10 Pa (B) 10 KPa (C) 100 KPa (D) 1000 KPa

26. The clutch is located between the transmission and the
(A) Engine (B) rear axle (C) propeller shaft (D) different

27. The parts of the cover assembly that hold the pressure plate against the clutch plate are the
(A) Release levers (B) thrust bearings (C) struts (D) springs

28. Cushioning springs in clutch plate are meant to reduce
(A) Torsional vibrations (B) vehicle speed (C) jerky stars (D) none of the above

29.The thrust bearing should come into contact with the release levers when the
(A) vehicle is stationary (B) vehicle is running very fast (C) vehicle is driven very slow (D) clutch pedal is pressed

30.In a clutch will coil springs, the wear of the clutch facing will cause the clamping load to
(A) increase (B) decrease (C) remain constant (D) become infinite

31. Clutch facings are usually attached to the plate by
A- Steel rivets, B- brass rivets, C- aluminum screws, D- steel screws

32.-Belleville springs are generally known as
A:-Torsion spring B:-Coil springs C:-Helical springs, D:-Diaphragm springs

33:-Which one of the following is not a part of cover assembly in a clutch?
A:-Pressure plate B:-Release lever C:-Release bearing D:-Springs

34. Which type of clutch provides more frictional area and simple in construction?
A. Cone clutch, B. single plate clutch with coil spring, C. Diaphragm clutch, D. Multi plate clutch

35. If there are 7 clutch plates in a multi-plate clutch, what is the number of pair of contact surfaces?
A- 5, B- 4, C- 6, D- 8

36. Which of the following contains no linkage between the clutch and the pedal?
A- Clutch – by – wire, B- Wet clutch, C- Hydraulic single plate clutch, D-Hydraulic multi-plate clutch

37. Where is the clutch located?
A- Between transmission and engine, B-Between transmission and rear axle, C-Between transmission and propeller shaft, D- Between transmission and differential

38. Which of the following parts of the cover assembly that hold the pressure plate against the clutch plate?
A- Springs B- Thrust bearings C- Struts D- Lever

.39. Which of the following is the disadvantage of the cone clutch?
A - It becomes difficult to disengage the clutch when the cone angle is less than 20°,
B - It is silent in operation,
C - The normal force on the contact surface is larger than the axial force ,
D -Same torque can be transmitted for the same size as the plate clutch

.40-The clutch cover is bolted to the:
(A) Pressure plate (B) Crankcase (C) Gearbox (D) Flywheel

41-The facing of the clutch friction plate is made of:
(A) .Asbestos (B) Rubber (C) Steel (D) Cast iron

42. In the coil spring type of clutch when the pressure plate and cover are separated, the spring pressure must be held by
A-Hand B-. An arbor press C- A lever D- A heavy weight

43. Parts of the clutch that should not be cleaned in solvent include the
A- Friction disc and throw out bearing B-. Friction disc cover C- Throw out bearing and springs D- Release levers and springs

44. On diaphragm spring clutch, pressing down on the clutch pedal moves throw out bearing in against the
A- Release levers B- Diaphragm C-. Pressure plate D- Friction disc

45. As a general rule in facings on the friction disc are worn down to the rivet heads
A-. Rivets should be replaced, B- The friction disc should be replaced, C-The clutch should be replaced, D-The linkage should be adjusted

46. The front end of the clutch shaft is supported in a pilot bearing in the
A- Throw out bearing, B-. Friction disc, C- Crankshaft, D- Transmission

47. Clutch noises are usually most noticeable when the engine is
A- Accelerating B-. Decelerating C-. Idling D-. Being started

48. What is the advantage of using single plate hydraulic clutch? |:
A. Minimize the force to operate the clutch B. Effective frictional force obtained C. Reduce the wear on the clutch plate, D -Easy repair and maintenance

49. What is the advantage of mechanical actuated type clutches?
A-. Less maintenance and repair ,B-. .Less pedal effort, C.- Smooth functioning, D. Easy to operate

50. Which factor does not affect the torque transmission by clutch?
A. Size of clutch plate, B-. Co-efficient of friction, C-. Number of clutch plates used, D.- Axial load on the clutch

ANSWERS- CLUTCH

1-A, 2-B ,3-A ,4-B, 5-C ,6-A , 7- C,8- C, 9-D , 10-B , 11-A , 12-C ,13-C ,14-B ,15-B ,16-A ,17-B ,18-D ,19-B ,20- A, 21-A ,22-B ,23- A,24-B ,25-C ,26-A ,27-D ,28-C ,29-D ,30-B ,31-B,32-D ,33- C ,34-A ,35-C ,36-A ,37-A ,38-A ,39-A ,40-D ,41-A, 42-B ,43-A ,44-A ,45-B ,46-C ,47-C ,48-A ,49- A, 50-D

GEAR BOX

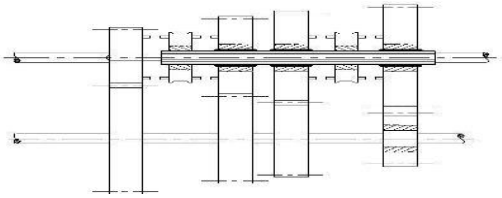
1. The purpose of transmission is an automobile is
A) To vary the speed of automobile, B) to vary the torque at road wheel of vehicle, C) to vary the power of automobile, D) none of these

2-Mechanical transmission can be of following class
(A) Clutch, gearbox and live axle transmission, (B) Clutch, gearbox and dead axle transmission, (C) Clutch, gearbox and axle less transmission, (D) All of the above

3-Transfer case is located next to the gearbox in
(A) Front wheel drive, (B) Rear wheel drive, (C) Four wheel drive, (D) All of the above

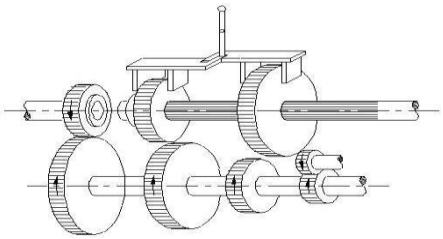
4-The following type of transmission uses chain and sprocket to transmit power
(A) Clutch, gearbox and live axle transmission,(B) Clutch, gearbox and dead axle transmission,(C) Clutch, gearbox and axle less transmission, (D) All of the above

5. What is the name of gearbox?



A) Constant mesh gearbox,
B) B) sliding mesh gearbox,
C) C) synchromesh gearbox ,
D) D) automatic gearbox

6. What is the type of gear box?



A) Constant mesh gearbox, B) sliding mesh gearbox, C) synchromesh gearbox , D) automatic gearbox

7. Which of the following is true?
A. high torque is required at the start of the vehicle, B. low torque is required at high speeds,, C. gearbox helps in smooth running of vehicle, D. all of these

8. Which of the following is not a type of gearbox?
A. Linear mesh gearbox, B .Sliding mesh gearbox, C. Constant mesh gearbox, D. Synchromesh gearbox.

9:-Which of the following gear boxes have lesser mechanical efficiency?
A:-Synchromesh B:-Constant mesh C:-Sliding mesh D:-All of these

10:-The percentage ratio between difference of vehicle speed and wheel speed to the vehicle speed is
A:-Velocity ratio B:-Speed ratio C:-Slip ratio D:-Aspect ratio

11:-Choose correct drive transmission from engine to gear box
A:-Fly wheel - cover - drive plate - driven plate B:-Fly wheel - cover - driven plate - drive plate C:-Fly wheel - driven plate - drive plate - cover D:-Fly wheel - drive plate - driven plate – cover

12:-As related to the automatic transmission, the friction loss in the manual transmission is
A:-Less, B:-Same, C:-More, D:-Much more

13. _____ is used to ensure that the main shaft and main speed gear to be Locked to it are rotating at the same speed.
(A) Transfer Case (B) Transaxle (C) Shift fork (D) Synchronizer

14. Cluster gear is other name for _____
(A) Idler Gear (B) Main Shaft Gear (C) Countershaft Gear (D) Final Drive Gear

15. _____ are commonly used on Front wheel drive vehicles.
(A) Transaxles (B) Double Reductions (C) Synchronizers (D) Slip Joints

16. The purpose of gear box in motor vehicle is/are
(A) To get the various speed (B) to get the various torque (C) both of these (D) none of these

17. Increase of torque in a vehicle is obtained by
(A) decreasing speed (B) decreasing power (C) decreasing petrol consumption (D) all the above

18. Two advantages of using helical gears rather than spur gears in a transmission are
(A) high strength and low cost (B) high strength and less end thrust (C) low noise level and high strength (D) low noise level and economy

19.By using synchronizing device, the two involved adjacent gears have their speeds
(A) increased (B) reduced, (C) equalized,(D) unequalized

20. In a single planetary gear set, the output member to increase torque is always the
(A) sun gear (B) ring gear, (C)planet carrier, (D) none of the above

21. In a simple epicyclic gear set, the output member to increase torque in reverse is always the
(A) ring gear, (B)planet carrier, (C) sun gear, (D) none of the above

22. The central gear of an epicyclic gear set is called a
(A) Ring gear, (B)sun gear, (C) planet gear, (D) internal gear

23. Which of the following is the need of the idler gear in gear box?
A) To forward of the vehicle, (B)To reverse of the vehicle, (C)To supply power of the vehicle, (D) To vary the acceleration of the vehicle

24. In which type of manual transmission the double-declutching is used?
A) Constant-mesh gearbox, B) Sliding mesh gearbox, C) Synchromesh gearbox, D) Epicyclical gearbox

25. In which of the gearbox all gears are always in contact?
A) Constant-mesh gearbox, B) Sliding mesh gearbox, C) Synchromesh gearbox, D) Epicyclical gearbox

26. In which of the gearbox sun and planet gear set is used?
A) Constant-mesh gearbox, B) Sliding mesh gearbox, C) Synchromesh gearbox, D) Epicyclical gearbox

27. Where is the overdrive located?
A) Between transmission and engine, B) Between transmission and rear axle,
C) Between transmission and propeller shaft, (D) Between transmission and differential

28. Which of the following is not part of automatic transmission?
A) Epicyclic gearbox, B) Torque convertor, C) Multi-plate clutch, D) Sliding mesh gearbox

29. In which of the configuration of epicyclic gearbox output will be forward and fast output speed?
A) Sun gear stationary, ring gear driven, planet carrier driving,
B) Sun gear driving, ring gear driven, planet carrier stationary,

C) Sun gear driven, ring gear stationary, planet carrier driving
D) Sun gear stationary, ring gear stationary, planet carrier driving

30. Which types of gears are used in constant mesh gearbox?
A) Spur gear, B) Helical gear, C) Bevel gear, D) Worm gear

31. Why are the helical gears used commonly in transmission over spur gears?
A) Low cost and high strength, B) Low noise level and high strength, C) Low noise level and economy, D) Low noise level and low cost.

33. Increase of speed in a vehicle is obtained by
A) Decreasing of torque, B) decreasing power, C) decreasing fuel consumption, D) all of these

34. By using ……device the two involved adjacent gears have their speed are equalized.
A) Cone B) hub, C) synchronizing unit D) none of these

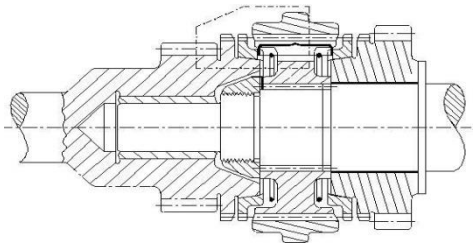
35. Hard gear shifting occurs due to
A) Binding clutch linkage, B) worn out gear, C) gear loose on main shaft, D) worn out counter shaft

36. Noisy operation of the gearbox is caused by
A) Binding clutch linkage, B) jammed synchromesh unit, C) misalignment of clutch housing D) gear loose on main shaft

37. Gear slipping occurs on account of
A) Broken teeth of any gear, B) worn out gear teeth, C) main shaft gears binding on spline, D) jammed synchromesh unit.

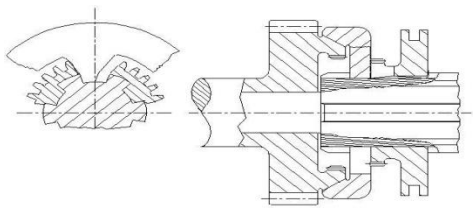
38:-What are the basic factors affect the gear selection?
A:-Vehicle load and engine speed B:-Vehicle speed and engine load C:-Vehicle load and road condition D:-Engine speed and road condition

39. What is the type of synchromesh gear box?



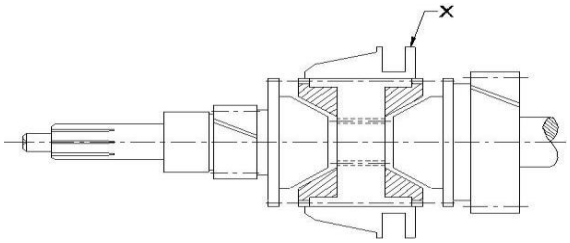
A) Baulk ring type, B) baulk type, C) multi and double cone type, D) porche type

40. What is the type of synchromesh gear box?



A) Baulk ring type, B) baulk type, C) multi and double cone type, D) porche type

41. What is the name of marked ‘x’ in the synchromesh action?



A) Gear, B) conical cup, C) hub, D) synchronizer sleeve

42. What is the advantage of using constant mesh gear box?
A). quick change of gear obtained, B) Wrong adjustment of gear will not affect the function,
C) Smooth power transmission, D) efficient lubrication possible

43. Which type of gear box provided with helical gears?
A- Auto synchromesh gear box, B-constant mesh gear box,
C- Sliding mesh gear box, D-synchromesh gear box

44. Which type of gear box can be operated even by unskilled driver?
A-compound wheel mesh gear box. B- Constant mesh gear box,
C- Sliding mesh gear box, D-synchromesh gear box

45. Which type of synchromesh gear box will produce torque more than three times of other types?
A- Baulk ring type, B- baulk type, C- multi and double cone type, D-porche type

46. Which type of synchromesh gear box used for heavy commercial vehicles?
A- Baulk ring type, B- baulk type, C- multi and double cone type, D-porche type

47. What is the possible reason of gear slip?
A) Wrong selection gear shift lever, B- excessive end float of gear,
C-wrong clutch engagement, D- worn-out clutch plate

48. What is the reason of gear locked in one gear position?
A-Synchronizer worn out, B- gear teeth worn out, C- synchronizing unit stuck, D- in adequate lubrication.

49. How to rectify the hard gear shifting?
A- Lubricate the unit, B-check and realign, C- adjust clutch pedal free play, D- re- install spring correctly

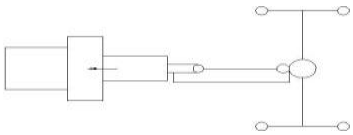
50. What causes noisy gear box in neutral position?
A. synchronizing unit stuck, B. bearing worn out or dry, C. synchronizer defective, D. synchronizer worn-out

ANSWER- **GEAR BOX**

1-A, 2-A, 3-C, 4-B, 5-A, 6-B, 7-D, 8-A, 9-C,10-C, 11-A, 12-A ,13-D,14-C, 15-A,16-C, 17-A,18-C, 19-C, 20-C, 21-A, 22-B, 23-B ,24-A ,25-A ,26-D ,27-C ,28-D ,29-A ,30-B ,31-B ,33-A,34-C ,35-A,36-D ,37-B ,38-B,39-A ,40-C ,41- D, 42-C,43-B,44-A, 45-C, 46-B, 47-B ,48-C , 49-C , 50-B

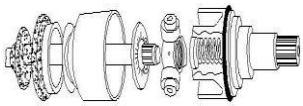
DRIVE SHAFT & DIFFERENTIAL

1-What is the type of drive line?



A-Front wheel drive line B- Four wheel drive line C- Real wheel drive line D- center wheel drive line

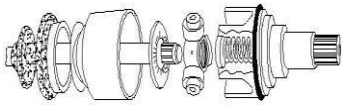
2-What is the permitted axial displacement of tripod joint?



A-55mm B-58mm C-64mm D-68mm

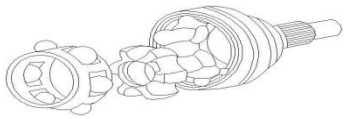
3-What is the permitted diffraction angel of tripod joint?
A-13^{O} , B-18^{O} , C-26^{O} , D-32^{O}

4- What is the type of constant velocity joint ?



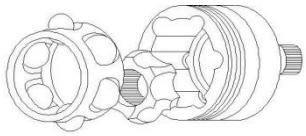
A-Pot joint B-Tripod joint, C- Ball joint D-Double joint

5- What is the type of constant velocity joint?



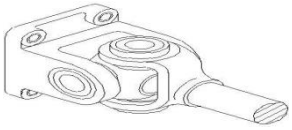
A-Pot joint, B-Tripod joint, C- Ball joint, D-Double joint

6- What is the type of fixed constant velocity type joint?



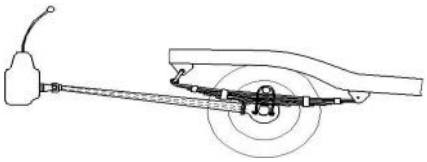
A-Pot joint B-Tripod joint C- Ball joint D-Double joint

7-What is the type of joint?



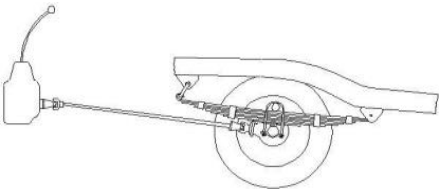
A-Ball and trunion type universal joint, B-Cross type universal joint, C- Slip joint, D- Ball joint

8. What is the type of drive?



A- Torque tube drive, B-Hotchkiss drive, C- four wheel drive, D- front wheel drive

9. What is the name of drive?



A- Torque tube drive, B-Hotchkiss drive, C- four wheel drive, D- front wheel drive

10. The following is not a part of driving axle unit
A-Propeller shaft, (B) Final drive, (C) Differential, (D) Half shafts

11. Four-wheel drive vehicles have differential at
A) Front wheels B-rear wheels C-both the front and rear wheels D-any of the front and rear wheels

12. The propeller shaft consist of
A-Knuckle joint, B--flange coupling, C-universal joint, D-Rag joint

13. The following diverts the power at right angles towards the driving wheels.
(A) Torque tube (B) Transfer case (C) Final drive (D) Differential

14. The distance between adjacent meshing teeth of mating gears is called.
A) Clearance B-Back lash C-Flank D- flute

15. In the over drive, there is an arrangement whereby it is possible to lock stationary the
A) Ring gear, B-Sun gear, C-Planet, D-pinion cage

16. the ring gear is adjusted in the differential by use of
A) Selective washers of proper thickness, B--Bearing adjuster c-Adjusting screw, D-None of these

17. The axle bevel gears in the differential mesh with the.
A-Differential pinion gears B-Ring gear C-Drive pinion D-Main gear

18. the ring gear is mounted on the
A-Differential housing B-Differential carrier C-Differential case D-Axle housing

19. the outer end of the axle is supported by a
A-Spring seat B-Sleeve bearing C-Housing bracket D-Ball or roller bearing

20. in the differential the ring gear is bolted to the
A-Differential housing B-Differential case C-Axle housing D-Drive pinion

21. the slip join permits a change in the
A-Length of shaft B-Speed of rotation C-Angle of drive, D- none of these

22. The centre part of a typical universal joint is called the
A-Trunion B-Joint C-Bearing D-Spider

23. To take care of the differential in the driving angle as rear axle moves up and down, the propeller shaft has one or more

A- Slip joint, B-Elbow joint, C-Release joint, D-Universal joint

24. In the modern differential the type of gearing used for the drive pinion and ring gear is
A- Spur, B—Spiral bevel, C-helical, D-Hypoid

25. The propeller shaft has one or more
A-Spur gears B--Elbow joints, C-Universal joints D-Fluid coupling

26. In the slip joint, slippage occurs between internally and externally mated
A-Couplings, B-Joints C-Spines, D- none

27. In the differential the ring gear is attached to the
A-Bevel gear, B-Drive gear, C-Differential case, D-Propeller shaft

28. The drive line consists of the propeller shaft with
A- Drive and universal joints, B-Universal joints and slip joints, C-both, D- none of these

29. The most popular drive at the drive axle for the passenger car is
A-Straight bevel gear, B--Spiral bevel gear, C-Worm gear drive, D-Hypoid drive

30. The axle shaft of a semi floating axle is subjected to
A-Axial thrust only B-Axial thrust and bending stress, C-Torsion stress only D-Bending, tensional stresses and end thrust

31. To correct heavy heel contact on the ring gear teeth, move the
A-Drive pinion in, B-Ring gear towards pinion, C-Ring gear away from pinion and adjust backlash, D-none of these

32. The universal joint permits a change in the
A-Length of the shaft, B-Speed of rotation, C-Angle of drive, D- none of these

33. In the Hotchkiss drive, the rear end torque is absorbed by the
A-Torque tube B-Rear spring C-Radius rods D- none of these

34. the two basic type of axle are
A-Dead and floating B-Dead and live, C-Floating and semi floating, D- none of these

35. The socket in which provided with a universal joint
A:-Deep B:-Flex C:-Standard D:-None of these

36. The function of a universal joint is to allow the propeller shaft to
A- change length, B- bend sideways- transfer torque at a angle, D-change inclination D- none of these

37. What is the permitted diffraction angle of double joint?
A- 50 degree, B- 62 degree, C- 58 degree , D- 72 degree

38. The arrangement in which road springs act as torque and thrust members is known as
A-Hotchkiss drive, B- Torque tube drive, C- road spring drive, D-none of the above

39. The differential unit consists
A- One bevel pinion B--two bevel pinion C-three bevel pinion D-four bevel pinion

40. The following diverts the power at right angles towards the driving wheels
A-Torque tube, B- Transfer case, C- Final drive, D- Differential

41. The live axle houses
A-Final drive, (B) Differential, (C) Half shafts, (D) All of the above

42. In four wheel drive there is (are)
A-no live axle, (B) one live axle, (C) two live axles, (D) one dead axle

43. Tandem drive vehicle has (have)
A-no drive axle, (B) two drive axles at front, (C) one drive axle at rear, (D) two drive axles at rear

44. Axle which form compact unit with gearbox, clutch and engine are called
A-Tandem axle, (B) power packed axle, (C) compact axle, (D) none of the above

45. in the differential, the crown wheel is attached to the
A-bevel gear, B-bevel pinion, C-differential cage, D-propeller shaft

46. Six wheel drive vehicle has
A-no live axle, (B) one live axle, (C) two live axles, (D) three live axles

47. What is the permitted diffraction angle of pot joint?
A- 18 degree, B- 20 degree, C- 22 degree , D- 26 degree

48. The distance between adjacent meshing teeth of mating gear is called
A) Clearance, B) pitch line, C) backlash, D) flank

49. Hypoid gear require special lubricant because
A- Tooth is made of soft material, B-tooth is made of hard material, C-such gears rotate faster, D- Sliding action is there between the teeth

50. The smallest gears of inside the differential casing are
A-Pinion gears, B- sun gears, C-side gears, D-ring gears

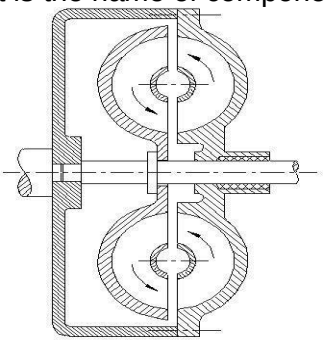
ANSWER:- **DRIVE SHAFT & DIFFERENTIAL**

1-C, 2-A, 3-C, 4-B, 5-A, 6-C,7-B, 8-A ,9-B, 10-A,11-C, 12-C, 13-C, 14-B, 15-B, 16-A, 17-B, 18-C, 19-D, 20-B, 21-A, 22-D, 23-D, 24-D, 25-C, 26-C, 27-C, 28-B, 29-D, 30-D, 31-A, 32-C , 33-B, 34-B, 35-B, 36-B, 37-A, 38-A, 39-B, 40-C, 41-D, 42-C, 43-D, 44-B, 45-C, 46-D ,47-C ,48-C ,49-D ,50-A

AUTOMATIC TRANSMISSION

1. Which is a type of automatic transmission.
a) Hydromantic drive b-Torque converter transmission c-Both are correct d-None of the above

2. What is the name of component?.



(a) Single plate clutch (b) Fluid coupling (c) Dog clutch (d) centrifugal clutch

3. The following is (are) the advantage(s) of fluid flywheel
(a) It gives a smoother power take up than centrifugal type, (b) fluid acts as a cushioning agent;
(c) It needs no separate pedal or lever to operate it, (d) all of the above

4. The purpose of the fluid coupling is to act as a
a. Synchronizing device b. automatic gear changer
c. Flexible power transmitting couple, d. none of these

5. In the fluid coupling, speed reduction means torque reduction. But in the torque converter, speed reduction means.
a- Torque increase b-Torque loss c-Power increase d- power loss

6. When coming out of overdrive, the overdrive electric control momentarily
a- De clutches the engine b-Interrupts the ignition system action c-De meshes the sun gear, d) none of these

7. In order for power to flow through the fluid coupling from the engine to car wheels, the driving member must be turning.
a- Slower than driven member b-At same speed as driven member
c- Faster than driven member. D) None of these

8. The number of planetary gear sets in a hydromatic transmission system is
a- Two b-Three c-Four d-Five

9:-Which member of a torque converter is also known as reactor?
a) Lock up clutch, b) Stator, c) Impeller, d)-Turbine

10: In the fluid coupling, speed reduction means torque reduction. But in the torque converter, speed reduction means.
(a)Torque increase (b)Torque loss (c) Power increase (d) power loss.

11. The component of the torque converter that allows multiplication of torque is the
(a) Turbine (b) impeller(c) pump (d) stator

12. The component of the torque converter that drives the oil is the
(a) Turbine (b) Impeller (c) freewheel(d) stator

13. The maximum torque multiplication ratio in a torque converter is about
(a) 2.5(b) 10(c) 25(d) 100

14. The component of the torque converter that redirects the flow of oil to impeller is
(a) turbine (b) impeller(c) stator(d) freewheel

15. In a torque converter maximum torque multiplication occurs at
(a) Stop (b) low speed(c) medium speed (d) high speed

16. The blades in a torque converter have a shape which is
(a) Square (b) round(c) flat (d) curved

17. Overdrive is placed
a) Before gearbox, b.)in between propeller shaft and gear box, c). after propeller shaft, d).in between engine and gear box.

18. The overdrive consists of _____ gear train.
a) Simple b) compound c) Epicyclic d) Reverted

19.The fluid coupling consists essentially of two
(a)Doughnuts b)-Vane members' c) Guide rings d) Driving shafts

20. The type of gear set used in automatic transmission is
a) Spur gear set, b) helical gear set, c) bevel gear set, d)planetary gear set

21. Simple planetary gears generally offers reductions as high as
a) 10:1, b)20;1, c) 30:1, d) 40:1

22. CVT stands for
a) Common variable transmission b) central variable transmission c) continuously variable transmission d) none of these

23. The main advantage of CVT
a) increase exposure to friction, b)can be used in heavy vehicle, c)less emission are produced d) All of these

24. TCC expands
a) Torque converter clutch, b) torque converter center, c) torque converter control, d) none of these

25. Torque converter eliminates the …… % of slip between impeller and turbine at the coupling stage.
a) 5, b) 10, c) 15, d) 20.

ANSWER- AUTOMATIC TRANSMISSION

1-c ,2-b, 3-d ,4-c, 5-a, 6-b,7-c, 8-c, 9-b, 10-a, 11-d, 12-b, 13-a ,14-c, 15-a, 16-d, 17-b, 18-c, 19-b, 20-d, 21-a ,22-c, 23-c , 24-a , 25-b,

STEERING SYSTEM

1.In a vehicle the problem cause for hard steering could be
A :Low tyre pressure B : Bent wheel spindle C : Tie rod end tight D : Any of the above

2.The angle of camber is usually
A : Less than ½ ^{0} B : Between ½ ^{0} and 2^0 C : 2 ^{0} to 5 ^{0} D : 5^0 to 7^0

3.The king pin inclination is usually
A : Less than ½ ^{0} B : Between 1^0 to 2^0 C : Between 2^0 to 5^0 D : 5^0 to 7^0

4.The distance between center of front wheel is called
A : Track B : Wheel base C : Axle width D : Turning circle

5. A certain steering has a track rod which is equal in length to the distance between the swivel axis centre's, when the outer wheel is steered through 20 the angle steered by the inner wheel is
A : Less than 20 ^{0} B : 20^0C : More than 20^0 but less than 25^0 D : More than 25^0

6.When a vehicle cornering , each wheel should form a right angle to a line draw from the
A : Center line of the vehicle B : Instantaneous centre of rotation C : Center of rear axle
D : Mid-point of the front suspension system

7. As applied to steering , the abbreviation P.A.S. Stands for
A : Pump assisted system B : Pump aided steering C : Power activated system D : Power assisted steering

8. A collapsible steering column is one which collapses to
A : Damp out road vibration B : Improve safety for the driver C : Simplify its removal for repair
D : Provide adjustment for the steering wheel

9. Rotary motion of the steering is converted to a reciprocating motion by
A : Track arm B : Track rod C : Stub axle D : Steering box

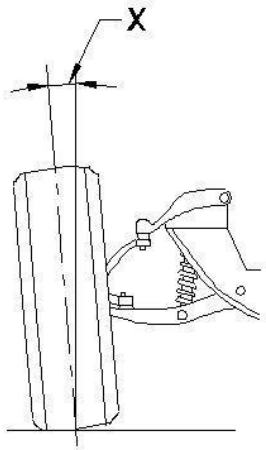
10. The track rod is connected to the track arm by a
A : Ball joint B : King pin C ; Stub axle D : Universal joint

11. Front wheel alignment is adjusted by altering the
A : Angel of track arm B : Length of track arm C : Distance between kingpins D : Position of the drag link

12. On a beam axle the stub axle pivots about a
A : King pin B : Ball joint C : Track rod D : Track arm

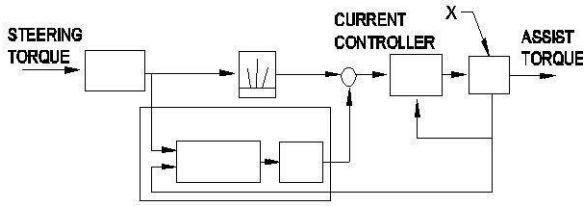
13. Which one is not steering gear
A: Recirculating ball steering gear B: Reciprocating ball steering gear C: Cam and roller steering gear
D: Worm and sector steering gear

14. What is the name of angle marked as 'X' in the camber?



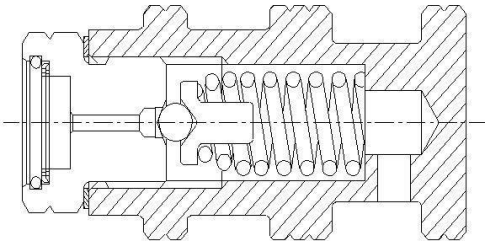
A : Caster angle | B: King pin inclination angle C: Camber angle D**:** Included angle

15. What is the name of part marked as ‘X’ in the electronic power steering? |



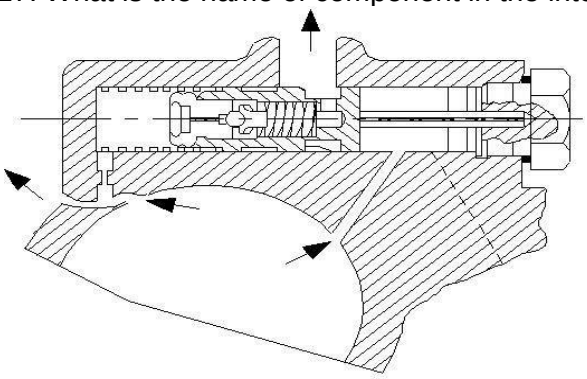
A : Motor **B** : Assist map **C** : Compensator **D** : Observer

16. What is the name of component used in the integral power steering?



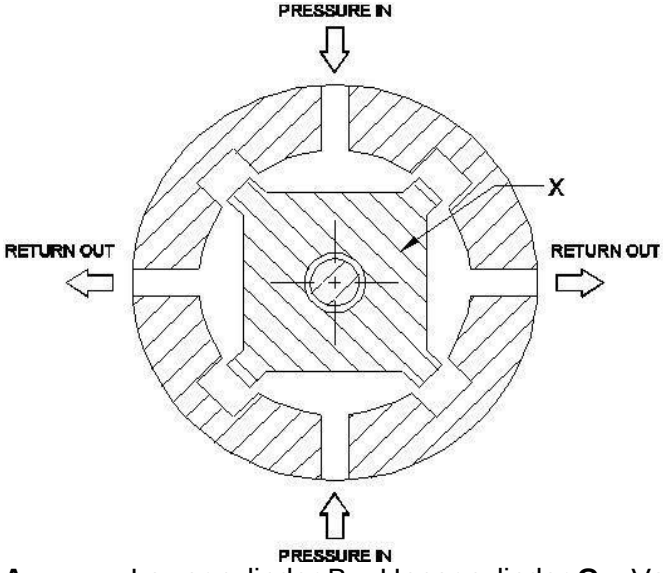
A : Flow control valve B:Rotary valveC: Unloading valve D: Pressure relief valve

17. What is the name of component in the integral power steering system?



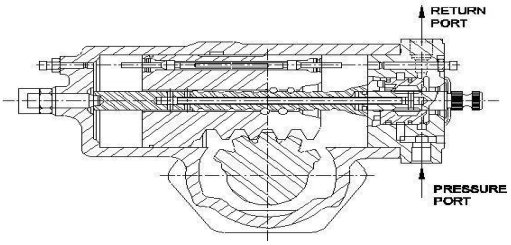
A : Flow control valve B: Unloading valve C: Rotary valve D: Pressure release valve

18. What is the name of part marked as ‘X’ in the integral power steering in neutral condition?



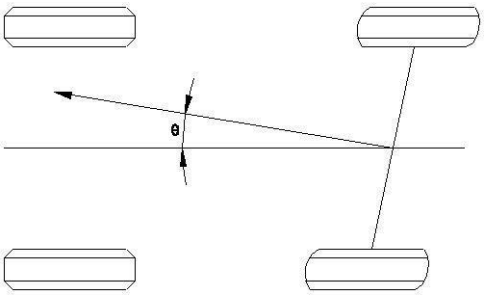
A : Lower cylinder B : Upper cylinder **C** : Valve sleeve **D** : Input shaft

19. What is the type of power steering?



A : Integral power steering B: Linkage power steering C: Electronic power steered
D: Electrical power steering

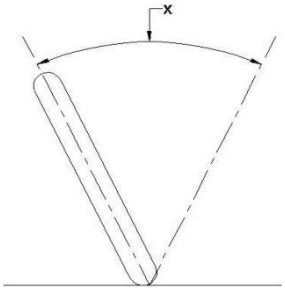
20. What is the name of angle marked as 'X' in the steering system ?



A : Camber angle B : Cast or angle C: Thrust angle D: Included angle

21. What is the recommended valve of combined angle in the steering system?
A : 5 - 8° **B:** 9 - 10° **C:** 12 - 15° **D** : 15 - 18^0

22. What is the name of angle marked as 'X'?



A : Combined angle B : Camber angle **C** : Castor angle **D** : Thrust angle

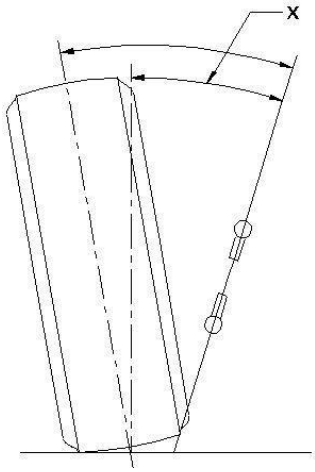
23. What is the steering linkage ratio if the pitman arm length twice of steering arm length?
A : 2 : 1 **B**:2 : 1 **C**:1 : 2 **D** : 2 : 3

24. What is the average power steering gear ratio followed in general?
A : 40% less than manual steering B: Equal to manual steering

C : 20% less than manual steering D : 10% more than manual steering

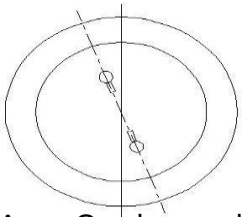
25. What is the range of steering ratio available in general?
A: 8 : 2 to 22 : 2 **B**: 11 : 2 to 22 : 2 **C**: 11 : 1 to 24 : 1 **D** : 10 : 1 to 18 :1

26. What is the name of angle marked as 'X'?



A : Camber angle B:Castor angle **C**:King pin inclination **D** :Included angle

27. What is the name of angle influence the wheel alignment?



A. Camber angle B. King pin Inclination angle C. Castor angle D. Included angle

28 : Which part of electronic power steering reverts back to manual steering in case of failure in power steering?

A : Solenoid valve B: Fail safe relay D: Current controller

29. Which device in electronic power steering converts the steering torque input and its direction in to voltage signals?

A : Rotation sensor **B**: Torque sensor **C** : Hall effect sensor **D** : Temperature sensor

30. What is the advantage of electronic power steering?

A : Compact in size **B** : Energy being consumed only while steering |

C : Less occupation of space D : Number of components are less

31. Which steering system will provide assistance even when the engine is not running? |

A: Integral power steering B: Linkage power steering C: Electronic power steering D: Manual steering

32. : Which part of integral power steering reduces fluid pressure? |

A : Torsion bar B: Rotary valve C: Unloading valve D:Flow control valve

33. What is the role of recirculating balls in the integral power steering?

A : Affect steering stability B : Prevent control in event of hydraulic failure

C : Combine high mechanical efficiency with smooth operation **D** : Provide hard steering

34. Which is the heart of integral power steering system?

A : Flow control valve B : Rotary control valve **C** : Pressure relief valve **D** : Unloading valves

35. Which is not the benefit of power steering?

A : Effortless driving B : Quick response C : Absolute control during driving D : Positive breaking system

36. : Why light weight cars use low steering ratio?

A : To obtain low steering effect B: To obtain large steering effect

B **C**: To obtain constant steering effect D: To obtain no steering effect

37. : Which angle helps in self centering of wheels after negotiating a turn? ?

A: Castor angle **B**: King pin inclination **C**: Camber angle **D** :Included angle

38. What is the purpose of castor in wheel alignment?

A : Maintain directional stability and control B: Reduce tyre wear C: Reduce abnormal vibration

D : Convert steering torque input into voltage signal

39. How to rectify the defect of noise in hydraulic steering?

A : Replace with new fluid B: Fill fluid to correct level and bleed the system

B : Adjust the torsion bar linkage D: Replace the flow control valve

40. What is the cause of noise in steering? |

B **A** :High fluid level B Presence of air in the fluid C: Defective flow control valve E: Defective torsion bar

41. What will be effect of unequal castor in the vehicle?

A : Vehicle pull to one side wheel B : Vehicle will not move C :Driver have to use less effort on steering

D : Increase steering stability

42. What is the reason of steering wheel play excess?

A : Improper pre load defective steering **B**: Low oil level **C**: Drop in pressure D :Worn out sealing rings

43. What is the cause of "Wheel wobbling"?

A : Improper tyre pressure **B**: King pin worn out **C** : Drop in pressure **D** : Wrong hose size

44 : Why tyre wear found abnormal in the vehicle?

B **A** :Loose wheel nut **B** : Improper linkage adjustment C: Improper linkage adjustment

D : Improper toi-in and toi – out E : Improper tyre pressure

45 : What causes the defect of 'Hard steering in the hydraulic power steering system?

A : Improper position of drop arm **B**: Tie rod loose fitting **C** : Band axle beam **D** : Improper size of tyre

46 : What causes "Air suction" in pump of hydraulic power steering system?

A: Noise B: High fluid level C: Low pressure D: Steering wheel play

47 : What is the cause of " low pressure" in the hydraulic power steering system?

A:Low oil level B: Wrong flow control valve setting C: Air in the system D: Worn-out sealing ring

48. Effort required to the steer the vehicle should be

A. Maximum B. Minimum C. Zero D. All of above

49. Effort required to steer must not be _____to the driver .

A : Tiresome B : Easy C : Difficult D : All of above

50. Which one is not a part of steering gear layout _____.

A : Steering wheel B : Steering column C : Steering gear D : Crank shaft

51. The main function of the steering system is to convert _____ of the steering.

A : Vertical motion B : Rotary motion C : Linear motion D : Crank shaft

52. The steering wheel rotates the _____.

A : Drop arm B : Steering column C : Steering Gear box D : All of above

53. The steering arms on both wheels are connected by the _____ to the drag link

A : Drop arm B : Steering column C : Tie rod D : All of above

54. _____ Are us3ed in ball and socket system to absorb this vibration.

A : shock springs B : Steering arm C : tie rod D : Drag link

55. A light sports car with quick steering may have a ratio of _____.

A : 12:1 B : 10:1 C : 20:1 D : None of above

56. A large heavy automobile may have a ratio of _____.

A : 12:1 B : 10:1 C : 20:1 D : None of above

57. The arc of movement of the drop arm is usually from _____.

A : 12:1 B : 10:1 C : 20:1 D : None of above

58. A large heavy automobile may have a ratio of _____.

A : 50^0 to 60^0 B : 60^0 to 90^0 C : 60^0 to 80^0 D : None of above

59. The nut has teeth ,which mesh with the _____ in the gear box.

A : Sector gear B : worm gear C : pinion gear D : None of above

60. Turning the steering wheel turns the _____.

A : Sector gear B : worm gear C : pinion gear D : None of above

61. Which of the following vehicles not uses rack and pinion steering gear ?

A : Ambassador car B : Truck C : American passenger car D : None of above

62. Mesh type columns introduced in _____.

A : 1967 B : 1957 C : 1977 D : 1987

63. Corrugate deformable section column employs _____ .

A : Single column B : Double column C : Triple column D : None of above

64. Telescopic safety steering lower column is connected to the _____ .

A : Steering wheel B : Steering arm C : Steering box D : None of above

65. How many number of the rods are used in this type of steering linkage ?

A : 2 B : 3 C : 1 D : 4

66. Drop arm is connected between _____.

A : Steering wheel and steering box B : steering box and stub axle

C : Steering box and drag link D : drag link and tie rod

67. In which of the following vehicles independent front suspension steering linkage is used ?

A : cars B : heavy vehicles C : mopeds D : motor cycles

68. Steering ratio is the ratio of angle turned by steering wheel to corresponding turning angles of the _____.

A : Front axle B : Rear axle C : Stub axle D : None of above

69. Turning radius of circle made by outer _____ .

A : Front axle B : Rear axle C : Stub axle D : None of above

70. Steering gear ratio varies between _____ in passenger cars without power steering

A : 10:1 and 24:1 B : 14:1 and 24:1 C : 12:1 and 24:1 D : None of above

71. The radius of turning circle is the _____.

A : Over steer B : Under steer C : Turning radius D : None of above

72. Ackermann's steering mechanism uses _____.

A : Pivot or turning pairs B : Sliding constraints C : Both A and B D : None of above

73. The maintenance if pivots compared to sliding constraints is _____.

A : Difficult B : Easier C : costly D : Cheaper

74. When the slip angle of the front are greater than the condition is said to be _____.

A : Under steer B : Over steer C : Both A and B D : None of above

75 . When the slip angle of the front are less than the condition is said to be _____.

A : Under steer B : Over steer C : Acetylene frame D : None of above

76. An irreversible steering gear does not transmit road shocks to the _____.

A : Road wheel B : Steering wheel C : Front axle D : Rear axle

77. When the steered wheels do not transfer any deflection to the steering wheel _____.

A : Irreversible steering B : Reversible steering C : Semi reversible D : None of above

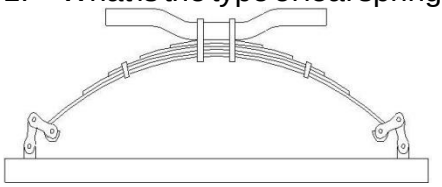
Answers- STEERING SYSTEM

1-D, 2-B, 3-C, 4-C, 5-B, 6-B, 7-D, 8-B, 9-D, 10-A, 11-B, 12-B, 13-B, 14-C, 15-A, 16-D, 17-A, 18-D, 19-A, 20-C,21-B, 22-A,23-C, 24-C, 25-C, 26-C, 27-C,28-C, 29-B, 30-B, 31-C, 32-C, 33-C, 34-B, 35-D, 36-B, 37-B, 38-A, 39-B,

40-B, 41-A, 42-A, 43-A, 44-B, 45-C, 46-A,47-B, 48-B, 49-A, 50-D, 51-B, 52-B, 53-C, 54-A, 55-A, 56-C, 57-A, 58-B, 59-A, 60-B, 61-A, 62-A, 63—A, 64-C, 65-B, 66-C, 67-A, 68-C, 69-A, 70-B, 71-B, 72-A, 73-B, 74-A, 75-B, 76-B, 77-A

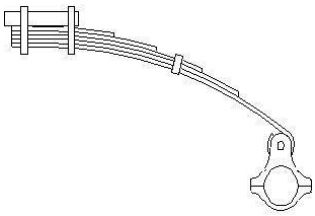
SUSPENSION SYSTEM

1. What is the type of leaf spring?



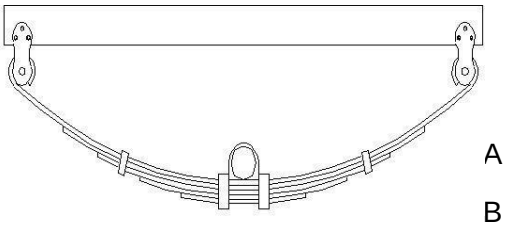
A : Quarter elliptical spring B : Transverse spring C : Semi elliptical spring D : Full elliptical spring

2. What is the type of leaf spring?



A : Transverse spring B : Full elliptical spring C :Quarter elliptical spring D : Semi elliptical spring

3. What is the type of leaf spring?

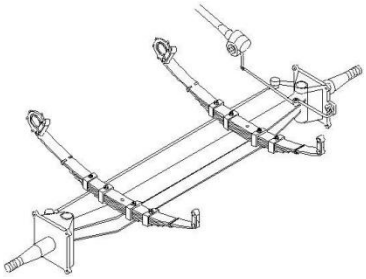


A : Semi elliptical spring

B : Quarter elliptical spring

C : Three elliptical spring
D : Transverse spring

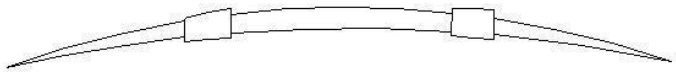
4. What is the type of suspension system? |



Independent suspension system
Conventional suspension system
Air suspension system

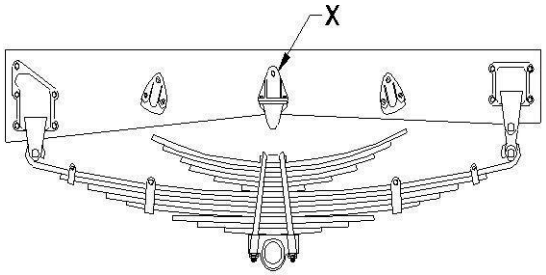
C. spring suspension system

5. What is the type of suspension system spring?



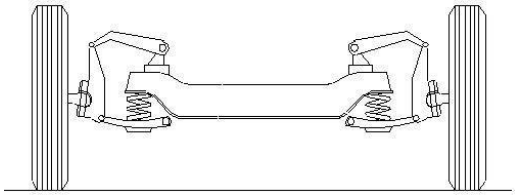
A : Mono leaf spring:
B : Fiber composite spring
C : Multiple leaf spring
D : Coil spring

6. What is the name of part marked as 'X' in the suspension system?



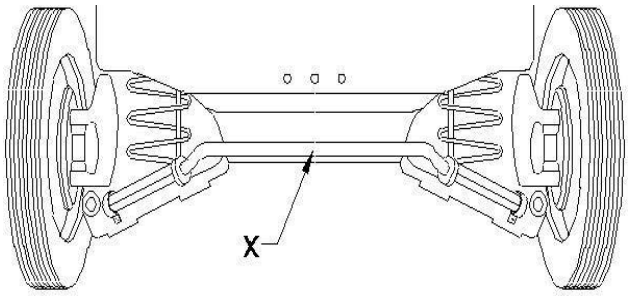
A : Chassis frame B : Helper spring C : Rubber buffer D : Brackets

7. What is the type of independent suspension system?



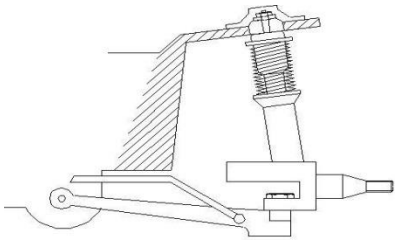
A : Torsion bar suspension B : Strut type suspension C : Air type suspension D : Coil spring suspension

8. What is the name of part marked as 'X' in the coil spring suspension?



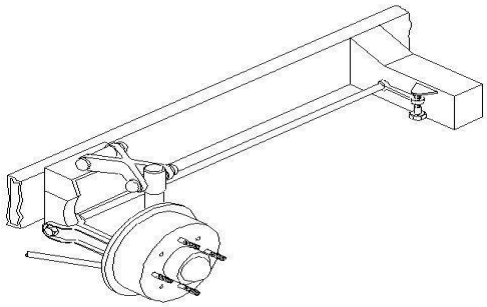
A : Torsion bar B : Stabiliser bar C : Control arm D : Coil spring

9. What is the type of suspension?



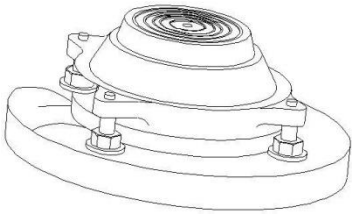
A : Coil spring suspension B : Torsion bar suspension C: Rubber spring suspension | D : Strut type suspension

10. What is the type of suspension?



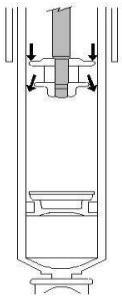
A : Strut type suspension B : Coil spring suspension C :Torsion bar suspension D : Rubber spring suspension

11. What is the name of shock absorber?



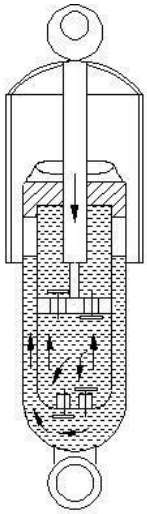
A: Gas pressurized shock absorber B : Electronic adjustable shock absorber
C: Hydraulic shock absorber D: Load adjustable shock absorber

12. : What is the type of shock absorber?



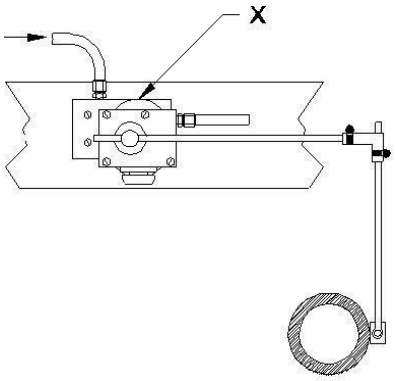
A : Gas pressurized shock absorber B: Mechanical type shock absorber
C : Telescopic type shock absorber D: Piston type shock absorber

13. What is the type of shock absorber?



A :Vane type B: Piston type C :Telescopic type D :Mechanical type

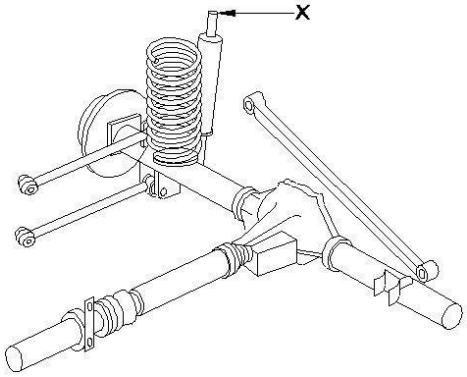
14. What is the name of part marked as ‘X’ in air suspension system?



A : Air bag B : Height control valve C : Vehicle frame D : Axle

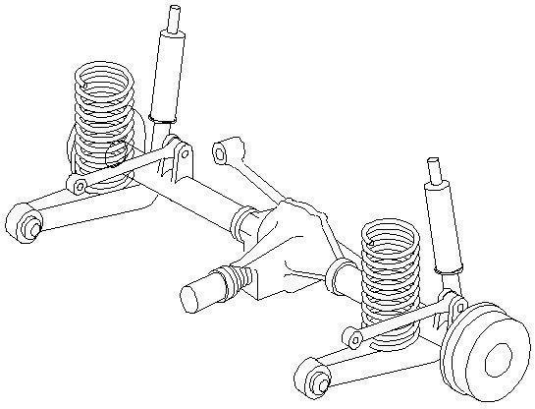
15. What is the maximum air pressure supplied by the compressor in the air suspension system?
A : 100 to 115 PSI B : 180 to 210 PSI C : 120 to 125 PSI D : 200 to 215 PSI

16. What is the name of part marked as ‘X’ in the suspension system?



A : Tracking bar
B: Upper control rod
C : Shock absorber
D : Axle mounting bracket

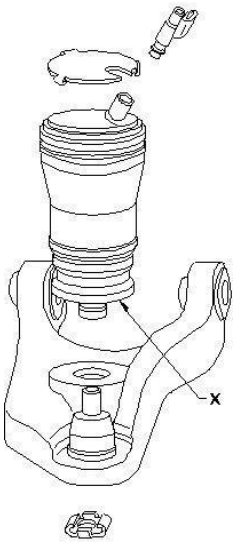
17. What is the type of suspension? :



A : Air suspension rear axle B : Coil spring rear suspension

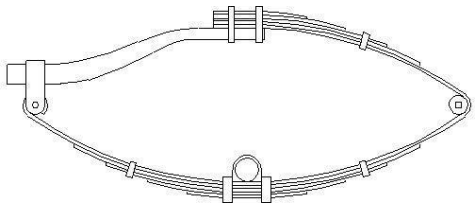
C: Front air spring suspension D : Rigid axle suspension system

18. What is the name of part marked as ‘X’ in the front air spring suspension



A : Air Spring valve | B : Lower control arm C : Piston D : Spring attaching clip

19. What is the type of suspension system? |



A : Rigid axle suspension system B : Adaptive air suspension system
C : Independent suspension system D : Coil spring suspension system

20. Which type of suspension spring can not transfer wheel guidance forces?
A : Helical springs B : Coil springs C : Leaf springs D : Compression springs
21. What is the advantage of coil spring? |
A : Good load carrying capacity B : High steering and stability C : Low space requirement D : Provide greater pay load
22. : Which type of suspension spring made of fiber glass, laminated and bonded together by tough polyester resins?
A : Coil springs B : Multiple leaf springs C : Monoleaf springs D : Fiber composite springs

23. : Which type of spring will have good load carrying capacity and do not have noise in the suspension system? |
A : Monoleaf springs B : Coil spring C : Multiple - leaf spring D : Fiber composite springs
24 Which system provided between axles and chassis frame? |
A : Braking system B : Suspension system C : Steering system D : Cooling system
24. Which is not the function of suspension system?
A : It maintains body level B : It gives cushioning effects
C : It transfer braking torque to the chassis D : It increase steering stability

25. Which type of independent suspension system simple in construction and allow more deflection of the front wheel without effect on the steering?
A : Torsion bar suspension B : Strut type suspension C : Coil spring suspension D : Conventional suspension

26. Which part of coil spring allows angular movement of linkages?
A : Ball joint B : Stabilizer bar C : Torsion bar D : Lower control arm

27. Which type of spring suspension responds quickly to road shocks?
A : Compression spring B : Coil spring C : Helical spring D : Transverse spring

28. : Which type of shock absorber maintain vehicle ride at a pre - set level according to the load placed over the rear axle?
A : Gas pressurized shock absorber B : Hydraulic shock absorber
C : Automatic load adjustable shock absorber D : Mechanical shock absorber

29. What is the effect of weak suspension? |
A : Directional instability of vehicle B : Carrying excessive payload of vehicle
C : Unequal weight distribution of weight D : Vibration damping is more effective

30. : Which type of shock absorber is easy for replacement and handling?
A : Vane type B : Piston type C : Mechanical type D : Telescopic type

31. : Which type of shock absorber absorbs shocks with the help of friction disc and spring? |
A : Hydraulic type B : Electrical type C : Mechanical type D : Pneumatic type

32. Which device in the air suspension system observes vibration of low amplitude and high frequency?
A : Shock absorber B : Suspension spring C : Air bags in the system D : Leaf spring

33. Where the airbags are located in the air suspension system?
A : Between frame and vehicle axle B : Between high control valve and frame
C : Between air pressure regulator and front axle D : Between brake tank and vehicle axle

34. What is the purpose of air suspension?
A : Used for leveling purpose B : Reduce the suspension weight
C : Increase the directional stability D : Reduce the space occupation

35. Why vibration damper are not used inside the helical spring?
A : Possibility of stuck in one position B:Not economical
C : Fitting and removing time consuming D:No effect on load carrying capacity

36. Why rubber buffer is provided in the main spring of suspension system?
A : Transfer pay load smoothly B: Protect chassis frame from heavy jerk
B : Transfer the load equally C: Provide steering control stability

37. Which factor affecting suspension
A : Damaged chassis frame B : Worn out spring C : More shocks, uncomfortable riding D : Abnormal tyre wear

38. Why suspension is used in motor vehicle?
A: To reduce the noise B : To reduce the vibrations C : To control the speed D : All of above

39. Conventional suspension is mainly used in_____.
A : Heavy trucks B : Light motor vehicle C : Two wheelers

40. Damper is most commonly called as ____.
A : Shock absorber B : Leaf spring C : Both A and B D : None of these

41. The steering spindle and steering knuckle assemblies are ____on the axle ends.
A : Hinged B : Clamped C : Both a and B D : None of these

42. In almost all cars of the present day ,Independent suspension system is used as_____.
A : Front suspension B : Rear suspension C : Both a and b D : none of these

43. The material used for leaf springs are _____.
A : Iron B : Steel C : Rubber D : None

44. In Trucks, leaf springs are used in _____.
A : Front axle B : Rear axle C : Both A and B D : None

45. Leaf spring assembly is generally made up of _____ spring leafs.
A : 5 to 1 B : 6 to 12 C : 8 to 12 D : none of these
46. The energy started per unit volume _____ in coil springs compare to leaf springs is almost.
A : half B : Double C : One-third D : Full
47. The coil springs is popularly used in _____ system.
A ; Independent suspension B : conventional suspension C : Shear , bending D : None of these

48. In suspension system ,the lift control valve is operated _____.
A : Manually B : Automatically C : both A and B D : None of these

49. Bellow type spring consists of _____ bellows.
A ; Plastic B : Fiber C : Rubber D : None of these

50. The improved standard of ride comfort and noise reduction attained with _____.
A : Air spring B : Coil spring C : Leaf spring D : None of these

51. Torsion bar spring is _____ compared to leaf springs.
A : Heavy weight B : Light weight C : All of these D : None of these
52. The torsion bar cannot take up driving and _____ torque effectively.
A : Braking B : Accelerating C : Moving D : None of these
53. Shock absorber in an automobile is used to _____.
A : Absorb the energy B : Dissipate the energy C : Release the Energy D : Increase the energy
54. The hydraulic type has the additional advantage that the damping is proportional to the _____ of the speed.
A : square B : rectangle C : circle D : None of these
55. Another name for a shock absorber is _____.
A : Damper B : Torsion bar C : spring D : Independent suspension

56. Which of the following are advantages of independent suspension system
A : Elastic strain energy stored in a coil spring is greater B : Un sprung weight is reduced
C : softer spring can be used without increasing rolling effect D : None of these
57. In which type of suspension system kingpin is attached directly to the cross member of the frame ?
A : Wishbone type B: Macpherson sturt type C : Vertical guide type D : Swing half axle
58. In wishbone type suspension system, the spring is placed between _____ .
A : Lower wishbone and under side of the frame B : above the upper wishbone
C : Both a and B D : None of these
59. In wishbone type suspension system _____ may vary.
A : Caster angle B : Toe in C : Toe out D : camber angle
60. The stabilizer bar reduces the tendency of the vehicle to roll when _____.
A : Taking a turn B : In straight C : Normal condition D : High speed
61. To stop tilting of the vehicle stabilizer rod are placed in the _____.
A : Suspension system B : Braking system C : Chassis D : None of these
62. If the axle is transmitting power, it is called as _____.
A : Live axle B : Dead axle C :Both A and B D : None of these
63. Front axle beam has the following section _____.
A : H- section B : C- section C : I- section D : None of these
64. What is the function of thrust washer in the stub axle joint ?
A : To clean the joint B : To take torsional load C : To receive the vertical load D : to lubricate the joint
65. Why phosphor bronze bushes are used in the joint ?
A : To break the joint B : To have friction in the joint C : To provide a bearing surface D : None of these
66. The thrust washer is placed at top of the _____.
A : Front axle beam B : Wheel hub C : Stub axle D : None of these

67. The purpose of cotter pin in lamoine and reversed lamoine joints is _____.
A : To provide smooth operation B : To lock the front axle beam C : to lubricate the joint D : None of these
68. Springs are made of
A : Mild steel B : Carbon steel C : High speed steel D : Spring steel
69. In case of clutch if the spring s become weak, the remedy lies in
A : Tightening further the springs B : Interchanging the springs
C : Retempering the springs D : Replacing the spring

70. The purpose of a suspension damper is to

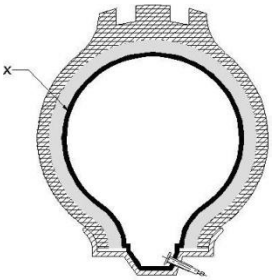
A : Take the road shocks B : Prolong the bounce
C : Prevent the spring deflection D : absorb the ener5gy in the spring
71. Which one of the following suspension springs also acts as a means for locating the axle ?
A : Laminated B : Helical C : Torsion bar D : Rubber
72. The reason why a laminated spring is made up of a series of leaves is to
A : Reduce interleaf friction B : Soften the spring action and increase the maximum deflection
C : Allow the leaves to slide during the bump movement D : Overcome the weakness at the centre of a single leaf spring
73. An axle is located on a leaf spring by a
A : U – bolt B : Spring clip C ; Centre bolt D : Shackle pin
74.The purpose of a suspension damper is to
A : Resist the road shocks B : Reduce the “dump” stroke of the spring
C : Absorb the energy stored in the spring
75.Which one is not a type of suspension spring.
A : Leaf spring B : Coil Spring C : Torsion Bar D : oil Spring

ANSWERS- Suspention System

1-B, 2-C, 3-A, 4-B, 5-B, 6-C, 7-D, 8-B, 9-D, 10-C, 11-B, 12-A, 13-C, 14-B, 15-C, 16-C, 17-B, 18-C, 19-B, 20-A, 21-C, 22-D, 23-C, 24-B, 25-D, 26-B, 27-A, 28-B, 29-C, 30-A, 31-D, 32-C, 33-A, 34-A,35-C,36-B,37-B, 38-B, 39-A,40-A, 41-A, 42-A, 43-B, 44-B, 45-A, 46-B, 47-A, 48-A, 49-C, 50-A, 51-B, 52-B, 53-A, 54-A, 55-A, 56-A, 57-B, 58-A, 59-D, 60-A, 61-A, 62-A, 63-C, 64-C, 65-C, 66-C, 67-B, 68-D, 69-D, 70-D, 71-A, 72-D, 73-C, 74-D, 75-B

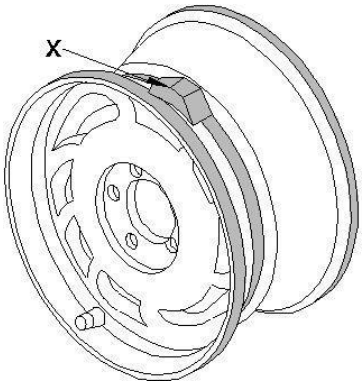
WHEEL & TYRE

1. What is the name of part marked as ‘X’ in the tub tyre?



A : Tube B: Steel beeds C: Tread D: Tyre

2. What is the name of part marked as ‘X’ in the wheel rim?



A : Valve stem B : Wheel hub C : Pressure sensor D : Beading edge

3. What is the aspect ratio in the tyre structure?

A : Percentage ratio of tyre height to Rim width B : Ratio between tyre height to tyre dia
C : Percentage ratio of tyre height to tyre width D : Ratio between tyre width to Rim width

4. How the tyre height is calculated?

A : Rim dia - tyre outer dia B : Tyre outer dia - Rim dia
C : Thread width + Tyre width D: Tyre width + Bead circle dia

5. : What is the name of distance between most protruding portions on both sides of tyre?

A : Tyre outer diameter **B**: Tyre height **C** : Tyre width **D** : Thread radius

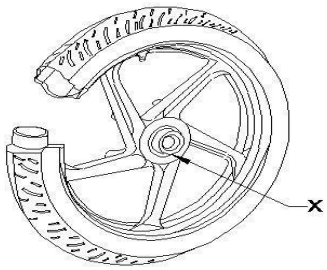
6. : What does the no: 14PR denotes in the tyre specification 9” x 14 - 14PR?

A: Shoulder width **B**: Bead circle dia **C**:Ply rating **D** : Tyre thickness

7. : How the tyre is specified?

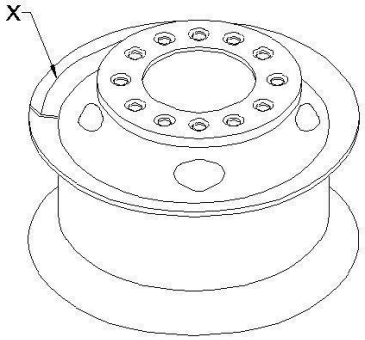
A: Shoulder width, Bead circle dia. Ply rating B Shoulder dia, Bead circle dia, Ply rating |
C: Shoulder width, Tyre thickness D : Ply rating, tyre inner circle dia, shoulder width

8. 8. What is the name of part marked as ‘X’ in the cast wheel?



A: Tyre B: Rim C:Tube D: Hub

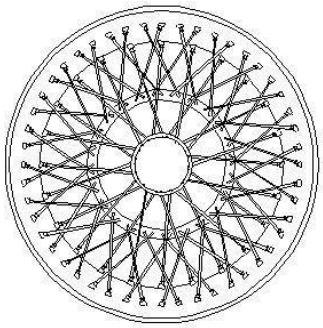
9. What is the name of part marked as 'X' in the flat type rim?



A : Centre position **B** : Plain split lock ri **C** : Rim projection **D** : Rim outer edge

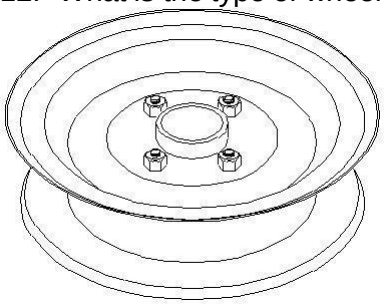
10. Which type of wheel consist two separate discs are clamped together?
A : Split wheel **B**: Wire wheel **C** : Disc wheel D : Heavy vehicle

11. What is the type of wheel



A : Disc wheel **B** : Split wheel **C** : Heavy vehicle wheel D : Wire wheel

12. What is the type of wheel?



A : Wire wheel **B**: Disc wheel **C** :Split wheel **D** : Heavy vehicle wheel

13 What is the advantage of using nitrogen in the tyres?
A : Provide positive road grip B : Increase the tyre life
C: Provide cushioning effect on the vehicle D : Observe shocks and vibration
14 What is the use of compact spare tyres? |
A: Used for breakdown B:Used for high altitude
BC: Withstand heavy load D:Withstand high temperature

15. Which rating indicate the braking capabilities of the tire to the consumer?

A : Ply rating **B**:Tyre rating

C : Traction rating **D** :Temperature rating

16. What is the advantage of using run flat tyres?

A: Less cost and maintenance B:Eliminate head for spare tyre and jack

C: Resist vibration **D** :Provide equal distribution of load |

17. What will effect in case of over inflated tyres?

A: Tyre will wear out at centre B: Tyre will wear out at edges

C: Tyre will crack at edges D: Tyre will crack at centre

18. What is the purpose of beads and plys provided in the tyre?

A: Provide strength to tyre B: Provide grippness on the surface

C : Prevent tyre slip **D** : Resist vibration

19. What is the function of Rim in the wheel construction?

A : Support the axle **B** : Provides balancing of vehicle

C: Holds the tyre in correct position D: Distribute the load equally

20: What is the purpose of spokes provided in the wheel?

A: Provide accurate rounds of rim B: Distribute pre load evenly

C: Provide directional stability of vehicle D:Support the chassis frame of vehicle

21.What is the impact of larger scrub radius?

A: Wear on the outer edge of tyre B:Unequal braking on the front wheel

C:Wear on the centre part of tyre D: Bending of steering linkage point

22. What will be the effect of negative scrub radius?

A : Wheel is caused to toe - out B: Wheel is kept in straight position

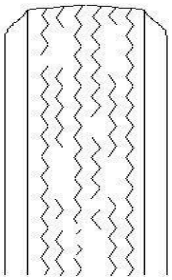
C : The tyre centre portion wear out D : Wheel is caused to toe – in

23. What causes abnormal tyre wear, tyre slip and poor steering stability?

A : Incorrect toe - in and toe – out B : Malfunctioning of torsion bar

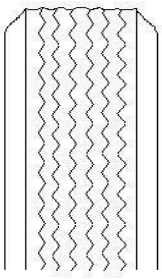
C: Presence of air in the brake fluid **D** : Front axle bend/twist

24.What is the type of defect?



A : Cracked treads B : Wear on the centre C : Feather edge **D** : Bold spots wear

25.What is the type of defect in the tyre



A : Bold spots wear B : Rapid wear at centre C : Feather edge D : Wear on one side

26. What is the main cause for wear on one side of tyre?

A : Improper camber **B** : Improper caster **C** : Over inflation **D** : Under inflation

27: What is the reason of faster wear out of tyre edges?

A : Under inflated tyre **B** : Over inflated tyre

C : Un equal load distribution **D** : Defective suspension system

28.Why the alternator spokes are screwed to slope forward and backward towards the rim in the wire wheel?

A : To take the uneven load B : To provide cushioning effect

C : To observe braking and driving torque D : To distribute the load evenly

29: What is the cause of "Poor self centering" in a vehicle?

A : Filter chocked B : Improper wheel alignment C : Loose wheel level **D** : Low oil level

30.The Number of plies in a truck tyre is usually

A. 2 B.3 C.5-8 D.12-16

31.An Automobile tyre will wear rapidly in case

A. It is overloaded B. It is misaligned C. It is incorrectly inflated D .Any of the above

32.When diameter of a tyre is specified as 1000 mm, it means

A. Outer diameter of tyre is 1000mm B. Inner diameter measured between the bead seat is 1000mm C. The diameter measured at the root of the groove of tread is 1000mm D. Tube diameter is 1000mm

33.Which company is not engaged in manufacture of tyre in India

A. J.K B. Modi C.Larsen & Toubro D.Appollo

34.1000 mm diameter is generally used on

A. Scooters B.Moped C.Jeeps D.Trucks

35the probable cause of for uneven wear of tyre for truck could be

A. low tyre presser B. excessive camber C. tyres over loaded D. Any of the above

36.The purpose or the 'well' in a wheel rim is to

A. Lock the tyre on to the rim B. Allow the type fitted and remove

B. Expose the valve of the inner tube D. Prevent the type dislodging during severe cornering

37. What safety precaution should be taken when a tyre having a flange is initially inflated after fitting to the rim ? the tyre should be inflated

A : in a steel cage B : with the flange towards the operator

C : very slowly to allow the head to dissipate D : slowly and allowed to stand for a period of time

38. What type tyre has a slow deflation when punctured and offers considerable resistance to side deflection when the vehicle is cornering ?

A : Tubed cross-ply B : Tubed radial-ply C : Tubeless cross-ply D : Tubeless radial-ply

39. Compared with a radial-ply tyre, one advantage of a cross –ply tyre is

A : Longer life B : Lower rolling resistance C : Smoother ride at low speeds

D : Full width of tread held on road when vehicle is cornering

40. The tyre of wheels preferred in sports cars are _____.

A : Disc wheel B : Wire wheel C : Magnesium alloy wheel D : Aluminum alloy wheel

41.In case of wire wheel the vehicle weight supported by the wires in _____.

A : Tension B : Compression C : Bending D : Shear

42.Which part of wheel on which the tyre is mounted and supported ?

A : Hub B : Rim C : Stub axle D : None of them

43.Drop center rim used on _____.

A : Trucks B : Bikes C : Cars D : None of them

44.Which type small diameter well is provided at the centre of the rim ?

A : Flat base rim B : Drop center rim C : Round base rim D : None of them

45.Conventional type consists of _____.

A : Tube &tyre B : tube only C : Tyre only D : None of them

46.Which metal is used for treads of tyre ?

A : steel B : Aluminium C : Synthetic rubber D : None of them

47.Pneumatic tyre means_____.

A : air less tyre B : Air filled tyre C : Solid tyre D : None of them

48. Which type tyre has air storage system ?

A : Tubed tyre B : Tubless tyre C : Pneumatic tyre D : Conventional type

49. An under inflated will wear the tread _____.

A : Near centre B : Near the edge C :In the lateral direction D : In the cross direction

50. An over inflated tyre will wear the tread most _____.

A : Edge B : corner C : Outside D ; Centre

51.A tyre with lower than specified pressure could lead what condition _____.

A : Reduced fuel economy B : Reduced tyre life

C : Increased chances of roadside fault or accidents D : All of them

52.Which tyre inflation should be checked to determine the proper tyre inflation pressure ?

A :Cold placard inflation pressure B :The maximum pressure as stated on the sidewall of the tyre

C :32PSI in all tyre D : None of them

53.Static imbalance is indicated by _____ .

A : Wheel wobble B : Wheel shimmy C : Wheel tramp D : All of them

54._____ is the distribution of weight around the wheel.

A :Static balance B : Dynamic balance C : Both A & BD : None of them

55._____ is the distribution of weight on each side of the tyre centerline.

A :Static balance B : Dynamic balance C : Both A & BD : None of them

56.The _____ holds the tyre in the correct position.

A : Rim B : Sprocket C : Hub D : Tube

57._____ is cast from aluminum alloy as a single component.

A : Wire sprocket B : cast wheel C : Tyre valve D : None of them

58.The _____ allows air to flow into the tyre and it is also used to release air from the tyre.

A: rim B : Hub C : tyre valve D : None of Them

59: When the driver is warned of difference in tyre pressure?

A : Difference in pressure exceeds 30% B : Difference in pressure more than 10%

C : Difference in pressure more than 20% D : Difference in pressure exceeds 40%

60: What will be the effect of negative camber excessive in the wheel alignment?

A : Outer edge of tyre wear out faster B : Centre of tyre wear out faster

C : Inner edge of tyre wear out faster D : Cracks developed in the tyre tread

61. What is the disadvantage of excessive positive camber in the wheel alignment?

A : Tyre outer edge will wear out fast B : Tyre centre will wear out

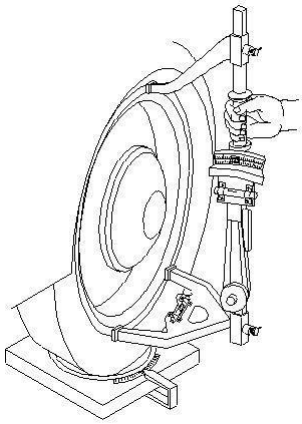
C : Tyre bleeding wire wear out D : Tyre thread wear out

62. Where the tyre pressure sensor secured in the wheel assembly?

A : Secured in the wheel hub B : Secured in the tyre outer edges

C : Bolted to metal valve D : Bolted to the rim centre

63: What is the servicing procedure carried out in the wheel?



A : Checking camber angle B : Checking castor angle
C : Checking kingpin inclination D : Checking included angle

64. Which advantage does not suit to wheel alignment?
A : Minimize tyre wear B : Reduce driver effort
C : Achieve self centering after turning D : Achieve easy torque transmission

ANSWER- WHEEL & TYRE

1-B, 2-C, 3-C, 4-B, 5-C, 6-C, 7-A, 8-D, 9-B, 10-A, 11-D, 12-B, 13-B, 14-A, 15-C, 16-B, 17-A, 18-A, 19-C, 20-A, 21-B,

2-22-D, 23-A, 24-D, 25-C, 26-A, 27-A, 28-C, 29-B, 30-D, 31-D, 32-D, 33-D, 34-D, 35-D, 36-B, 37-A, 38-D, 39-C, 40-C,

41-B, 42-B, 43-C, 44-B, 45-A, 46-C, 47-B, 48-C, 49-B, 50-D, 51-D, 52-D, 53-C, 54-A, 55-B, 56-A, 57-B, 58-C, 59-A,

60-C, 61-A,62-C, 63-A,64-D

BRAKING SYSTEM

1) The rate at which the braking system wild bring the vehicle to the stationary position from a given speed is known as ----------
a) Torque b) brake efficiency
C) none of these d) all of these

2) Brake efficiency is ----------
a) f/g x50 b) f/g +100
c) f/g x100 c) none of these

3) The maximum brake efficiency is ----------
a) 50% b) 80%
c) 70% d) none of these

4) The mechanical brakes are used in ----------
a) Cars b) Mopeds
c) Buses d) None of these

5) Hand brakes are also called as -------
a) Rear breaks b) parking brakes
c) None of these d) All of these

6) Hand brake in car applied when the vehicle ----------
a) At high speed b) At low speed
c) At parking d) None of these

7) Hydraulic brake works based on the principle of
a) Ohm's Law b) Pascal Law
c) Newton Law d) All of them

8) The operation of removing trapped air from the hydraulic braking system is known as ----------
a) Trapping b) Tapping
c) Bleeding d) None of these

9) The main component of hydraulic braking system is ----------

a) Wheel cylinder b) Master Cylinder
c) None of these d) All of these

10) Drum Brakes has ----------drum that encloses the brakes assembly of each wheel .
a) Metal Brake b)Rubber Brake
c) None of these d) All of them

11) Now a days drum brake used only in ----------
a) Front wheel b) Rear Wheel
c) Both A&B d) All of them

12) The top of the shoes are attached with the ----------
a) Wheel cylinder b) master cylinder
c) None of these d) All of them

13) The disc rotates with the ----------
a) Wheel hub b) Axle Shaft
c) None of these d) All of them

14) The ----------is connected to some stationary part of the vehicle .
a) Brake disc b) Caliper
c) Brake Cylinder d) None of these

15) When the brake is applied , the all under pressure from the ----------
a) Master Cylinder b) Wheel Cylinder
c) None of these d) All of them

16) Power braking require much ----------effort to apply .
a) Medium Pedal b) Less Pedal
c) More Pedal d) None of these

17) When the brake pedal pushed air is removed from one side of the vacuum line .
a) Diaphragm b) Master Cylinder
c) Canister d) None of these

18) Hindustan Motors offer the power braking unit ELGI type for their ----------
a) Nano b) Ambassador
c) Safari d) None of these

19) Any Mechanism which adds to the driver's efforts in applying the brakes is called ----------
a) Steering Mechanism b) Servo mechanism
c) None of these d) All of them

20) Which of the following is not a component of vacuum servo brake ----------
a) Vacuum booster b) Master cylinder
c) Wheel cylinder d) All of them

21) In air brake system the vehicle is braked exclusively by an external force generated by
a) Vacuum b) compressive air
c) Driver effort's d) None of these

22) Dual circuit air brake system is used in ----------
a) Buses b) Cars
c)Vans d) All of them

23) ABS stops the wheels from locking which happens----------
a) When the vehicle is over braked b) when the vehicle is over steered
c) When the vehicle is stopped d) All of them

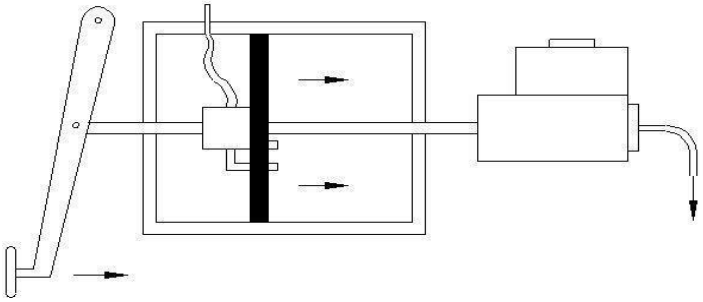
24) Which of the following component of ABS is used to adjust the brake pressure .
a) Speed sensors b) pressure control valve
c) Electronics controller d) None of these

25) The condition that caused vapour locking in a braking system is ----------
a) Overheating of the fluid due to frequency brake application
b) Overcooling of the braking during high speed driving

c) Keeping the vehicle without use for an extended period
d) An excessively high engine speed on a downhill road

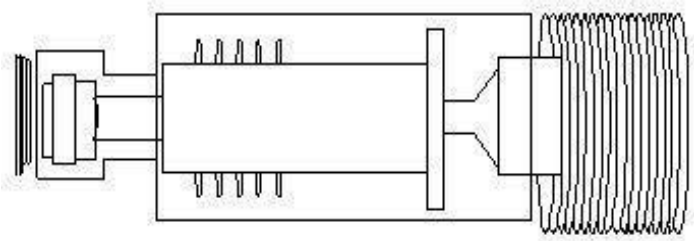
26) Which of the following symptoms is caused as a result of braking disc run out ?
a) Ineffectiveness of the brakes b) judder during braking
c) Localized wearing of the brake pads d) rapid wearing of the brake pads

27) What is the name of power assisted servo brake?

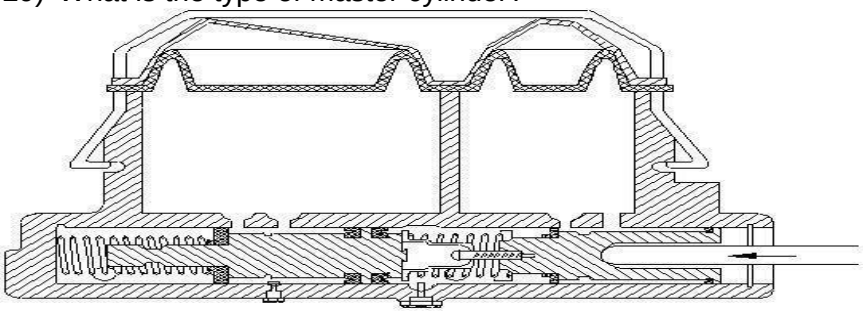


A : Vacuum suspended power brakes
B : Air suspended power brakes
C : Vacuum assisted power brakes
D : Electro hydraulic brake system

28) What is the name of device used in the braking system?
A :Brake propositioning valve
B : Master cylinder
C :Reservoir
D :Piston

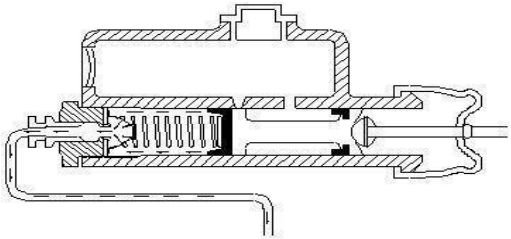


29) What is the type of master cylinder?



A : Single barrel master cylinder
B : Tandem master cylinder
C : Tank type master cylinder
D : Centre feed master cylinder

30) What is the type of master cylinder?

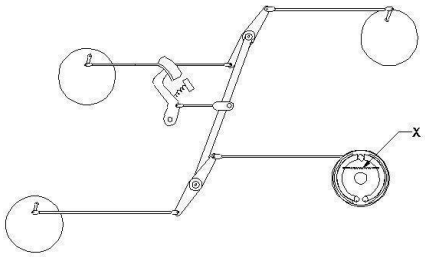


A :Tandem master cylinder
B :Centre feed master cylinder
C :Tank type master cylinder
D: Single barrel master cylinder

31) Which principle is applicable for hydraulic brakes?

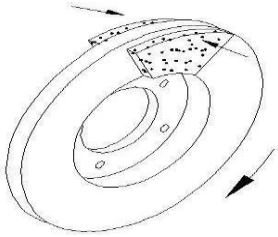
A: Pascal's law
B: Boyle's law
C: Newton's law of motion
D: Hooks law

32) What is the name of part marked as 'X' in the mechanical brake?



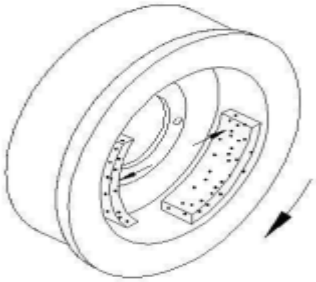
A : Brake drum
B : Brake shoe retracting spring
C : Pedal return spring
D : Brake pedal

33) What is the type of brake system?



A : Drum brake
B: Vacuum assisted brake
C: Disc brake
D : Hydraulic brake

34) What is the type of braking system?



A: Disc brake
B: Drum brake
C: Air brake
D: Hydraulic brake

35) Which device permits air to the air brake system?

A: Hand control valve
B: Spring brake actuator
C: System protection valve
D: Brake valve

36) How the slip ratio is calculated in the ABS?

A: $\frac{\text{Velocity speed} - \text{Wheel speed}}{\text{Vehicle}} = 100$

B: $\frac{\text{Velocity speed} - \text{Vehicle speed}}{\text{Velocity}} = 100$

C: $\frac{\text{Velocity speed} - \text{Wheel speed}}{\text{Velocity speed}} = 100$

D: $\frac{\text{Velocity speed} - \text{velocity speed}}{\text{Wheel speed}} = 100$

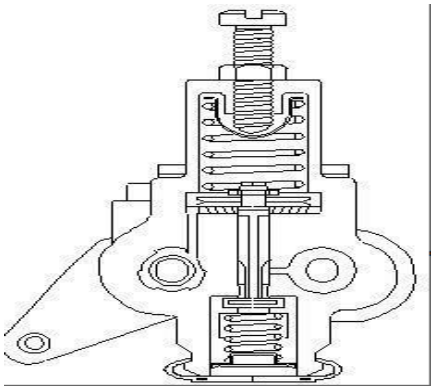
37) What is the material constituent of semi metallic brake lining?

A : Carbon fiber B. Aluminium oxide C. Fine polished steel wool D. Carbon composite

38) What is the binding material used in organic brake lining?

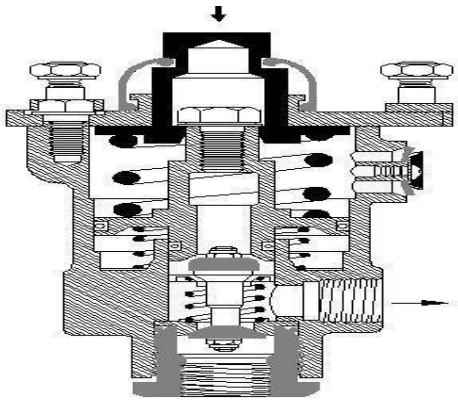
A: Resin B. Mica C. Asbestos D. Fibber glass

39) What is the name of component used in the air brake system?



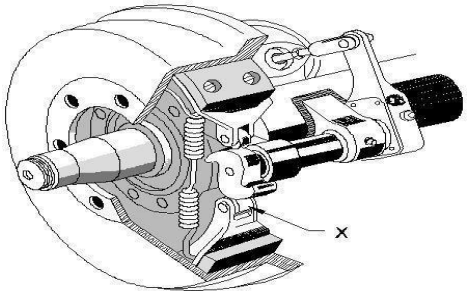
A : Brake valve
B : Unloader valve
C : Slack adjuster
D : Pressure release valve

40) What is the name of device used in air brake system?



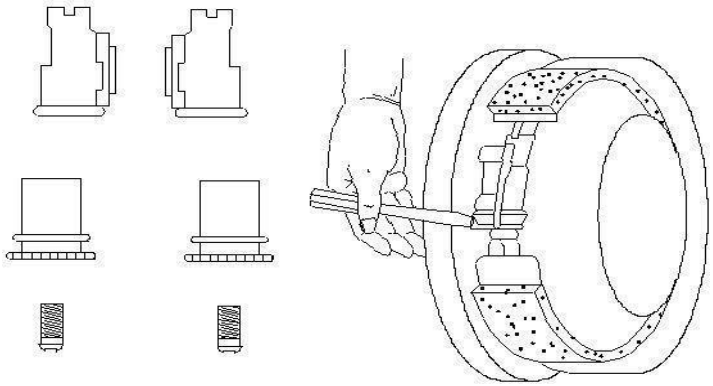
A : Air tank
B : Brake valve
C : Brake chamber
D : Un loader valve

41) What is the name of part marked as 'X' in the slack adjuster for 's' cam brake?



A: Brake cam
B: Adjusting nut
C: Brake drum
D: Cam roller

42) What is the name of brake adjuster?



A Slack adjuster for 'S' cam brake B Wedge type brake adjuster

C: Serrated wheel brake adjuster : D. Snail and cam type adjuster

43) Which material is used for brake rotors and brake pads for aircraft and racing cars?
A : Sintered alloy
B : Carbon fiber reinforced carbon composite
C : Asbestos
D : Copper, brass, steel

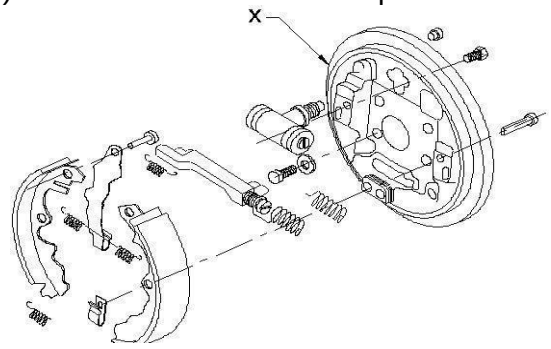
44) What is the permitted brake pedal travel in the hydraulic brake system?

A: 2 to 12 mm
B: 6 to 12 mm
C: 7 to 12 mm
D: 9 to 12 mm

45) What is the material used to make brake drum?

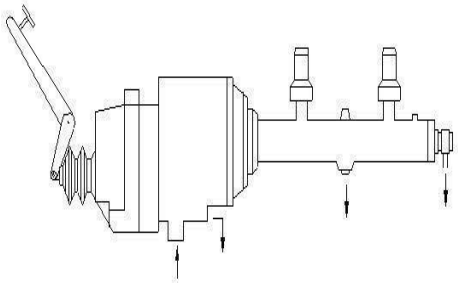
A : Stainless steel
B : High carbon steel
C : Special type cast iron
D : High speed steel

46) what is the name of part marked as 'X" in the drum brake system?



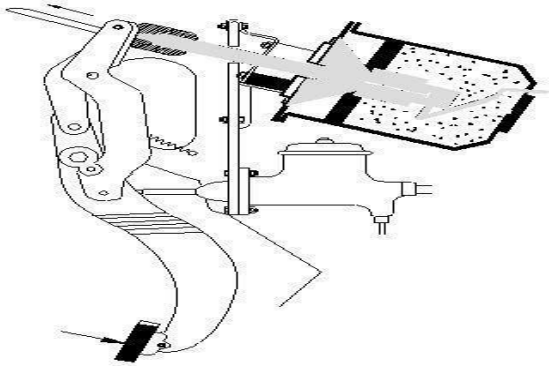
A : Brake shoe
B : Wheel cylinder ₹
C :Back plate
D : Shoe hold down pin

47) What is the type of brake?



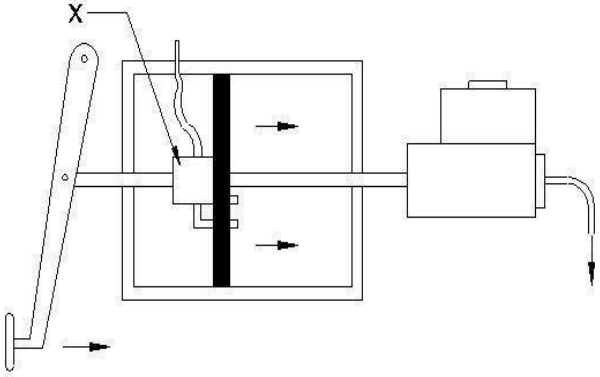
A: Integral type brake
B: Air assisted power brake
C: Multiplier type brake
D: Pedal assisted type brake

48) What is the type of brake?



A: Integral type
B: Multiplier type
C: Pedal assisted type
D: Air assisted power brakes

49) What is the name of part marked as ‘x’ in the vacuum assisted power brakes?



A : Master cylinder
B : Booster cylinder
C : Vacuum control valve
D : Brake pedal linkage

50) What is the purpose of brake proportioning valves in the braking system?

A: Reduces brake pedal effort
B: Increase braking efficiency
C: Provide balanced braking
D: Prevent front wheel lockup

51) Where the non-return valve is located in the centre feed master cylinder?

A : On the reservoir ज
B : On the cylinder head
C : On the bypass port
D : On the pistons head

52) What is the brake pedal free play range permitted while adjusting?

A : 4 mm to 8 mm
B : 8 mm to 10 mm
C : 6 mm to 12 mm
D :13 mm to 18 mm

53) What is the precautionary measure to be adapted while removing secondary piston to prevent damage?

A: Remove the circlip before
B: Remove the retaining spring before
C: Remove the stopper bolt before
D: Remove the return spring before

54) What is the purpose of ‘G’ sensor?

A: Locking pressure inside wheel cylinder
B: Measuring deceleration rate of vehicle
C: Reduce pressure at wheel cylinder
D: Detect wheel lock up condition

55) Which device detects the driven wheel spin through sensor?

A : EBD
B : ECU
C : TCS
D : ELSD

56) How the EBD (Electronic Brake Force Distribution) failure indicated to the driver?

A: Peep sound in the cabin
B: Indication lamp the dash board
C: Glowing the parking lamp
D: Flickering the tail lamp

57) What is the advantage of TCS/ELSD brake circuit of wheel?
A: Reduce the pressure at wheel cylinder
B: Reduce fluid pressure
C: Automatic adjustment of engine torque to the grip rates
D: Avoid wheel lockup by releasing pressure

58) What is the function of traction control system?
A: Prevent wheel spinning
B: Release the pressure to expansion tank
C: Reduce the engine torque
D: Reduce steering effort

59) .What is the function of EBD (Electronic Brake - Force Distribution) in anti lock brake system?
A: It control the slip of the front wheel
B: It controls the slip of the rear wheel
C: It increase brake pressure to the rear wheel
D: It improve directional stability of vehicle

60) The purpose of brake is to

A) Store energy
B) change friction to heat
C) Convert heat energy to kinetic energy
D) Convert kinetic energy to heat energy

61) Which one of the following is necessary if a vehicle is to stop in the shortest distance possible ?

A) Brake held on verge of skidding and excellent road adhesion
B) Excellent held adhesion and all wheels set to skid
C) All wheel set to skid and smooth ,dry road surface
D) Smooth, dry road surface and brakes held on verge of skidding .

62) The most effective braking system for a 4 wheel vehicle will have
A) All wheel braking
B) Front wheel braking
C) Rear wheel braking
D) Front wheel braking if the front axle is the drive axle

63) In the hydraulic braking system the movement of the piston in the master cylinder produces hydraulic pressure which cause movement of the
A) Brake lining
B) Brake shoe
C) Brake pedal
D) Brake cam

64) What is effect of leading shoe when it is applied to a brake drum , which is rotating in a forward direction ? The shoe is pushed
A) Away from the drum
B) Towards the hydraulic expander
C) Away from the anchor pin
D) Harder into contact with drum

65) Braking is produced by the frictional effect between the brake drum and
A) Wheel cylinder pistons

B) Brake shoes
C) Wheel studs
D) Wheel rim

66) In a disc brake the disc is attached to the
A) Piston
B) Caliper
C) Wheel hub
D) Steering knuckle

67) The braking efficiency of a new vehicle le is about ?
A) 30%
B) 50%
C) 80%
D) 100%

68) The fading of brake occur
A) At high speed
B) At low speed
C) During continuing application
D) When the brake lining is worn

69) The brake employed car is usually operated
A) Mechanically
B) Hydraulically
C) By means of engine vacuum
D) By compressed air

70) The component of the wheel cylinder , which seals the brake fluid is
A) Piston
B) Spring
C) Dust cover
D) Cup

71) During braking the push rod is directly operates
A) Primary piston
B) Secondary piston
C) Residual pressure valve
D) Compensating port

72) As applied the braking system the term self servo means that the
A) Vehicle is fitting with a vacuum device
B) Trailing Shoe is forced towards the drum
C) Pedal force increase as the brake gets hotter
D) Rotational of the drum helps to apply the brake

73) As applied the braking system the term Brake fade
A) Decrease the friction due to wear
B) Fall off efficiency due to heat
C) Increase in effort as the shoe clearance increases
D) Discoloration Of the lining when it is oil soaked

74) As compared to an internally expanded shoe brake a disc brake has the advantage
A) Greater resistance to fade
B) Fades at a lower temperature
C) Small efforts gives larger braking torque
D) Greater self servo action at high speed

75) Most antiskid device are employed on
A) Rear brakes
B) Front brake
C) Secondary brake
D) Parking brake

76) The hand brake usually operated on
A) Rear wheel
B) Front wheel
C) Right wheel
D) Left wheel

77) In the disc brakes pad to disc adjustment is provided by
A) Caliper
B) Piston
C) Piston Seal
D) Bleed screw

78) The brake lining consist mainly of
A) Asbestos
B) Copper
C) Cast iron
D) Aluminum

79) If the pedal of hydraulically operated brake is springy it indicates that's the
A) System contains air
B) Shoe clearance is excessive
C) Brake fluid should be change
D) System is in a good condition

80) Parking brake are generally operated by
A) Hand lever operator
B) Brake pedal operator
C) Electrical switch control operation
D) None of these

81) The operation of removing trapped air from hydraulic braking system is known as ?
A) Tapping
B) Bleeding
C) Pressurizing
D) Clearing

82) If brake wheels get locked before the vehicle stops the wheels are said to be
A) Slipping
B) Sliding
C) Skidding
D) Rubbing

83) The most widely used brakes are operated
A) Mechanically
B) Pneumatically
C) Electrically
D) Hydraulically

84) Brake shoes are made of
A) Pressed steel
B) Cast iron
C) Plastic Fiber
D) Both A&B

85) Brake lining is mounted on
A) Brake shoe
B) Brake drum
C) Master Cylinder
D) Wheel Cylinder

86) In automobile the probable cause for dragging brakes could be
A) Lack of clearance
B) Drum out of round
C) Loose wheel bearing
D) Weak retraction spring

87) In automobile the probable cause for ineffective brakes could be
A) Grease in lining
B) Excessive Lining Wear
C) Drum scored
D) All of the above

88) In general in all vehicles parking or hand brakes are of
A) Hydraulic type
B) Mechanical type
C) Vacuum type
D) Air operated

89) The law which governs hydraulic pressure in brake system
A) Charles's law
B) Boyle's law
C) Pascal law
D) Newton's law

90) Which of the following material is not used for brake drum ?
A) Steel
B) Copper
C) Cast iron
D) Aluminum

91) What is the primary advantage of the antilock braking system ?
A) It allow you to stop easier
B) It allow you to steer while braking
C) It prevents locking
D) It makes locking easier

ANSWER-BRAKING SYSTEM

1(A), 2(B),3(A) ,4(B), 5(B),6(C),7(B), 8(C),9(B),10(A),11(B),12(B),13(A),14(B),15(A),16(B),17(A),18(B)
19(B),20(C),21(B),22(A),23(C),24(B),25(A),26(B),27(C),28(A),29(B),30(A),31(D),32(B),33(C),34(B),35(D),
36(A),37(C),38(A),39(B),40(B),41(D),42(C),43(B),44(C),45(B),46(C),47(C),48(B),49(C),50(C),51(D),52(C),
53(C),54(B),55(B),56(C),57(C),58(A),59(B),60(D),61(A),62(A),63(B),64(D),65(B),66(C),67(C),68(C),69(B),
70(D),71(A),72(D),73(B),74(A),75(B),76(A),77(C),78(A),79(A),80(A),81(B),82(C),83(D),84(D),85(A),86(D)
87(D),88(B),89(C),90B),91(B)

FUEL SUPPLY AND INJECTION SYSTEM

1. which type of draft is most commonly used in automobile carburetor ?
a) Down draft
b) Updraft
c) Horizontal draft
d) Inclined draft

2. One of the function of induction manifold in an engine is to
a) Atomize the fuel
b) Vaporize the fuel
c) Meter the fuel
d) Regulate the fuel

3. The petrol filter is connected to a fuel pipe
a) Between the fuel pump and carburetor
b) Between petrol tank and fuel pump
c) Between carburetor and cylinder
d) Between carburetor and crankcase

4. The circuit in the carburetor is responsible for maintaining a constant level reservoir of fuel is called the
a) Fuel circuit
b) Level circuit
c) Float circuit
d) Choke circuit

5. Under which condition is choke is closed ?
a) When the engine is idling
b) When the engine is running at high speed
c) When the engine is to be suddenly accelerate
d) When the engine is cold is to be started

6. The element of fuel filter is made of
a) Porous cast iron
b) Aluminium
c) Brass
d) Pleated paper

7. Which one of the following reasons can richen the air/fuel mixture for cold starting ?
a) Fuel particles are smaller
b) Quantity of air is less
c) Cold engine doesn't vaporized
d) Cold fuel will not flow through the jet

8. Which one of the following methods is used on constant volume carburetor supply a suitable mixture for cold start
a) The jet is lowered
b) The needle is lowered
c) The strangler is closed
d) The flap on air intake is close

9. A compensation system is incorporated in modern fixed choke carburetor . it prevents
a) Flooding at high speed
b) Richness at high speed
c) Weakness at high speed
d) Starvation at high speed

10. The flow of petrol from a constant volume carburetor is increased when the engine load is increased by
a) Altering the petrol level
b) Intensifying the choke depression
c) Speeding up the air flow over the jet
d) Causing the piston to raise the tapered needle

11. The outlet of the carburetor is slow running system is suitable on the
a) Engine side of the throttle
b) Choke side of the throttle
c) Waist side of the throttle
d) Intake side of the venture

12. One of the effect of a punctured carburetor float is
a) Weak mixture
b) Petrol flooding
c) Low petrol
d) High air / fuel ratio

13. The reason why the petrol flow from the floating chamber to the venture is because
a) Of the difference in the pressure
b) Of the difference in the level
c) The floating level is higher
d) The air sucks out the petrol

14. Which of the following describe the purpose of the carburetor choke tube ?
a) To decrease the air speed , and decrease the air pressure
b) To increase the air speed , and decrease the air pressure
c) To decrease the air speed , and increase the air pressure
d) To increase the air speed , and increase the air pressure

15. Which of the following components regulates the quantity of petrol air mixture that enters the engine ?
a) Throttle
b) Stranger
c) Float
d) Needle valve

16. Which of the following parts of the carburetor shuts off the air supply to aid cold starting?
a) Throttle
b) Stranger
c) Float
d) Needle valve

17. An engine is supplied mixture of 12 parts of air and 1 parts of petrol . its effects are
a) High fuel consumption and dirty exhaust product

b) Slow combustion and high power out put
c) Low fuel consumption and sooty exhaust gas
d) Slow combustion and low fuel consumption

18. In gravity feed system the fuel tank is located
a) At the same level as the carburetor
b) At the low level as the carburetor
c) At the higher level as the carburetor
d) Close to the carburetor

19. In a petrol engine the air fuel mixture is drawn into cylinder due to vacuum created during
a) Power stroke
b) Exhaust stroke
c) Suction stroke
d) Compression stroke

20. The choke in the carburetor is generally used when the engine
a) Idling
b) Running at the high speed
c) To be suddenly accelerate
d) To be cold started

21. Air fuel ratio changes according to certain operating condition like
a) Speed only
b) Load only
c) Speed and load only
d) Speed ,load , temperature

22. Which one of the following operated mechanical fuel feed pump ?
a) Camshaft
b) Crankshaft
c) Flywheel
d) Piston

23. The most widely used fuel supply system for car engine is the
a) Gravity system
b) Pressure system
c) Vacuum system
d) Pump system

24. Lean air fuel mixture is require for
a) Starting
b) Idling
c) Cruising
d) Accelerating

25. Carburetor provides the correct air fuel mixture during
a) Starting
b) Idling
c) acceleration
d) All

26. The venture in the carburetor causes
a) Increase the air velocity
b) Decrease the air velocity
c) Decrease of the fuel flow
d) Decrease of the manifold vacuum

27. The throttle valve in the carburetor control the supply of
a) Air only
b) Fuel only
c) Air fuel mixture
d) None

28. The choke is usually closed when the engine is
a) Hot
b) Cold
c) Idle
d) Accelerating

29. The most accurate petrol injection system is the
a) Direct injection
b) Port injection
c) Manifold injection
d) Throttle body injection

30. The cheapest and yet reasonable prices petrol injection system
a) Direct injection
b) Port injection
c) Manifold injection
d) Throttle body injection

31. Which of the following gives the correct flow path of petrol in an engine ?
a) Tank - filter -pump -carburetor - cylinder
b) Tank - pump- filter - -carburetor - cylinder
c) filter -Tank - pump -carburetor - cylinder
d) Pump -filter -tank - carburetor - cylinder

32. The accelerating pump operates
a) All the time the engine is running
b) During initiate throttle
c) The operation is automatic when the vacuum drops suddenly
d) When the throttle valve widely open

33. The float circuit is provided in a carburetor
a) To store fuel vapour
b) To supply mixture of air fuel
c) To maintain proper level of fuel in float chamber
d) None

34. What happens in the floating chamber during the idling action of the fuel pump ?
a) It remains empty
b) It remains partially filled
c) It remains filled
d) None

35. When the diaphragm in the fuel pump moves down it creates
a) Pressure In the top chamber
b) Partially vacuum in the top chamber
c) Partially vacuum in the lower chamber
d) Fully vacuum in the lower chamber

36. Deposit of carbon in the exhaust chamber ?
a) Will increase back pressure
b) Will reduce back pressure
c) Will have no effect on back pressure
d) Will result in fluctuation

37. In four stroke diesel engine the power cycle is complete in four stroke of the engine . in a diesel engine during suction stroke piston dawns the
a) Gas
b) Fuel
c) Pure air alone
d) Mixture of air fuel

38. In four stroke petrol engine the power cycle is complete in four stroke of the engine . in a petrol engine during suction stroke piston dawns the
a) Gas
b) Fuel
c) Pure air alone
d) Mixture of air fuel

39. The carburetor is to supply the correct air fuel mixture to engine . if the main jet is small in carburettor the trouble is
a) Idle speed varies
b) Lean mixture at high speed
c) Improper choking
d) Carburetor flooding

40. Carburetor is to supply correct air fuel mixture to the engine . at high speed of the engine will be lowered due to the main jet too small . the correct method is to
a) Install correct jet
b) Clean jet
c) Clean air cleaner
d) Adjust float level

41. High fuel consumption is due to
a) Scale formation in the engine
b) Dynamo defective
c) External leakage of the fuel
d) High oil level

42. The air fuel mixture is used for combustion in I.C engine . if the fuel has low octane value , the fault is
a) Pre-ignition
b) Short spark plug life
c) Detonation
d) Back firing
43. The purpose of petrol injection

a) To increase power
b) To decrease power
c) To same power
d) None

44. In ----------the fuel injector is placed directly into the cylinder
a) Mechanical injection
b) Electronic injection
c) Direct injection
d) Port injection

45. An ---------- driven fuel pressure pump is mounted near the fuel tank
a) Mechanical
b) Electrical
c) Electronic
d) Hydraulic

46. In ----------injector sprays the fuel into each intake part of the manifold side of the inlet valve .
a) Port
b) Throttle body
c) Mechanical
d) Electronic

47. The function of diesel fuel supply system ----------
a) Injecting the fuel in to the engine cylinder
b) Supply the fuel to the carburetor
c) Supply the fuel to pump
d) None

48. Quantity of fuel should vary to meet changing the speed and ----------
a) Load
b) Heat
c) Air fuel mixture
d) Road geometry

49. Supply fuel from the fuel tank to the fuel injection pump is through ----------
a) Fuel lines
b) Fuel pump
c) Fuel filter
d) Carburetor

50. The drive for the pump taken from the engine camshaft by means of an ----------
a) Speed
b) Accelerator
c) Engine load
d) Braking

51. The function of the fuel pump is ----------
a) To feed fuel tank to injector
b) To supply fuel to engine cylinder
c) To supply fuel to injector
d) None
52. plunger type pump is used in ----------vehicle

a) Tate
b) Ashok Leyland
c) Audi
d) Benz

53. The fuel pump is driven by ----------
a) Crankshaft
b) Cam shaft
c) Connecting rod
d) Fuel pump

54. The function of the hand primer is ----------
a) To feed fuel to tank to injection pump during air lock
b) To supply fuel to engine cylinder
c) To supply fuel to injector
d) None

55. The discharge pressure of fuel rises above approximately ----------
a) 1.5kg/cm2
b) 2.5kg/cm2
c) 3.5kg/cm2
d) 4.5kg/cm2

56. The function of the fuel filter is ----------
a) To filter fuel before entering into FIP
b) To feed fuel from tank to injection pump
To supply fuel to injector

57. Most commonly used in ----------for diesel engine fuel is the wire gauge installed on the suction the feed pump
a) Secondary filter
b) Sedimentary filter
c) Primary filter
d) None

58. The secondary filter is installed after the ----------
a) Feed pump
b) Oil pump
c) Fuel pump
d) All

59. Primary filter became choked in winter due to formation of ----------
a) Water
b) Gap
c) Ice
d) Rust

60. Function of the fuel injection system is ----------
a) To feed fuel from tank to injection pump
b) To filter fuel before entering into the FIP
c) To supply fuel from tank to injector
d) None

61. Diesel engine compresses pure air during ----------
a) Suction stroke
b) Compression stroke
c) Power stroke
d) Exhaust stroke

62. Fuel supply should be in accordance with the various load and ----------requirement of the engine
a) Accelerator
b) Speed
c) Fuel
d) Movement

63. Diesel engine compresses pure air during
a) Suction stroke
b) Compression stroke
c) Power stroke
d) Exhaust stroke

64. A small quantity of fuel is purposely allowed to leak between the nozzle valve and the guide for ----------purpose
a) Cooling
b) Pumping
c) Lubrication
d) Spraying

65. Fuel injector consist of mainly two parts ----------
a) Fuel pump and nozzle
b) Nozzle and nozzle holders
c) Filter and pump
d) Nozzle and filter

66. Fuel injector is also known as ----------
a) Nozzle
b) Spray tip
c) Fuel spray
d) Fuel supply system

67. Nozzle being connected to ----------by means of screwed cap
a) Spray tip
b) Injector
c) Nozzle holder
d) None

68. The ---------- is moved up by a cam and return back to its initial position by tension spring
a) Connecting rod
b) Plunger
c) Piston
d) Crank level

69. The fuel passage is connected to ----------

a) Fuel injection pump
b) Fuel filter
c) Fuel injector
d) Carburetor

70. The fuel injector is commonly used in ----------
a) Petrol engine
b) Diesel engine
c) Gas engine
d) CNG engine

71. The fuel injection pump plunger is operated by a ----------mechanism
a) Cam
b) Crank
c) Valve
d) Piston

72. The thermo time switch senses ----------temperature and control the cold start valve according
a) Engine
b) Gear box axle
c) All

73. In electronic fuel injection system ----------is used to maintain closed loop control of the air fuel mixture .
a) Cold start system
b) Van type air flow sensor
c) Feedback from the exhaust gas oxygen sensor
d) None

74. ---------- provide additional fuel during starting condition according to the engine temperature
a) Cold start system
b) Idle speed control system
c) Variable intake manifold system
d) None

75. In engine management system . the ---------- control additional function such as idling speed ignition timing and fuel pump operation .
a) Electronic fuel injection unit
b) Electronic control unit
c) Idle speed control system
d) Cold start system

76. ----------can be used to indicate problem in the engine management system .
a) A portable data collector
b) A data scanner
c) Both A&B
d) None

77. ECT sensor is used to measure the engine ----------
a) Temperature
b) Pressure
c) Temperature and pressure
d) Speed

78. ---------- used to time the speed of wheel and shaft
a) MAP sensor
b) Parking sensor
c) Speed sensor
d) Half effect sensor

79. ----------is used to measure the position and speed of moving metal component
a) Throttle position sensor
b) Input speed sensor
c) Variable reluctance sensor
d) Torque sensor

80. ----------is used to measure the absolute pressure in the intake manifold and compare it with a reference vacuum .
a) Actuator
b) Resistive sensor
c) Manifold air pressure
d) Throttle position sensor

Answer- FUEL SUPPLY AND INJECTION SYSTEM

1 A , 2 B , 3 B , 4C , 5D , 6D , 7C , 8A , 9B , 10D , 11A , 12B , 13A , 14B , 15A ,16B , 17A , 18C , 19C , 20D , 21D , 22A , 23D ,24C , 25D , 26A , 27C ,28B , 29B ,30D , 31A ,32D , 33C , 34C , 35B , 36A ,37C ,38D , 39B , 40A , 41C , 42C , 43A , 44C , 45 B , 46A ,47C, 48 A , 49C , 50C , 51A , 52C ,53B, 54A, 55B , 56B ,57C, 58A, 59B ,60A,61B, 62B ,63B , 64C , 65B ,66A ,67C ,68B , 69C, 70B ,71A, 72A , 73 C,74A, 75B, 76B,77A, 78D,79C,80C

IGNITION SYSTEM

1. Who discovered that a magnetic field exist around a current carrying conductor ?
a) Michael farad
b) Stephen volta
c) Oersted
d) Thomas alva edison

2. Faraday's law are followed by ----------
a) Generator
b) Television
c) Heater
d) None

3. The Len'z law is applicable to ----------
a) A.C generator
b) D.C generator
c) Both A&B
d) Electro magnetic

4. The spark is produced by ----------
a) The battery
b) Electrodes
c) The spark plug
d) None

5. The spark must produce spark at the correct movement , i.e ----------
a) At the beginning of the compression stroke
b) At the end of the compression stroke
c) At the end of power stroke
d) None

6. The spark plug for all driving condition must be
a) High heat resistance
b) High pressure resistance
c) Corrosion resistance
d) All

7. Engine misfiring is likely to result from ----------
a) Spark plug gap too small
b) Spark plug gap too wide
c) Vapour lock in the fuel only
d) Incorrect fuel air mixture

8. A hot spark plug has ----------
a) Shorter path of heat travel
b) Longer path of heat travel
c) No path of heat travel
d) None

9. The cold spark plug which has ----------
a) Longer path travel and runs cooler
b) No path of heat travel and runs cooler
c) Shorter path of heat travel and runs cooler
d) None

10. A spark plug will fall in its function due to the ----------
a) Plug fouled by engine oil entering the combustion chamber
b) Plug fouled by too rich mixture

c) Spark plug gap is incorrect
d) All

11. The main purpose of spark plug resistance is due to ----------
a) Reduce radio and television interference
b) Increase radio and television interference
c) Maintain radio and television interference
d) None

12. The centrifugal force is developed by ----------
a) Flywheels
b) The flyweight
c) Base plate
d) None

13. The centrifugal advance mechanism takes much care of ----------
a) Speeds only not the loads
b) Loads only not the speed
c) Both speed and loads
d) None

14. The diaphragm is used in the ----------
a) Centrifugal advance
b) Vacuum advance mechanism
c) Both the mechanism
d) None of them

15. Which one gives perfect sparks timing for all driving conditions ?
a) Centrifugal advance mechanism
b) Vacuum advance mechanism
c) Combination of both Centrifugal & Vacuum advance mechanism
d) None

16. An electronic ignition system doesn't consist of ----------
a) C.B point and spark plug
b) C.B point and condenser
c) Spark plug and condenser
d) None

17. The electronic ignition system has a module kit that improve ----------
a) C.B point performance
b) The condenser performance
c) The coil performance
d) None

18. Electronic ignition module is easy to install , it has only ----------
a) Four wire
b) Five wire
c) Two wire
d) None

19. Electronic ignition module max current ----------
a) 3A
b) 5A
c) 4A
d) None

20. A transistorized ignition system for a gas turbine engine that requires only ----------
a) Spark gap charge device
b) C.B point charge discharge device

c) Spark gap discharge device
d) All

21. An advantage is to provide a transistorized ignition system for a gas turbine engine that is capable of operating under ----------
a) Open circuit and short circuit condition
b) Close circuit and short circuit condition
c) Open and Close circuit and short circuit condition
d) None

22. Distributor is used to distribute the ----------
a) Low voltage to the spark plug
b) High voltage to the spark plug
c) No voltage to the spark plug
d) None

23. spark plug is used to ----------
a) Pass the current through itself and to give spark in the cylinder
b) Pass the current though distributor and to give spark
c) Pass the current through cylinder
d) None

24. The function of the distributor in a coil ignition system of I.C engine
a) To distribute spark
b) To distribute power
c) To distribute current
d) To time the spark

25. The criteria of an ignition timing is ----------
a) To get more torque and power
b) To get low torque and power
c) To get no torque and power
d) None

26. if the spark ignition takes place before compression stroke it is called ----------
a) Spark retardance
b) Spark advance
c) Spark neutralized
d) None

27. Ignition system in needed for ----------
a) Applying brakes
b) Generate high voltage pulse
c) Turning of the vehicle
d) None

28. Spark is to be generated at ----------
a) The end of compression stroke
b) The end of suction stroke
c) The end of exhaust stroke
d) None

29. H.T coil is used for ----------
a) Step down the voltage
b) Step up the voltage
c) Keeping constant voltage
d) None

30. Contact breaker is used ----------
a) To make and brake primary circuit
b) To make and brake secondary circuit

c) To spoil primary circuit
d) All

31. Ignition in an engine should occur at
a) T.D.C at the start of the compression stroke
b) T.D.C at the end t of the compression stroke
c) B.D.C at the bottom of the power stroke
d) B.D.C at the end of induction

32. To ensure combustion occurs at the correct time when the engine speed is increased, the spark should be
a) Advanced
b) Retarded
c) Less intense
d) More intense

33. The three component of the primary circuit are
a) Contact breaker ,Condenser , distributor gap
b) Contact breaker , ignition coil spark plug
c) Contact breaker, ignition switch , condenser
d) Contact breaker, ignition switch, rotor

34. The component of secondary ignition circuit include the secondary winding of ignition coil , distributor rotor , distributor cap and
a) Condenser
b) Spark plug
c) Ignition switch
d) Distributor drive gear

35. The ignition condenser
a) Reduce arcing at the contact
b) Reduces secondary spark
c) Protect plugs from load
d) Increases contact arcing

36. The two firing order used in four cylinder inline engine are
a) 1342 and 1423
b) 1423 and 1324
c) 1324 and 1243
d) 1243 and 1342

37. What is happening of a two stroke at instant when the spark occurs ?
a) New gas is being compressed
b) Transfer port just open
c) Inlet port is closed and depression being formed

38. Two factor which would increase the voltage to produce spark at the sparking plugs are
a) Wider electrode gap and higher cylindrical pressure
b) Wider electrode gap and lower cylindrical pressure
c) Narrower electrode gap and higher cylindrical pressure
d) Narrower electrode gap and lower cylindrical pressure

39. contact breaker points are generally made of
a) Plastic
b) Steel
c) Copper
d) Tungsten

40. The dwell is
a) The time for which the points remain closed
b) The distance between the cam lobes
c) The angle at which the heel contacts the cam
d) None

41. The part of an ignition system which transforms the voltage from 12V to more than 9000V is the
a) Contact breaker
b) Capacitor

c) Distributor
d) Coil

42. The rotor arm of a coil ignition system fitted to a four cylinder four stroke engine is driven at
a) Twice engine speed
b) Engine speed
c) Half engine speed
d) Quarter engine speed

43. Excessive contact breaker results in
a) Rapid burning of points
b) Advanced timing
c) Increased dwell
d) All

44. The spark occurs when the
a) Point close
b) Point open
c) Ignition switch is on
d) None

45. The contact breaker points are open by the cam and closed by
a) Same cam
b) Centrifugal force
c) Magnetic force
d) Spring tension

46. The function of the capacitor in a coil ignition system is to
a) Transfer the voltage
b) Act as a mechanical switch
c) Prevent arcing at the contact breaker
d) Direct the current to the appropriate plug

47. In the engine having automatic advance devices in coil ignition which mechanism advances the spark to suit the engine speed ?
a) Vacuum
b) Air bleeding
c) Centrifugal
d) Volume control

48. How is the gap of a spark plug adjust ?
a) By bending of the earth electrode
b) By bending of the centre electrode
c) By filling the earth electrode
d) By filling the centre electrode

49. The dwell on a six cylinder engine compare to four cylinder engine
a) More
b) Less
c) Same
d) May be more or less

50. The secondary winding of a ignition coil has
a) Many turns of heavy wire
b) Many turns of fine wire
c) Few turns of heavy wire
d) Few turns of fine wire

51. The centrifugal advance mechanism provides ignition advance proportional to
a) Engine load
b) Engine speed
c) Both A&B
d) None

52. The commonly used material for insulator
a) Bakelite
b) Asbestos
c) Alumina
d) Copper

53. Compare to the life of a spark plug of two stroke engine the spark plug life of a four stroke engine is approximately
a) Same
b) Twice
c) One half
d) One quarter
54. A spark plug may be fouled by
a) Petrol
b) Oil
c) Lead
d) All
55. A semiconductor is a material with
a) Exactly four electrons in its outer most orbit
b) More than four electrons in its outer most orbit
c) Less than four electrons in its outer most orbit
d) None
56. Current will flow through its diode when it connected
a) In forward bias
b) In reverse bias
c) To any suitable battery
d) None
57. A transistor consist of base
a) Diode and emitter
b) Diode and collector
c) Emitter and collector
d) Diode and thyristor
58. A transistor is controlled by the current at
a) The base
b) The emitter
c) The collector
d) Both the emitter and collector
59. The ignition coil in an electronic ignition system is triggered on and off by means of a
a) Contact breaker
b) Diode
c) Permanent magnet
d) Timer
60. A pulse generator consist of
a) Permanent magnet , reluctor , and timer coil
b) Ignition coil , reluctor , and electronic control unit
c) Permanent magnet , reluctor ,electronic control unit
d) Permanent magnet ,Ignition coil , and electronic control unit

61. The number of ignition coil in a distributor less ignition system for a 6 cylinder engine is
a) 2
b) 3
c) 6
d) 12

62. The spark plug is fitter on
a) Cylinder
b) Cylinder head
c) Crank case
d) Rocker cover

63. The distributor is used to distribute the high voltage surges from the ignition coil to the spark plugs . the distributor cap has segments around its circumference equal to
a) Half the number of engine cylinder

b) The number of engine cylinder
c) Double the number of engine cylinder
d) Four times the number of engine cylinder

64. The distributor is use to distribute the high voltage surges from the ignition coil to the spark plugs. The distributor cap is made of
a) P.V.C
b) Plastic
c) Fiber
d) Bakelite
65. Which of the following is used to check the gap between the contact breaker points ?
a) Feeler gauge
b) Wire gauge
c) Micrometer gauge
d) Vernier gauge
66. Ignition coil is used to set up low voltage to high voltage to generate sparks. If secondary voltage is excessive than required .in ignition circuit what will effect ?
a) Pre - ignition
b) Short CB point life
c) Increased engine speed
d) Missing at all speed
67. Which one of the following is called as capacitor ?
a) Alternator
b) Condenser
c) Distributor
d) Contact breaker
68. Ignition timing is set as
a) T.D.C at the start of the compression stroke
b) T.D.C at the end of the compression stroke
c) B.D.C at the start of the power stroke
d) B.D.C at the end of the power stroke
69. In diesel engines , the diesel is ignited by
a) Glow plug
b) Spark plug
c) Injector
d) Temperature of compressed air
70. In ignition system contact breaker connect and disconnects
a) Secondary winding in the ignition coil
b) Primary winding in the ignition coil
c) Primary and secondary winding
d) Low tension and high tension circuit

Answer- Ignition system

1 C , 2 A , 3 B , 4 C ,5 B , 6 D , 7 B ,8 B , 9 C , 10 D ,11 A ,12 B , 13 C , 14 B ,

15 C , 16 B , 17 C , 18 A , 19 D ,20 C ,21 A ,22 B ,23 B , 24 D , 25 A ,26 B , 27 B

28 A ,29 B , 30 A ,31 B ,32 A , 33 C ,34 B , 35 A ,36 D ,37 C, 38 A , 39 D , 40 A ,

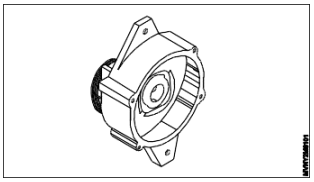
41 D, 42 C , 43 B , 44 B , 45 D , 46 C , 47 B , 48 A , 49 B , 50 B , 51 B ,52 C , 53 B ,

54 D , 55 A , 56 A , 57 C , 58 A , 59 D , 60 A , 61 C , 62 B , 63 B , 64 D , 65 A , 66 A

, 67 B , 68 B , 69 D , 70 B

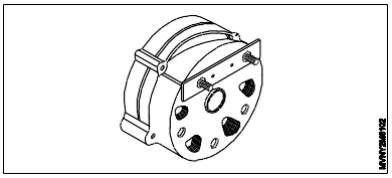
CHARGING & STARTING SYSTEM

1. What is the name of alternator part?



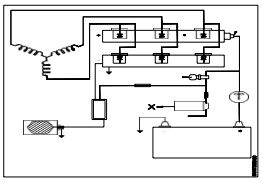
A Drive end frame
B Spring end frame
C Rotor assembly
D Stator assembly

2. What is the name of alternator part?



A Drive end frame
B Voltage regulator
C Slip ring end frame
D Current regulator

3. What is the name of part marked as 'X' in the alternator charging circuit?

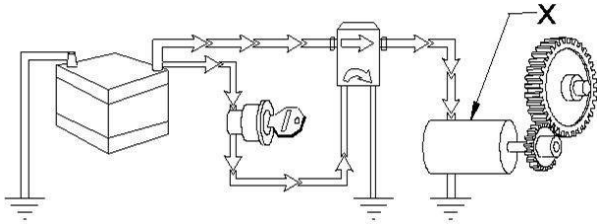


A Ignition switch
B Ammeter
C Ignition core
D Fuse

4. What is the purpose of 'V' pulley in the charging system?

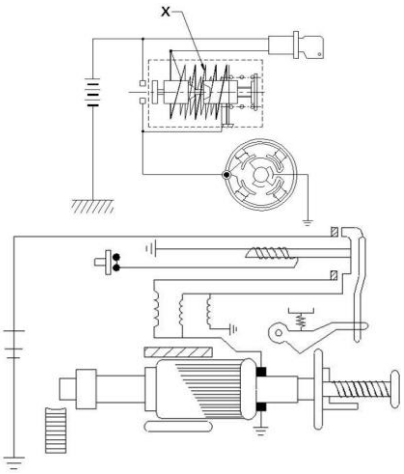
A Drive the cam shaft
B Rotate the alternator rotor
C Drive the crank shaft
D Support rectifier mounting plates

5. What is the name of part marked as 'X' in the starting system?



A Key switch
B Armature
C Solenoid switch
D Starting motor

6. What is the name of part marked as 'X' in the starting circuit?



A Solenoid switch
B Solenoid windings
C Starter switch
D Starter Motor

7. What is the type of starting system?

A Bendrix drive
B Axial or sliding armature drive
C Overrunning clutch drive
D Sliding clutch drive

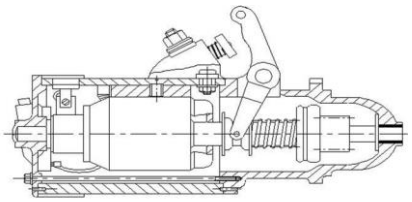
8 Which type of DC starter motor generally used in automobiles?

A Series type
B Shunt type
C Compound type
D Parallel type

9 What is the type of winding used in DC starter motors?

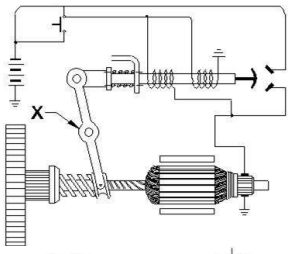
A Series type
B Parallel type
C Compound type
D Shunt type

10 What is the type of starting system?



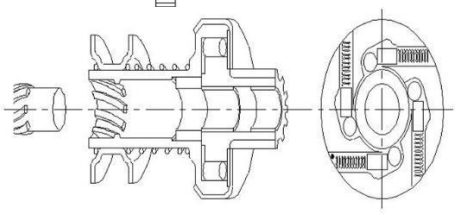
A Over running clutch drive
B Bendix drive
C Sliding armature type
D Radial sliding armature type

11 What is the name of part marked as 'X' in the solenoid switch?



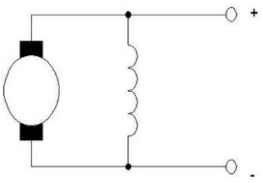
A Armature shaft
B Shift lever
C Pinion
D Fly wheel ring gear

12 What is the name of device used in the starting system?



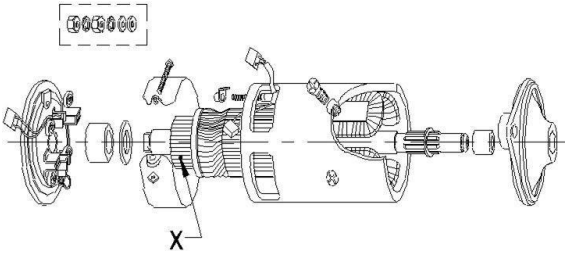
A Armature shaft
B Fly wheel
C Pinion gear
D Over running clutch

13 What is the type of starter motor circuit?



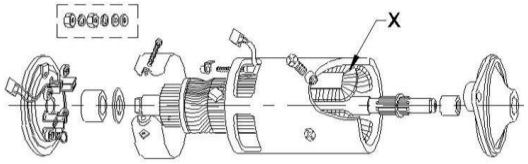
A Series type
B Parallel type
C Shunt type
D Compound type

14 What is the name of part marked as 'X' in the armature winding?



A Pole shoes
B Brushes
C Commutator
D Drive end bracket

15 What is the name of part marked as 'X' in the armature winding?

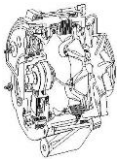


A Brushes
B Field coil
C Commutator
D Drive end bracket

16 What is the working principle of alternator?

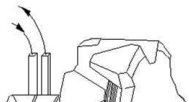
A Ohms law
B Law of resistance
C Electromagnetic induction
D Lenz's law

17 What is the type of device?



A Alternator
B Distributor
C Ignition coil
D Condenser

18 What is the name of part marked as 'X' in the rotor assembly?



A Connection to rectifier
B Laminated core
C Slip ring
D Field coil

19 What is the material used to make diodes?
A Mica
B Silicon
C Alumina foil
D Graphite
20 What is the function of over running clutch in the starting system?
A Protect armature from damage
B Prevent sliding movement of pinion
C Operate the solenoid
D Drive the armature shaft
21 How the alternator field terminal is connected to the battery?
A By ignition switch
B By indicator lamp
C By charge indicator
D By voltage regulator
22 What is the function of solenoid switch?
A Open and close the circuit between primary and secondary
B Step down voltage from primary to secondary
C Close the contact between battery and starting motor
D Shift the lever to engage the plunger
23 What is the function of rotor assembly?
A Supports pre lubricated scaled bearing
B Carriers driving pulley and cooling fan
C Allow the current flow in one direction
D Supports rectifier mounting plates
24 Which type of winding is connected to the starter switch in the solenoid switch?
A Pull in winding
B Hold in winding
C Compound winding
D Primary winding
25 What is the minimum RPM of crank shaft required to start the engine?
A 180 RPM
B 200 RPM
C 100 RPM
D 150 RPM
26 Where the starter motor located?
A Front side of engine
B Rear side of engine
C Top side of engine
D Bottom of engine
27 What is the function of diodes?
A Convert AC to DC
B Convert DC to AC
C Step up voltage
D Step down voltage

Answer Key

1	A	2	C	3	C	4	B	5	D	6	B
7	B	8	A	9	D	10	A	11	C	12	D
13	D	14	C	15	B	16	C	17	A	18	C
19	B	20	A	21	A	22	C	23	B	24	A
25	C	26	B	27	A						

AUTO LIGHTING SYSTEM

1. What is the colour of pilot lamp provided in the vehicle?
A Red
B Green
C White
D Orange
2. What is the colour of front indicator lamps?
A Red
B White
C Green
D Orange
3 What is the type of head light?
A Sealed beam head light
B Halogen head light
C LED head light
D Double filament head light

4. What is the expansion of LED?
A Long electrical diodes
B Light electronic diodes
C Light emitting diodes
D Limited electrical data
5. What is the gas filled in the sealed beam head lights?
A Oxygen gas
B Nitrogen gas
C Argon gas
D Hydrogen gas
6. Where the red colour indicator lamps are provided in the vehicle?
A Front side
B Pilot lamp
C Side of vehicle
D Rear side

7 What is the advantage of using side indicator in a vehicle?
A Prevent accident while turning left and right
B Provide effective illumination
C Indicate the vehicle behind
D Provide enough visibility

8 What is the use of cornering light in a vehicle?
A Provide interior illumination
B Highlight the blind spot during bend

C Indicate traffic behind vehicle
D Provide enough visibility to driver

9 Which type of head light provides 25% more light than sealed beam head lights?
A Neon type head light
B Halogen head light
C LED type head light
D LCD type head light

10 Which type of lights provides maximum brightness in a shorter time?
A LED light
B LCD light
C Halogen light
D Neon light

11 What is the purpose of indexing pin provided in the bulb case?
A Complete the circuit
B Retain the bulb in the socket
C Prevent damage to light
D For easy identification

12 What is the use of single red lamp of 24 watts fitted at the rear?
A Provide enough visibility
B Give indication the traffic behind
C Help driver to see full width of road
D Provide interior illumination

13 What is the use of tail light?
A Indication to vehicle behind
B Indication to slowing down
C Provide interior illumination
D Provide enough visibility

14 Which light give indication to the traffic behind the vehicle for slowing down?
A Stop light
B Fog light
C Dome light
D Head light

15 Which light provide effective illumination during snowfall?
A Head light
B Parking light
C Fog light
D Stop light

16 What is the purpose of dome light circuit?
A Panel board gauges indication
B Interior illumination
C Used for parking vehicle on road
D Provide enough visibility to driver

17 Which circuit provide miniature bulbs to know the working gauges?
A Panel light circuit
B Head light circuit
C Parking light circuit
D Stop light circuit

18 What is the use of two small lamps fitted front and rear of vehicle?
A Used for visibility
B Provide illumination
C Used for parking on the road
D Provide caution to the driver

19 Which lighting circuit provided with dip and dim switch?

A Parking light circuit

B Head light circuit

C Panel light circuit

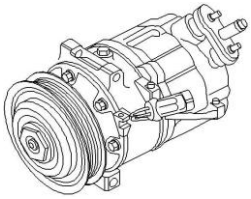
D Fog light circuit

Answer Key- AUTO LIGHTING SYSTEM

1	B	2	B	3	B	4	C	5	C	6	D
7	A	8	B	9	B	10	A	11	B	12	C
13	A	14	A	15	C	16	B	17	A	18	C
19	B										

AIR CONDITIONING SYSTEM

1 What is the device used in air conditioning system?



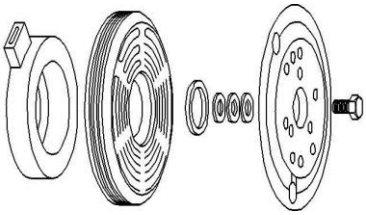
A Compressor

B Condenser

C Receiver

D Evaporator

2 What is the name of device in air conditioning system?



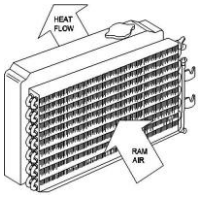
A Magnetic clutch

B Condenser

C Receiver

D Expansion valve

3 What is the name of air conditioning?



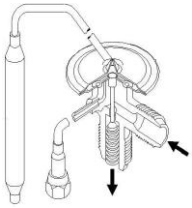
A Compressor

B Receiver

C Condenser

D Blower

4 What is the name of device



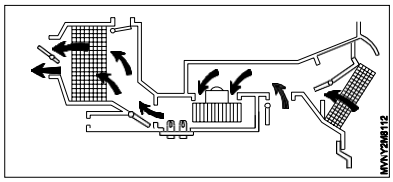
A Evaporator

B Condenser

C Blower

D Expansion valve

5 What is the name of device?



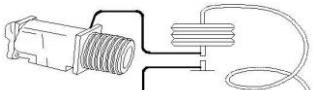
A Condenser

B Evaporator

C Receiver

D Expansion valve

6 What is the name of device?

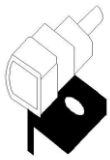


A Ambient temperature sensor
B Thermostatic switch
C Expansion valve
D Servo motor

7 What is the boiling point of refrigerant R- 134a?
A 20.5°C
B 22.0°C
C 26.5°C
D 27.8°C

8 What should be the high air flow rate permitted while doing performance checking in automobile AC system?
A 4 kg per min
B 6 kg per
C 10kk per min
D 8 kg per min

9 What is the name of device used in the automobile AC system?
A Thermostatic switch
B Expansion valve
C Ambient temperature sensor
D Evaporator

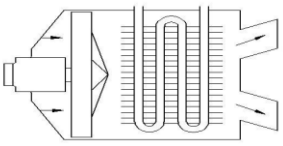


10 Which is not the part of servo motor assembly?
A Gear reduction unit
B Normal DC motor
C Position sensor
D Expansion valve

11 How much DC supply voltage required for servo motor?
A 4 V to 8 V
B 4.8 V to 6 V
C 3.5 V to 8 V
D 5 V to 7.5 V

12 Which wire of servo motor connected to power supply?
A White
B Yellow
C Black
D Red

13 What is the type of heat control system?
A Ventilation system
B Air blending heating system
C Water valve heating system
D Automatic climate control system



14 What is the function of magnetic clutch in air conditioning system?
A Cool the hot refrigerant
B Connect and disconnect drive to compressor
C Absorbs moisture in the system
D Control the refrigerant flow to evaporator

15 What is the function of condenser?
A Control the refrigerant flow
B Absorbs moisture in the system
C Cool the hot refrigerant
D Convert refrigerant to vapour

16 Which part of air conditioning system absorbs moisture in the system?
A Expansion valve

B Receiver
C Condenser
D Evaporator

17 Which part of air conditioning system removes heat from air and transfer to the refrigerant?
A Evaporator
B Condenser
C Receiver
D Blower

18 Which type of flow mode is selected if outside is dusty and contaminated in car AC system?
A Recirculation mode
B Fresh mode
C Heating mode
D Defroster mode

19 Which device acts as an evaporator temperature sensing switch?
A Thermostatic switch
B Blower switch
C Heater switch
D Defroster switch

20 Where the ambient temperature sensor is located in the vehicle?
A Behind the grill
B Rear side of engine
C Front axle
D Top of servo motor

21 What is the function ambient temperature sensor in the air conditioning system?
A Monitor air temperature inside vehicle
B Monitor air temperature outside vehicle
C Monitor air temperature in driver cabin
D Monitor air temperature at the exhaust

22 What is the advantage of using servo motor in air conditioning system?
A High speed operation possible
B Suitable for precision control of rotation
C Low cost of maintenance
D Suitable to prevent vibration

23 Which sensor measures the actual body temperature of passengers?
A Smog sensor
B Sun load sensor
C Infrared sensor
D Interior temperature sensor

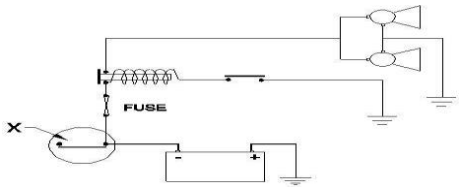
24 Which sensor causes off the outside air inlet or other odours?
A Infrared sensor
B Smog sensor
C Unloader sensor
D Temperature sensor

Answer Key AIR CONDITIONING SYSTEM

1	A	2	A	3	C	4	D	5	B	6	B
7	C	8	C	9	C	10	D	11	B	12	D
13	C	14	B	15	C	16	B	17	A	18	A
19	A	20	A	21	B	22	A	23	C	24	B

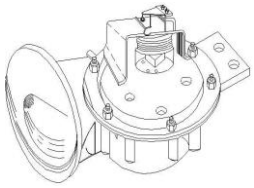
Electrical Component & Trouble Shooting

1 What is the name of part marked as 'X' in the horn circuit?



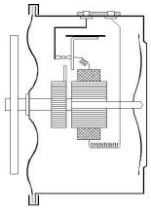
A Battery
B Solenoid switch
C Horn relay
D Fuse

2 What is the type of horn?



A Air horn
B Bulb horn
C Electric horn
D Wind horn

3 What is the name of Horn?

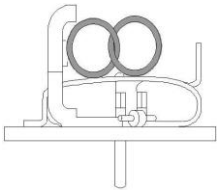


A Air horn
B Bulb horn
C Electric horn
D Horn relay

4 What is the expansion of GPS in vehicle safety system?

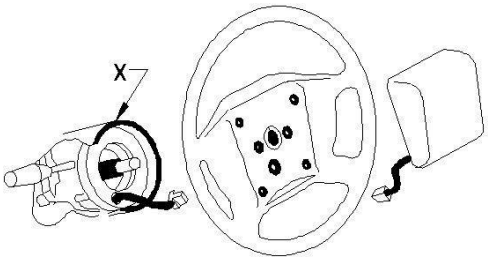
A Global Placing Satellites
B Global Positioning Satellites
C General Positioning Satellites
D Global Preventing Systems

5 What is the name of sensor used in the air bag systems?



A Mass type air bag system sensor
B Accelerometer type air bag system sensor
C Interior temperature sensor
D Infrared sensor

6 What is the name of part marked as 'X' in the air bag inflator module?

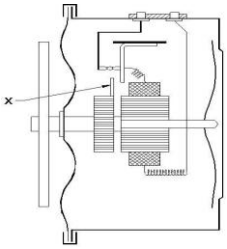


A Clock spring electrical unit
B Air bag module
C Steering column
D Steering wheel

7 What is the expansion of ICAT in the vehicle safety system?

A Indian computer advanced technology
B Intelligent computerized anti-theft system
C Intelligent computer advanced technology
D Indian combat advanced technology

8 What is the name of part marked as 'X' in the Horn assembly?



A Armature
B Striker plate
C Contact breaker
D Diaphragm

9 What is the type of horn?

A Bulb horn

B Air horn
C Vibrating type horn
D Wind tone type horn
10 What is the advantage of multiplex network?
A Improve vehicle safety system
B Prevent malfunctioning of air bag system
C Reduce system cost and weight
D Determine vehicle tracking system
11 Which system determines the vehicles location by forming a triangle with a group of four or more satellites?
A Triangulation
B Reflective displays
C Telemetric
D Networking and Multiplexing
12 Which sensor used for safer parking of vehicle?
A Infrared sensor
B Proximity sensor
C Crash sensor
D Air bag sensor
13 What is the purpose of seat belt pre Pensioner?
A Hold the occupant tightly in the seat
B Detect passengers' weight
C Prevent the side way movement of seat
D Protect the occupant from head injury
14 How to confirm the satisfactory function of air bag system?
A Air bag warming light come on during starting and stopping
B Warming light on with engine running through
C Warning light on and flash few times and go
D Peep sound on during starting
15 What is the purpose of engine immobilizer?
A Electric opening and closing of door
B Used to operate horn relay
C Prevent from starting the engine
D To compensate from sun light entering vehicle
16 Which device inflates the air bag in few mille seconds during vehicle collision?
A Seat belt pre tensioners
B Steering lock
C GPS tracker
D Inflator module
17 Why seat belt and air bag systems are necessary in the vehicle?
A Provide ventilation inside vehicle
B Prevent the steering wheel from turning
C To protect the driver and passenger
D To track the stolen car
18 How much is the current consumption of wind shield wiper motor?
A 2.7 to 3.4 Amps
B 2.2 to 3.2 Amps
C 1.8 to 3.2 Amps
D 3.5 to 5.2 Amps

19 Which type of horn consist electrically driven air pump forces air through plastic trumpet?
A Wind horn
B Wind horn
C Air horn

D Electric horn

20 Which type of wipers is used for heavy motor vehicles?

A Hand operated wiper

B Vacuum operated wiper

C Hydraulically operated wiper

D Compressed air operated wiper

21 Which is the most commonly used wiper in all motor vehicles?

A Electrically operated wipers

B Hydraulically operated wipers

C Vacuum operated wipers

D Compressed air operated wipers

22 What is the cause of horn does not produce any sound?

A Relay point stuck up

B Fuse blown off

C Low voltage at horn terminal

D Tone disc damaged

23 What causes horn sounds continuously even switch is in off position?

A Fuse blown off

B Incorrectly adjusted relay

C Relay point stuck up

D Low battery voltage

24 Why horn produces low improper sound?

A Cracked diaphragm

B Fuse blown off

C Relay points stuck up

D Open field coil winding

25 What is the necessity of wiper unit?

A To see road and traffic clearly

B To provide easy steering

C To reduce effort on the steering

D To provide balancing of vehicle

26 Why power windows are provided with lock out switch controlled by a driver?

A Prevent accident

B Provide effective operation

C Improve easy handling

D Prevent damage to windows

27 What is the possible cause for immobilizer antenna error?

A ECM problem

B Unregistered ignition key

C Poor transponder in key

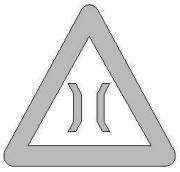
D Blown fuse

Answer Key -Electrical Component & Trouble Shooting

1	C	2	A	3	C	4	B	5	A	6	C
7	B	8	B	9	A	10	D	11	A	12	B
13	A	14	C	15	C	16	D	17	C	18	A
19	B	20	D	21	A	22	B	23	C	24	A
25	A	26	A	27	A						

Motor Vehicle Act & Trouble Shooting

1 When motor vehicle act came into force?
A 1 July 1989
B 31 Aug 1968
C 1 Aug 1985
D 1 July 1988
2 How to define a vehicle constructed to carry more than 6 passengers but not more than 12 passengers?
A Light motor vehicle
B Maxi cab
C Goods carriage
D Contract carriage
3 What is the age limit prescribed to drive transport vehicles?
A 16 Years
B 18 Years
C 20 Years
D 22 years
4 What is the validity of learner driving license?
A 6 Months
B 8 Months
C 10 Months
D 1 year
5 What is the validity of learner driving license?
A 6 Months
B 8 Months
C 10 Months
D 1 year
6 What is the validity period of the license to drive non transport vehicle?
A 10 Year
B 15 Years
C 20 Years
D 22 Years
7 What is the validity for international driving license?
A 2 Years
B 3 Years
C 1 Years
D 5 Years
8 What is the name of sign?

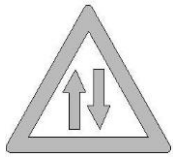


A Gap in median
B Narrow bridge
C Narrow road
D Road widens

9 What is the overall length of a transport vehicle with rigid frame with two or more axles permitted by motor vehicle rules?
A 8 Mtrs
B 12 Mtrs

C 6 Mtrs
D 15 Mtrs

10 What do the traffic sign indicate?



A Two-way operation
B Cross roads
C Traffic diversion
D Slippery road

11 What do the traffic sign indicate?

A School
B Men at work
C Pedestrian crossing
D Cycle crossing

12 Which form is used for declaration of physical fitness in the motor vehicle act?
A Form 1
B Form 1A
C Form 9
D Form 20

13 What is the use of form LLD in motor vehicle act?
A No objection certificate
B Registration of motor vehicle
C Intimation of loss driving license
D Medical certificate

14 What is the permitted overall height of tractor trailer goods vehicle as per motor vehicle act?
A Not to exceed 4.20 Mtrs
B Not to exceed 4.75 Mtrs
C Not to exceed 4.50 Mtrs
D Not to exceed 4.00 Mtrs

15 What is the permitted overall height of tractor trailer goods vehicle as per motor vehicle act?
A Not to exceed 4.20 Mtrs
B Not to exceed 4.75 Mtrs
C Not to exceed 4.50 Mtrs
D Not to exceed 4.00 Mtrs

16 What is the purpose of form 33 used regarding registration certificate?
A Notice of transfer of owner ship or vehicle
B Renewable of certificate of fitness
C Intimation of change of address |
D Registration of motor vehicle act

17 Which form is required to obtain temporary authorization of use of vehicle when the certificate of fitness expired?
A Form C.F Sub
B Form C.F.R.A
C Form C.F.A
D Form C.F.A.B

18 Why form-9 is required for driving license in motor vehicle act?
A To intimate loss to driving license
B For renewal of driving license
C To declare physical fitness
D For no objection certificate

19 Which among the following form is required for driving license?
A Form 20 |
B Form 30
C Form CFA

D Form LLD

20 What will be the probable reason of low oil pressure?

A Worn-out camshaft, crank shaft bearings.

B Defective injector

C More crankshaft end play

D Carbon deposit on piston head

21 What is the result of clogged oil strainer in the sump?

A High oil pressure

B Low oil pressure

C Low fuel pressure

D High oil consumption

22 What will be the result of improper injection timing?

A Low power generation

B High fuel consumption

C Engine does not start

D High oil consumption

23 What is the outcome of starting engine with corroded battery terminals?

A Engine run erratically

B Low power generation

C Engine will not start

D Engine will be over heated

24 What will be the effect on the engine performance in case of loose fan belt?

A Engine over heating

B Low power generation

C High full consumption

D High fuel pressure

25 What will be effect on engine performance in case of air in the fuel system?

A High fuel consumption

B Engine runs erratically

C High oil consumption

D Low fuel consumption

26 What is the cause of erratic running of engine?

A Defective radiator pressure cap

B Water present in the fuel

C Low compression pressure

D Clogged air cleaner

27 What causes high oil pressure?

A Defective oil pump

B Water present in the fuel

C Defective relief valve

D Defective fuel feed pump

28 What is the result of more carbon deposit on the piston head?

A Engine over heating

B High fuel consumption

C Low power generation

D Engine noise

29 What is the effect on engine performance if the low viscosity grade oil used?

A High fuel consumption

B Less Oil consumption

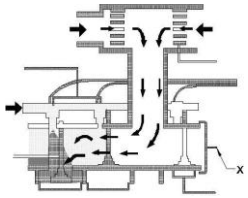
C Excessive oil consumption

D Engine will be over heated

30 What is the result of weak compression pressure?
A High oil consumption
B Low fuel consumption
C Lower power generation
D Engine will not start
31 What is the cause of low power generation?
A Improper tappet clearance
B High oil level
C Engine overheating
D What is the cause of low
32 What causes high fuel consumption?
A Less water level in the radiator
B Clogged air cleaner
C Defective thermostat valve
D Exhaust manifold clogged
33 What will be the effect of clogged fuel tank vent hole?
A Engine does not start
B High fuel consumption
C High oil consumption
D Engine over heating

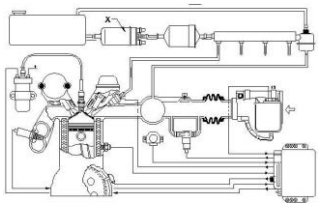
Electronic Control System

34 What is the name of part marked as 'X' in the multi point fuel injection?



A Throttle
B Intake port
C Intake valve
D Intake manifold

35 What is the name of part marked as 'X' in the MPFI system?



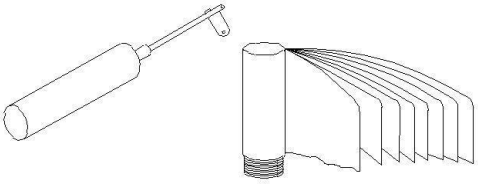
A Fuel filter
B Electric fuel pump
C Pressure regulator
D Electronic control unit

36 What is the firing order for four cylinder Engine

A 1,3,4,2
B 1,2,3,4
C 2,3,1,4
D 3,1,4,2

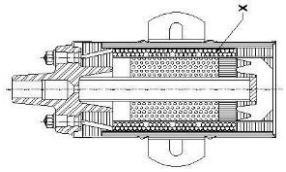
37 What is the temperature limit set to ON/OFF for the radiator control system?
A ON and OFF at below 98°c and 93°c
B ON and OFF at above 98°c and 93°c
C ON and OFF at below 93°c and 84°c
D ON and OFF at above 90°c and 81°c

38 What is the name of device used in the ignition system?



A Distributor
B Ignition coil
C Condense
D Contact breaker

39 What is the name of part marked as ‘X’ in the ignition



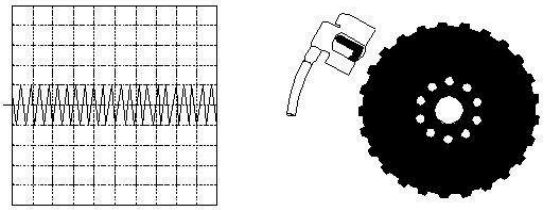
coil?

A Primary winding
B Secondary winding
C Back light cap
D Secondary cap

40 Which law states that the induction of electromotive force in any closed circuit is equal to the rate of change of magnetic flux?

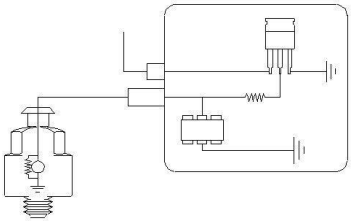
A Law of resistance
B Ohms law
C Charles law
D Faradays law

41 What is the name of sensor?



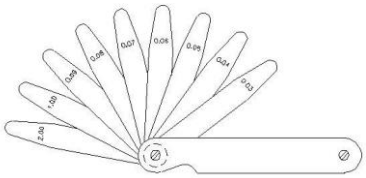
A Crank position senor
B Pressure sensor
C Temperature sensor
D Hall effect sensor

42 What is the name of sensor?



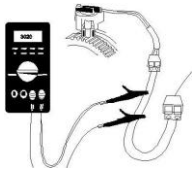
A Temperature sensor
B Pressure sensor
C Blind spot sensor
D Air vertex sensor

43 What is the name of gauge used to check spark plug gap?



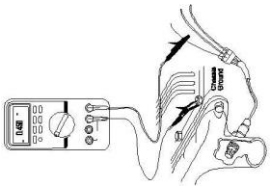
A Radius gauge
B Feeler gauge
C Angle gauge
D Plug gauge

44 What is the type of sensor?



A Cam shaft position sensor
B Throttle position sensor
C Crank shaft position sensor
D Magnetic induction sensor

45 What is the name of sensor?



A Temperature sensor
B Throttle position sensor
C Crank shaft position sensor
D Pressure sensor

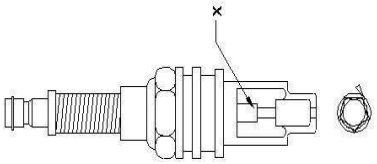
46 What is the type of sensor?

A Pressure sensor
B Temperature sensor
C Throttle position sensor
D Magnetic induction sensor

47 What is the name of part marked as ‘X’ in the spark plug?

A Body
B End cap
C Insulator

D Centre electrode



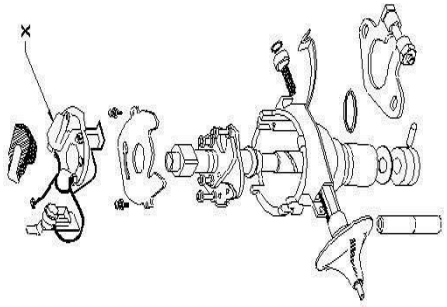
48 What is the permitted spark plug gap in general?

A 2.83 mm

B 2.03 mm

C 2.53 mm

D 2.92 mm



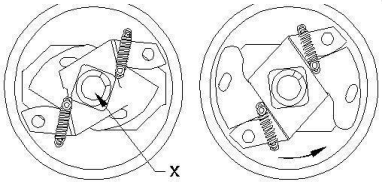
49 What is the name of part marked as 'X' in the distributor?

A Rotor

B Condenser

C Distributor cap

D Cam



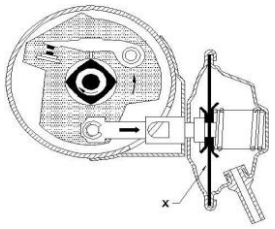
50 What is the name of part marked as 'X' in the centrifugal advance mechanism?

A Centrifugal weights

B Distributor cap

C Distributor shaft

D Breaker plate



51 What is the name of part marked as 'X' in the vacuum advance mechanism?

A Vacuum unit

B Diaphragm

C Breaker plate

D Distributor

52 How many spark plugs are ignited at the same time in the distributor less ignition system?

A Two

B Three

C Four

D Five

53 What is the function of distributor in the battery ignition system?

A Distribute high tension current from ignition coil to secondary winding

B Distribute high tension current flow ignition coil to spark plugs

C Opens and closes the secondary circuit of coil

D Distribute low tension current to ignition coil

54 What is the purpose of condenser in the ignition system?

A Distribute high tension current to spark plugs

B Insulate spark plug electrodes

C Prevents arcs at the points

D Open and close the primary circuit

55 What achieve through spark plug end gap design?

A Improve combustion swirl

B Increase the fuel pressure

C Improve fuel atomization

D Helps for the complete ignition

56 Why many engines use spark plugs with tapered seats?

A Helps in easy fitting

B Produce correct alignment

C Provide clearance space

D Produce good sealing

57 What will be the effect of the long heat path travel in the spark plug?

A Spark plug will run cooler

B Life of spark plug increased
C Spark plug will run hot
D Improper atomization

58 What is the purpose of breaker plate in the distributor?
A Acts as contact breaker
B Prevents dirt, carbon into distributor
C Conduct the ignition surge to the electrode
D Distribute high tension surge to ignition coil

59 Which electronic control system prevents stalling of engine when additional loads are placed on the engine?
A Fuel injection control system
B Fuel pump control system
C Idle speed control system
D Ignition control system

60 How much is the difference in resistance is permitted in the temperature sensor unit?
A More than 100 ohms
B More than 150 ohms
C More than 200 ohms
D More than 400 ohms

61 What is the function of thermo time switch in engine control module?
A Sense exhaust gas temperature
B Sense engine coolant temperature
C Indicate lubricant temperature
D Indicate fuel temperature

62 Which instrument indicate engine RPM in the engine control module?
A Pyro meter
B Tachometer
C Galvona meter
D Hydro meter

63 Where the engine control module installed in the engine?
A Under side of instrument panel
B In the gear box assembly
C Near the fly wheel
D Front side of radiator

64 Which electronic control system supplies optimum air fuel mixture to the combustion chamber under different driving condition?
A Idle speed control system
B Fuel injection control system
C Ignition control system
D Oil pump control system

65 Which part of electronic fuel injection system controls opening of bypass air passage?
A Pressure relief valve
B Idle air control valve
C Throttle valve
D Check valve

66 Which part of ignition system connects and disconnects primary circuit?
A Distributor
B Condenser
C Contact breaker
D Ignition coil

67 What is the function of ignition coil?
A Step up low voltage to high voltage
B Step down high voltage to low voltage

C Connect the primary circuit to ignition switch
D Disconnect the secondary circuit to distributor
68 Which sensor located in the intake manifold or throttle body?
A Mass air flow sensor
B Oxygen sensor
C Hall effect sensor
D Air vertex sensor
69 Which type of sensor located at the exhaust manifold?
A Hall effect sensor
B Oxygen sensor
C Air vertex sensor
D Mass air flow sensor
70 Which sensor used to measure the magnitude of a magnetic field?
A Air vertex sensor
B Voltage sensor
C Hall effect sensor
D Engine knocking sensor
71 Which senor is used to sense vibration?
A Engine knocking sensor
B Hall effect sensor
C Air vertex sensor
D Vehicle speed sensor

Answer key- Motor Vehicle Act & Trouble Shooting/ Electronic Control System

1.	**A**	2.	**B**	3.	**C**	4.	**A**	5.	**D**	6.	**C**
7.	**C**	8.	**B**	9.	**B**	10.	**A**	11.	**C**	12.	**A**
13.	**C**	14.	**A**	15.	**A**	16.	**C**	17.	**A**	18.	**B**
19.	**D**	20.	**A**	21.	**B**	22.	**C**	23.	**C**	24.	**A**
25.	**B**	26.	**B**	27.	**C**	28.	**D**	29.	**C**	30.	**C**
31.	**A**	32.	**B**	33.	**A**	34.	**C**	35.	**B**	36.	**A**
37.	**A**	38.	**C**	39.	**A**	40.	**D**	41.	**A**	42.	**B**
43.	**B**	44.	**C**	45.	**D**	46.	**B**	47.	**C**	48.	**B**
49.	**B**	50.	**C**	51.	**B**	52.	**A**	53.	**B**	54.	**C**
55.	**A**	56.	**D**	57.	**C**	58.	**B**	59.	**C**	60.	**C**
61.	**B**	62.	**B**	63.	**A**	64.	**B**	65.	**B**	66.	**C**
67.	**A**	68.	**A**	69.	**B**	70.	**C**	71.	**A**		

STARTING & STOPING SYSTEM

1. The EMF OF a cell doesn't depends upon ----------
a) Size of the plate
b) Spacing between the plate
c) Both A&B
d) None of these

2. Which one of the following is a primary cell ?
a) Nickel iron cell
b) Barium hydroxide
c) Dry cell
d) Lead acid cell

3. Which one of the following is a secondary cell?
a) Lead acid cell
b) Daniel cell
c) Voltaic cell
d) Lenience cell

4. Secondary cell are also call as ----------
a) Disposal cell
b) Throw away cell
c) Accumulators
d) None of these

5. Activate material of lead acid cells are ----------N.M
a) Lead peroxide
b) Sponge lead
c) Dilute H2SO4
d) All

6. During the charging of the lead acid cell ----------
a) Cathode became black and chocolate brown in colour
b) Voltage increase
c) Gives out energy
d) Specific gravity of H2SO4 decrease

7. The electrolyte used in lead acid cells is ----------
a) Nitric acid
b) Water
c) Dilute sulphuric acid
d) None

8. Dilute sulphuric acid ----------as electrolyte
a) PbO2
b) H2SO4
c) Pb
d) None
9. Positive plate of a sponge lead cell is made with ----------
a) PbO2
b) Pb

c) Copper
d) None

10. Positive plate of a sponge lead cell is made with ----------
a) Pbo2
b) Pb
c) Copper
d) None

11. Which one of the following is used for topping of the batter in lead acid cell ?
a) Dilute sulphuric acid
b) Dilute KOH
c) Distilled Water
d) Hard water

12. Buckling of the battery is due to ----------
a) Partial charging
b) Trickle charging
c) Under charging
d) Over charging

13. Sulphation of a battery is due to ----------
a) Partial charging
b) Trickle charging
C) Under charging
c) Over charging

14. A car battery has 6 cell in series what should be approximately charging voltage ----------.
a) 10 volts
b) 2 volts
c) 100 volts
d) 15 volts

15. Which one of the following gives the indication of full charging .
a) Specific gravity
b) Voltage
c) Colour of the plates
d) All

16. During charging process of a lead acid cell which one of the following gas evolve at cathode
a) Co2
b) Methane
c) Hydrogen
d) Oxygen

17. A battery can deliver 5Amps load for 5 hours then the capacity of the battery is ----------
a) 0 AH
b) 10AH
c) 1AH
d) 25AH

18. The capacity of the battery depends upon the ----------
a) Density of the electricity

b) Temperature
c) Rate of discharge
d) All

19. If the area of the plate increases , then the capacity of a battery ----------
a) Decreases
b) Doesn't change
c) Increases
d) First increase then decrease

20. Dry cells are rarely used as a power source because ----------
a) Costly
b) Require greater care
c) Not easily available
d) None

21. The battery used in submarine is -- ----------
a) Lead acid battery
b) Dry cell battery
c) Nickel iron battery
d) None

22. During charging ad discharging of a nickel iron cell ----------
a) The electro motive force remains constant
b) Water is neither form nor constant
c) Corrosive fumes are produce
d) Nickel hydroxide remains un spilt

23. Who created the first nickel cadmium battery in 1899?
a) Gastin plante
b) Thomas Edison's
c) Waldermar jungner
d) Lechianche
24. An alternator used in ----------
a) Motor bike
b) Buses and heavy vehicle
c) Scooter
d) None

25. Sparking problem occur in ----------
a) DC generator
b) Alternator
c) IC engine
d) None

26. Higher voltage can generated by ----------
a) Alternator
b) Dynamo
c) IC engine
d) None

27. Alternator convert mechanical energy to ----------
a) Solar energy
b) Heat energy

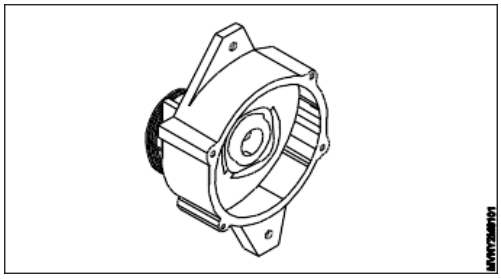
c) Electrical energy
d) None

28. Alternative wave form has ----------
a) Constant magnitude with respect to the time
b) Variable magnitude with respect to the time
c) Both A&B
d) None

29. Cycle is define as ----------
a) Sets of all value of positive half cycle
b) Sets of all value of negative half cycle
c) Sets of all value of both negative and positive half cycle
d) None

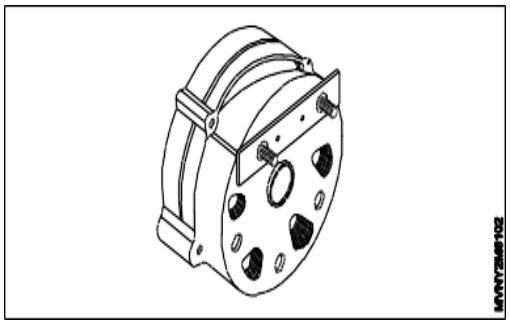
30. In simple loop generator the maximum emf will be induced when it is equal to
a) 0
b) Π/2
c) Π/6
d) Π/4

31) What is the name of alternator part?



a) Drive end frame
b) Spring end frame
c) Rotor assembly
d) Stator assembly

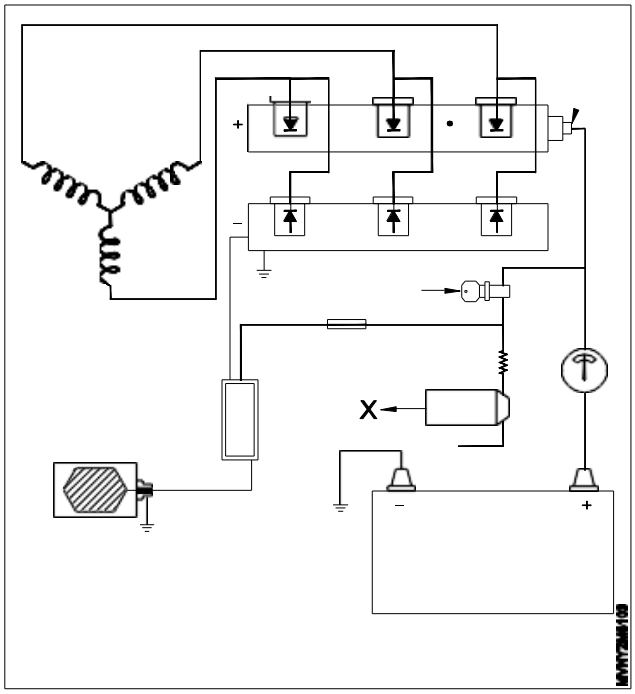
32) What is the name of alternator part?



a) Drive end frame
b) Voltage regulator

c) Slip ring end frame
d) Current regulator

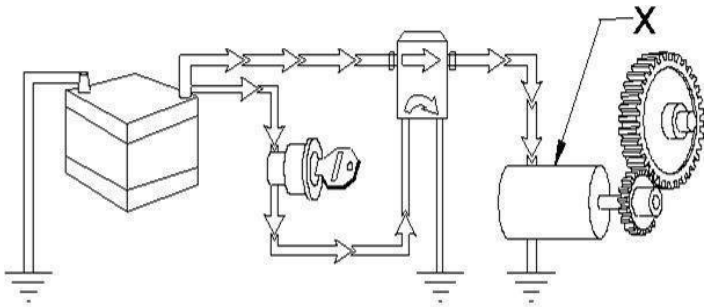
33) What is the name of part marked as 'X' in the alternator charging circuit?



a) Ignition switch
b) Ammeter
c) Ignition core
d) Fuse

34) What is the purpose of 'V' pulley in the charging system?
a) Drive the cam shaft
b) Rotate the alternator rotor
c) Drive the crank shaft
d) Support rectifier mounting plates

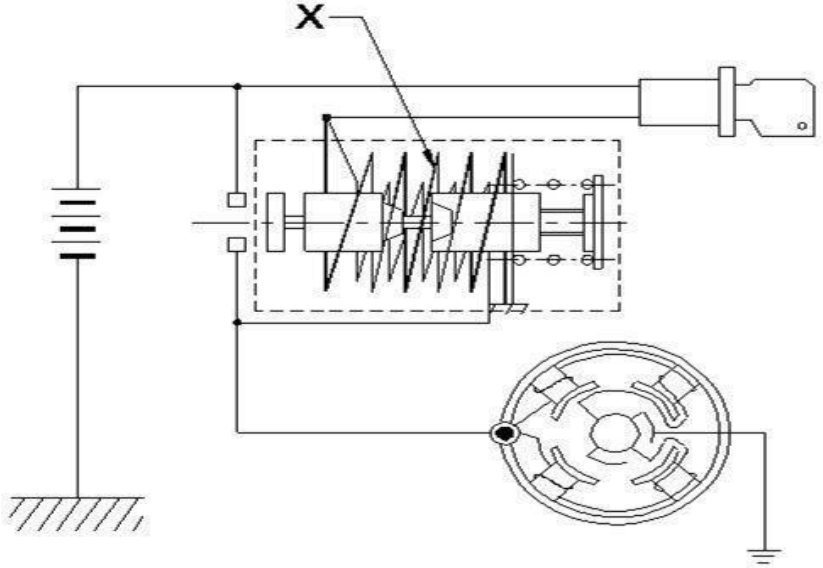
35) What is the name of part marked as 'X' in the starting system?



a) Key switch
b) Armature
c) Solenoid switch

d) Starting motor

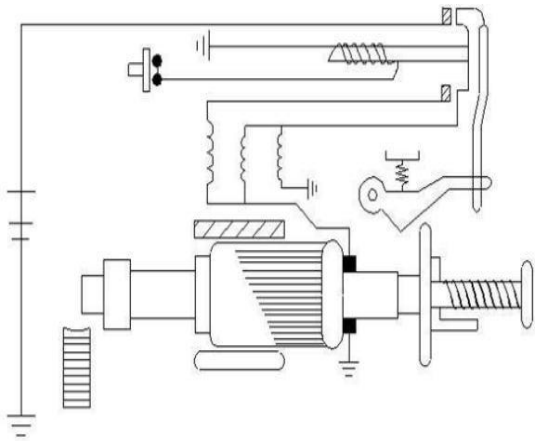
36) What is the name of part marked as 'X' in the starting circuit?



a) Solenoid switch
b) Solenoid windings
c) Starter switch
d) Stator motor

37) What is the type of starting system?

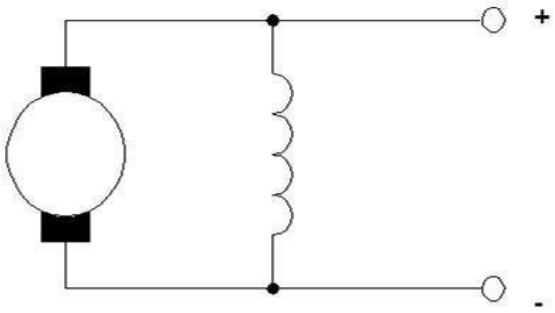
a) Bendix drive
b) Axial or sliding armature drive
c) Overrunning clutch drive
d) Sliding clutch drive



38) Which type of DC starter motor generally used in automobiles?

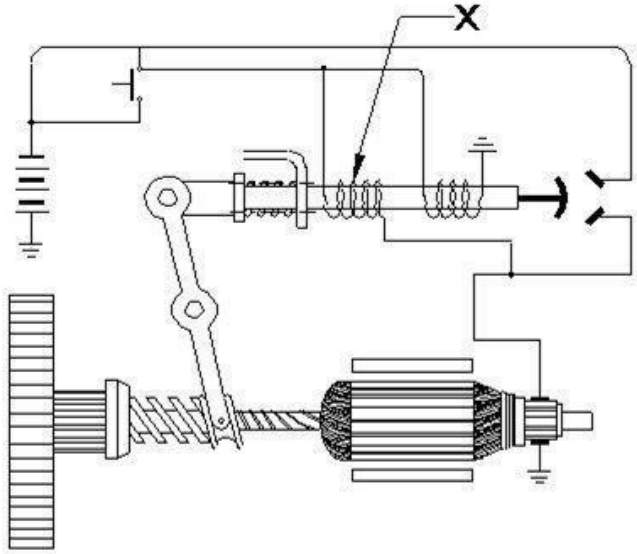
a) DC Series type
b) Shunt type
c) Compound type
d) Parallel type

39) What is the type of winding used in DC starter motors?



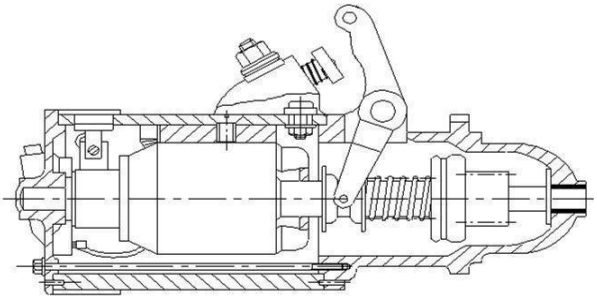
a. DC Series type
b. Parallel type
c. Compound type
d. Shunt type

40) What is the name of part marked as 'X' in the solenoid switch?



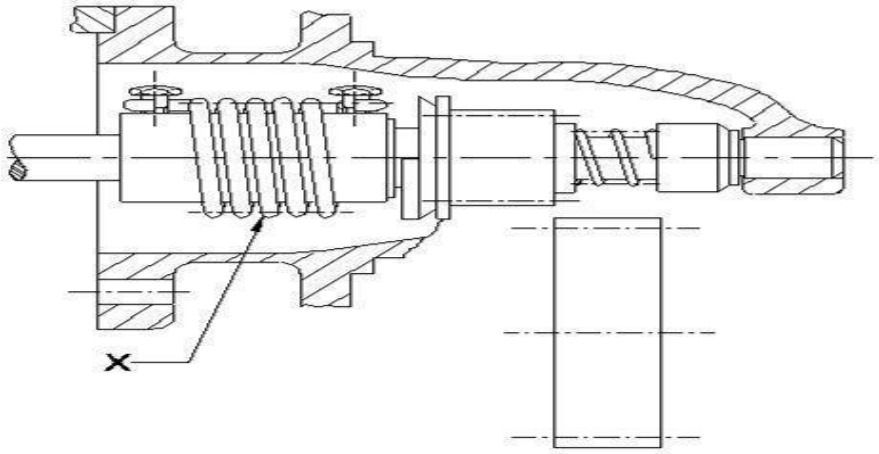
a) Hold in winding
b) Starter switch
c) Pull in winding
d) Iron plunger

41) What is the type of starting system?



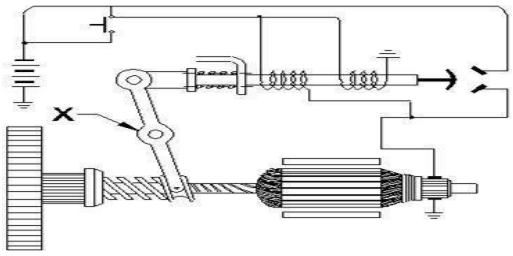
a) Over running clutch drive
b) Bendix drive
c) Sliding armature type
d) Radial sliding armature type

42) What is the name of part marked as ‘X’ in the bendix type starting system?



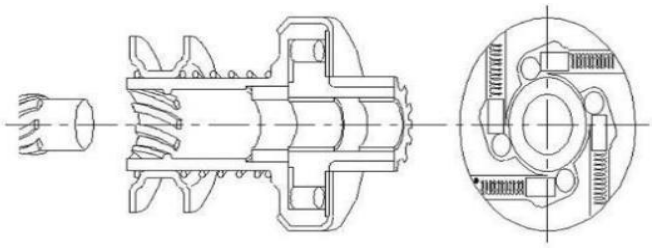
a) Anti drift spring
b) Bendix drive spring
c) Armature shaft
d) Fly wheel

43) What is the name of part marked as ‘X’ in the solenoid switch?



a) Armature shaft
b) Shift lever
c) Pinion
d) Fly wheel ring gear

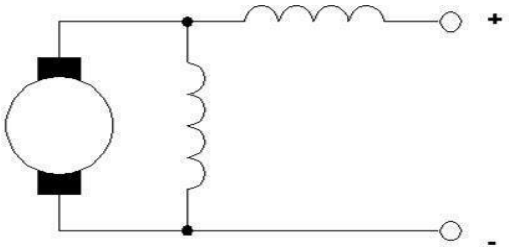
44) What is the name of device used in the starting system?



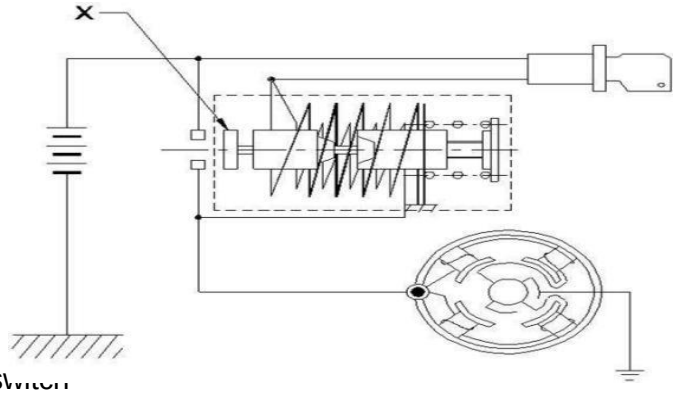
a) Armature shaft
b) Fly wheel
c) Pinion gear
d) Over running clutch

45) What is the type of starter motor circuit?

a) Series type
b) Parallel type
c) Shunt type
d) Compound type

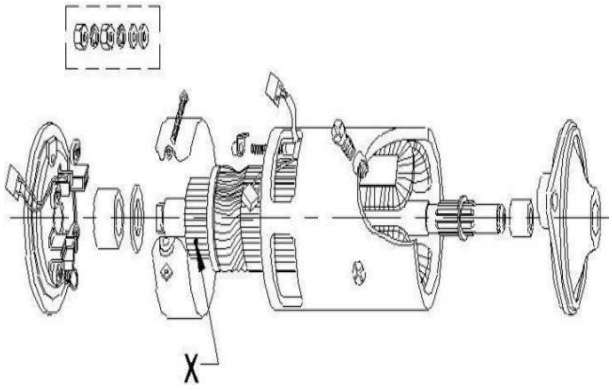


46) What is the name of part marked as ‘X’ in the starting circuit?



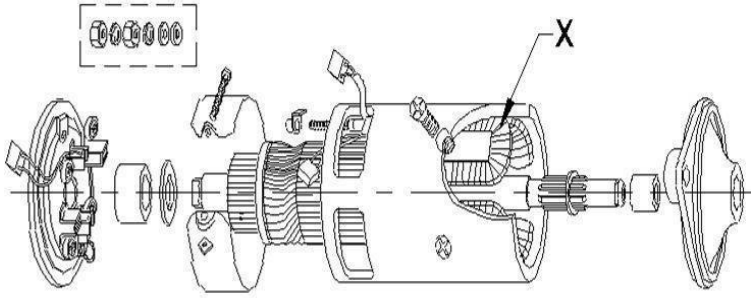
a) Solenoid switch
b) Plunger
c) Battery
d) Starter switch

47) What is name of the part marked as X in the armature



a) Pole shoes
b) Brushes
c) Commutator
d) Drive end bracket

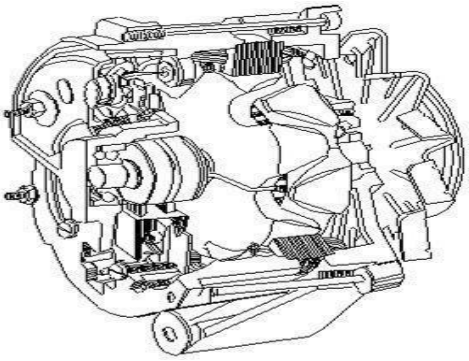
48) What is the name of part marked as ‘X’ in the armature winding?



a) Brushes
b) Field coil
c) Commutator
d) Drive end bracket

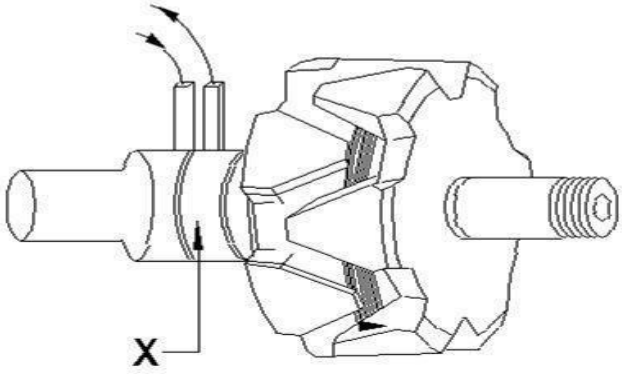
49) What is the working principle of alternator?
a) Ohms law
b) Law of resistance
c) Electromagnetic induction
d) Lenz’s law

50) What is the type of device?



a) Alternator
b) Distributor
c) Ignition coil
d) Condenser

51) What is the name of part marked as ‘X’ in the rotor assembly?



a) Connection to rectifier
b) Laminated core
c) Slip ring
d) Field coil

52) What is the material used to make diodes?
a) Mica
b) Silicon
c) Alumina foil
d) Graphite

53) Which part of bendix drive starting system limit the turning of the sleeve on the armature shaft?
a) Pinion
b) Bendix drive spring
c) Anti drift spring
d) Fly wheel

54) What is the purpose of slot provided in the laminated cylindrical iron core of stator assembly?
a) For lubrication
b) For fitting insulated winding
c) For easy fitting
d) Provide space for cooling

55) What is the function of over running clutch in the starting system?
a) Protect armature from damage
b) Prevent sliding movement of pinion
c) Operate the solenoid
d) Drive the armature shaft

56) How the alternator field terminal is connected to the battery?
a) By ignition switch
b) By indicator lamp
c) By charge indicator
d) By voltage regulator

57) What is the function of drive end frame in the alternator?
a) Carriers driving pulley
b) Connecting to spring loaded brush
c) Allow current flow in one direction
d) Support the pre lubricated sealed bearing

58) What is the function of solenoid switch?
a) Open and close the circuit between primary and secondary
b) Step down voltage from primary to secondary winding
c) Close the contact between battery and starting motor
d) Shift the lever to engage the plunger
59) What is the function of rotor assembly?
a) Supports pre lubricated scaled bearing
b) Carriers driving pulley and cooling fan
c) Allow the current flow in one direction
d) Supports rectifier mounting plates

60) Which type of winding is connected to the starter switch in the solenoid switch?
a) Pull in winding
b) Hold in winding
c) Compound winding
d) Primary winding
61) What is the minimum RPM of crank shaft required to start the engine?
a) 180 RPM
b) 200 RPM
c) 100 RPM
d) 150 RPM
62) Where the starter motor located?
a) Front side of engine
b) Rear side of engine
c) Top side of engine
d) Bottom of engine
63) What is the advantage of series winding type starter motor?
a) Produce high starting torque
b) Produce constant starting torque
c) Increase the life of armature
d) Less cost of maintenance
64) Why it is necessary to disengage the starter pinion from fly wheel ring gear once the engine has started?
a) Prevent damage to starter motor
b) Prevent wastage of current
c) Reduce the wear on commutator
d) Increase the fuel efficiency
65) How the armature winding ends are connected with commutator?
a) By welding
b) By soldering
c) By riveting
d) By brazing
66) What is the purpose of alternator?
a) Produce more electricity at high RPM
b) Produce more electricity at low RPM
c) Produce constant electric supply at high RPM
d) Produce variable electric supply at high RPM
67) What is the function of diodes?
a) Convert AC to DC
b) Convert DC to AC
c) Step up voltage
d) Step down voltage
68) Which device used to prevent damage to the battery and other electrical accessories?
a) Voltage regulator
b) Current regulator
c) Distributor assembly
d) Alternator.
69) What is the adverse effect of fly wheel ring to starter pinion ratio is very high?
a) Reduce the starting torque
b) Damage to starter motor
c) Increase the starting torque
d) Starter motor fails to start
70) Why the brushes are provided with a curvature at the bottom in the starting system?
a) Prevent wear on commutator
b) Provide more contact with commutator
c) Ensure proper heat dissipation
d) Provide ventilation to commutator
71) What is the contributory cause of starter motor running but not cranking?
a) Abnormally worm brush
b) Over running clutch slipping
c) Faulty ECM circuit

d) Poor contacting action of ignition

72) What will be the result of worn teeth of ring gear in the starting system?

a) Motor running but too fast
b) Motor not running no operating sound of magnetic switch
c) Starter motor running too slow
d) Starter motor running but not cranking

73) What is the possible cause of motor not running and no operating sound of magnetic switch?

a) Burnt commutator
b) Battery discharged
c) Worn brushes
d) Worn pinion tip

74) Why anti drift spring is provided in the bendix drive starting system?

a) Provide grip over armature shaft
b) Avoid the side way movement of armature shaft
c) Prevent pinion striking fly wheel
d) Resist wear on the fly wheel

75) What is the cause of low voltage output from alternator?

a) Faulty regulator
b) Loose mountings
c) Worn out bearing
d) Loose drive pully

76) What causes charges at high rate in the alternator?

a) Open rectifier circuit
b) Open field current
c) Voltage regulator setting too low
d) Voltage regulator setting too high

77) What will be the result of loose drive pulley in the alternator?

a) Charges at high rate
b) Low voltage output from alternator
c) No change when engine running
d) Alternator noisy

78) What causes no charge when engine is running?

a) Drive belt loose
b) Shorted rectifier
c) Sticky regulator
d) Brushes not seating properly

ANSWER KEY

1-C,2-C,3-A,4-C,5-D,6-B,7-C,8-B,9-A,10- B ,11- C ,12- D ,13- C ,14- D,15- A ,

16- C , 17- D , 18-D ,19-C, 20-D, 21-C ,22-B,23-C,24-B,25-C,26-A,27-C,28-B,

29-C,30-B,31-A,32- C,33-C,34-B,35-D,36-B,37-B,38-A,39-D,40-C,41-A , 42- B

43-B,44-D,45-D,46-B,47-C,48-B,49-C,50-A,51-C,52-B,53-B,54-B,55-A,56-A,

57- D,58-C,59-B,60-A,61-C,62-B,63-A,64-A,65-B,66-B,67-A, 68- A,69-B,70-B,

71-B,72-D,73-B,74-C,75-A,76-D,77-D,78-A