

**Reso-NET**  
**Resonance National Entrance Test**  
**ACADEMIC SESSION : 2018-19**  
**FOR STUDENTS MOVING TO CLASS-VIII**

Time : 1½ Hr.

SAMPLE TEST PAPER

Max. Marks : 210

**GENERAL INSTRUCTIONS**









1. Question paper contains 70 questions of Mathematics (1 to 25), Physics (26 to 35), Chemistry (36 to 45), Biology (46 to 55) & Mental Ability (56 to 70), each question carry 3 mark.
2. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form is not allowed.
3. Write your Name and Roll No. in the space provided in the bottom of this booklet.
4. Before answering the paper, fill up the required details in the blank space provided in the answer sheet.
5. Do not forget to mention your roll number neatly and clearly in the blank space provided in the answer sheet.
6. There is no negative marks for wrong answer.
7. No rough sheets will be provided by the invigilators. All the rough work is to be done in the blank space provided in the question paper.
8. In case of any dispute, the answer filled in the OMR sheet available with the institute shall be final.
9. Any correction/objection in Answer Key will be accepted/entertained within 24 hrs. of exam conduction. No correction/objection will be accepted after the time.

**MARKING CRITERIA**

| No. of Questions | Type             | Marks                        |                   |       |
|------------------|------------------|------------------------------|-------------------|-------|
|                  |                  | Correct                      | Incorrect         | Blank |
| 1-70             | Only one correct | Q. No. 1 to 70 (3 Mark each) | NO NEGATIVE MARKS | 0     |

**IMPORTANT**

**PROCEDURE OF FILLING UP THE ANSWERS IN OMR SHEET**

| Wrong Filling  | Right Filling   |
|--|---|
|  Tick mark                |  Fully darken with HB Pencil |
|  Cross mark               |  Fully darken with HB Pencil |
|  Half filled or semi dark |  Fully darken with HB Pencil |
|  Light filled             |  Fully darken with HB Pencil |

Name : \_\_\_\_\_ Roll No. : \_\_\_\_\_

**PCCP Head Office**

Address : Plot No. A-51 [A], IPIA, Near Resonance CG Tower,  
 Behind City Mall, Jhalawar Road, Kota (Rajasthan)-324005

Contact. No. : 8824078330

Website : [www.pccp.resonance.ac.in](http://www.pccp.resonance.ac.in) E-mail : [pccp@resonance.ac.in](mailto:pccp@resonance.ac.in)



# Syllabus of Reso NET

## FOR STUDENTS STUDYING IN CLASS-VII IN 2017-18

### Mathematics :

- ❖ Integers
- ❖ Fractions & Decimal
- ❖ Rational Number
- ❖ Lines & Angles
- ❖ Triangles
- ❖ Congruency Triangles
- ❖ Exponents
- ❖ Algebraic Expression
- ❖ Statistics
- ❖ Probability
- ❖ Triangles
- ❖ Symmetry
- ❖ Mensuration
- ❖ Linear Equation
- ❖ Ratio & Proportion
- ❖ Percentage
- ❖ Profit, Loss & Discount

### Physics :

- ❖ Measurement
- ❖ Motion & Time
- ❖ Heat
- ❖ Sound
- ❖ Electricity
- ❖ Light
- ❖ Wind, Storm & Cyclones
- ❖ Universe

### Chemistry :

- ❖ General Chemistry
- ❖ Fibre to Fabric
- ❖ Acids, Bases & Salt
- ❖ Physical and chemical changes
- ❖ Water A Precious Resources

### Biology :

- ❖ Nutrition in Plants
- ❖ Nutrition in Animals
- ❖ Weather, Climate & Adaptations
- ❖ Respiration
- ❖ Transportation
- ❖ Forest Our Lifeline
- ❖ Soil
- ❖ Reproduction
- ❖ Food
- ❖ Movements in animals
- ❖ Cellular Level of Organization

### Mental Ability :

- ❖ Alphabet Test
- ❖ Series completion
- ❖ Missing term in figure
- ❖ Mathematical operations
- ❖ Coding-Decoding
- ❖ Direction Sense
- ❖ Ranking & Ordering- Test
- ❖ Sitting arrangement
- ❖ Puzzle Test
- ❖ Analogy & Classification
- ❖ Figure Partition & counting
- ❖ Clock Test
- ❖ Non Verbal Series & Classification
- ❖ Dice Test
- ❖ Water Mirror Image

1. Which of the following statements is true ?

- (A)  $-\frac{4}{9} < -\frac{7}{18} < -\frac{5}{12} < -\frac{2}{3}$   
 (B)  $-\frac{7}{18} < -\frac{5}{12} < -\frac{4}{9} < -\frac{2}{3}$   
 (C)  $-\frac{2}{3} < -\frac{4}{9} < -\frac{5}{12} < -\frac{7}{18}$   
 (D)  $-\frac{5}{12} < -\frac{2}{3} < -\frac{4}{9} < -\frac{7}{18}$

2. The value of

- $\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{4}\right)\left(1 - \frac{1}{5}\right)\left(1 - \frac{1}{6}\right) \dots \left(1 - \frac{1}{n}\right)$  is  
 (A)  $\frac{1}{n}$  (B)  $\frac{2}{n}$   
 (C)  $\frac{2(n-1)}{4}$  (D)  $\frac{2}{n(n+1)}$

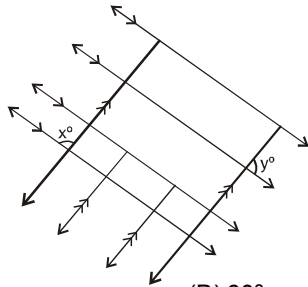
3. Two complementary angles differ by  $16^\circ$  find the angles.

- (A)  $53^\circ, 37^\circ$  (B)  $56^\circ, 40^\circ$   
 (C)  $62^\circ, 28^\circ$  (D)  $59^\circ, 31^\circ$

4. If  $(3x + 20)^\circ$  and  $(2x + 25)^\circ$  are supplementary angles then the value of  $x$ , is :

- (A)  $27^\circ$  (B)  $34^\circ$   
 (C)  $63^\circ$  (D)  $80^\circ$

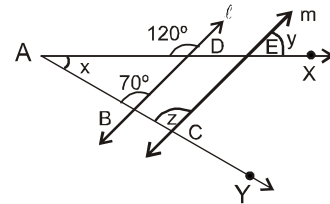
5. In the adjoining figure, parallel lines are shown with similar markings. Find  $\angle x$ , if  $\angle x = 5 \angle y$ .



- (A)  $30^\circ$  (B)  $60^\circ$   
 (C)  $150^\circ$  (D)  $170^\circ$

6. In the figure,  $\ell$  parallel to  $m$  and  $AX$  and  $AY$  are transversals. Then the value of the angle  $(x + y - z)$  is :

- (A)  $110^\circ$   
 (B)  $80^\circ$   
 (C)  $40$   
 (D)  $30^\circ$

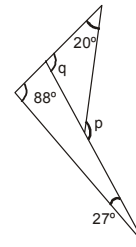


7. In a triangle  $ABC$ ,  $\angle A = 90^\circ$  and  $D$  is the mid-point of  $AC$ . The value of  $BC^2 - BD^2$  is equal

- (A)  $AD^2$  (B)  $2AD^2$   
 (C)  $3AD^2$  (D)  $4AD^2$

8.  $AB \parallel DC$ , then  $\angle ADC$  is equal to,

- 
- (A)  $90^\circ$  (B)  $45^\circ$   
 (C)  $60^\circ$  (D)  $75^\circ$



9.

Find measure of  $p$  and  $q$ .

- (A)  $p = 130^\circ, q = 115^\circ$   
 (B)  $p = 115^\circ, q = 135^\circ$   
 (C)  $p = 135^\circ, q = 115^\circ$   
 (D)  $p = 135^\circ, q = 110^\circ$

10. If one of the interior angles of a regular polygon

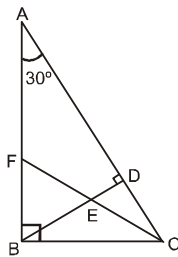
is to be equal to  $\left(\frac{9}{8}\right)$  times of one of the interior angles of a regular hexagon, then the number of sides of the polygon is :

- (A) 7 (B) 8  
 (C) 4 (D) 5

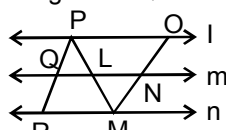
(Space For Rough Work)

11. Polygon in which sum of interior angles is equal to half the sum of exterior angles is a :  
 (A) Pentagon (B) Hexagon  
 (C) Quadrilateral (D) None of these
12. In a triangle, one angle is thrice the smallest angle and it is also greater than third angle by  $23^\circ$ , then greatest angle of triangle is :  
 (A)  $64^\circ$  (B)  $81^\circ$   
 (C)  $87^\circ$  (D)  $92^\circ$
13. In right angled triangle ABC, EC is a bisector of the  $\angle BCD$  and  $BD \perp AC$ .  $\angle BAC = 30^\circ$ , then  $\angle CED$  is :

- (A)  $65^\circ$   
 (B)  $60^\circ$   
 (C)  $45^\circ$   
 (D)  $30^\circ$



14. The length of the three sides of a triangle are 6cm, 10 cm and x cm. Between what two whole number should the value of x lies ?  
 (A)  $4 \text{ cm} < x < 16 \text{ cm}$   
 (B)  $6 \text{ cm} < x < 20 \text{ cm}$   
 (C)  $3 \text{ cm} < x < 10 \text{ cm}$   
 (D)  $2 \text{ cm} < x < 8 \text{ cm}$
15. Which of the following is not the criteria for the congruency of triangle.  
 (A) ASA (B) AAS  
 (C) SSS (D) SSA
16.  $l \parallel m \parallel n$ ,  $\Delta PQL \cong \Delta MNL$ ,  $PQ = MN$ ,  $PL = LM$ ,  $QL = NL$ ,  $MN = NO = 2.2 \text{ cm}$ ,  $PL = 3.2 \text{ cm}$ . Then the length of PQ is



- (A) 3.2 cm (B) 2.2 cm  
 (C) 7.2 cm (D) 4 cm

17. If the area of rhombus be  $24 \text{ cm}^2$  and one of its diagonals be 4 cm, find the perimeter of the rhombus.  
 (A)  $8\sqrt{10} \text{ cm}$  (B)  $8\sqrt{7} \text{ cm}$   
 (C)  $7\sqrt{11} \text{ cm}$  (D) none of these
18. Each side of a square is 5 cm. The perimeter of the equilateral triangle formed on the diagonal of the square would be :  
 (A) 15 cm (B) 20 cm  
 (C)  $20\sqrt{2} \text{ cm}$  (D)  $15\sqrt{2} \text{ cm}$
19. If the radius of a circle is increased by 100%, then its area is increased by  
 (A) 400% (B) 300%  
 (C) 200% (D) 500%
20. Diagonals of rhombus are 15 cm and 20 cm. Then its area and perimeter are :  
 (A)  $150 \text{ cm}^2, 50 \text{ cm}$  (B)  $120 \text{ cm}^2, 50 \text{ cm}$   
 (C)  $150 \text{ cm}^2, 70 \text{ cm}$  (D)  $120 \text{ cm}^2, 70 \text{ cm}$
21. If the length and width of a rectangle are each increased by 10%, then the perimeter of the rectangle is increased by  
 (A) 11% (B) 10 %  
 (C) 20 % (D) 21%
22. If area of a circle  $A_1$  is 25 times the area of a circle  $A_2$ , then ratio of their circumference is :  
 (A) 1 : 5 (B) 5 : 1  
 (C) 25 : 1 (D) 1 : 25
23. Due to virus problems, Bill Gates computer changes one fraction into another in a particular pattern. It changes  $\frac{1}{3}$  into  $\frac{7}{3}, \frac{1}{7}$  into 1 and  $\frac{2}{5}$  into  $\frac{14}{5}$ . What fraction will the computer change into  $\frac{3}{2}$  ?  
 (A)  $\frac{1}{3}$  (B)  $\frac{3}{14}$   
 (C)  $\frac{2}{3}$  (D)  $\frac{3}{98}$

(Space For Rough Work)

24. If  $x = \frac{1}{2}$ , then find the value of  $x + \frac{1}{1 + \frac{1}{1 + \frac{1}{x}}}$
- (A)  $\frac{5}{4}$  (B)  $\frac{4}{5}$   
 (C)  $\frac{3}{4}$  (D)  $\frac{4}{3}$
25. The sum of two integers is 93. If one of them is - 59, the other one is :  
 (A) 34 (B) - 34  
 (C) 152 (D) - 152
26. Electric bell :  
 (A) has filament  
 (B) has an electromagnet  
 (C) works on heating effect of current  
 (D) can be used as a switch
27. When the switch is in the off state :  
 (A) the circuit from the positive terminal of the battery to the negative terminal is complete  
 (B) the circuit is said to be open circuit.  
 (C) current flows throughout the circuit instantaneously  
 (D) the circuit is close circuit
28. Find the initial velocity of a car which is stopped in 10 s applying brakes. Retardation due to brakes is  $250 \text{ cm/s}^2$ .  
 (A) 25 m/s (B) 250 cm/s  
 (C) 2.5 m/s (D) 25 cm/s
29. Electroplating is an application of :  
 (A) Heating effect of current  
 (B) Magnetic effect of current  
 (C) Chemical effect of current  
 (D) None of these
30. Examples of primary cells are :  
 (A) Voltaic (B) Daniel  
 (C) Dry cell (D) All of these
31. An electric fuse is based on the :  
 (A) Heating effect of current  
 (B) Chemical effect of current  
 (C) Magnetic effect of current  
 (D) None of these
32. The rate of change of displacement is :  
 (A) Speed (B) Acceleration  
 (C) Retardation (D) Velocity
33. Human body temperature is normally :  
 (A)  $32^\circ\text{F}$  (B)  $0^\circ\text{F}$   
 (C)  $100.4^\circ\text{F}$  (D)  $98.6^\circ\text{F}$
34. Light shows :  
 (A) Random propagation  
 (B) Curvilinear propagation  
 (C) Rectilinear propagation  
 (D) None of these
35. In 10 minutes, a car with speed of  $60 \text{ kmh}^{-1}$  travels a distance of :  
 (A) 6 km (B) 600 km  
 (C) 10 km (D) 7 km
36. The acidic soil is not good for healthy growth of plants. This type of soil is neutralized by adding  
 (A) hydrochloric acid to the soil  
 (B) calcium oxide (CaO) to the soil  
 (C) sodium oxide to the soil  
 (D) formic acid to the soil
37. Wool is a / an  
 (A) fibre obtained from cocoon  
 (B) artificial fibre  
 (C) animal fibre  
 (D) plant fibre
38. The science of raising silk worms to obtain silk is known as -  
 (A) apiculture. (B) sericulture.  
 (C) horticulture. (D) pisciculture.
39. Process of removing wool from a sheep is called  
 (A) Weaving. (B) Shearing.  
 (C) Spinning. (D) Ginning.

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(Space For Rough Work)

40. The acid present in our stomach which helps in digestion of food is :  
 (A) acetic acid (B) formic acid  
 (C) hydrochloric acid (D) tartaric acid
41. Pure water is -  
 (A) completely neutral (B) slightly alkaline  
 (C) oxygen free (D) slightly acidic
42. When magnesium oxide (MgO) react with water to form magnesium hydroxide  $[Mg(OH)_2]$ , a base, it turns \_\_\_\_\_ litmus to \_\_\_\_\_.  
 (A) blue, red (B) blue, colourless  
 (C) red, blue (D) colourless, blue
43. During rusting , the layer deposited on the surface of iron is -  
 (A) FeO (B)  $Fe_2O_3$   
 (C)  $Fe_2O_3 \cdot xH_2O$  (D) None of these
44. Ice floats on water because -  
 (A) density of ice is higher than that of water.  
 (B) density of ice is lower than that of water.  
 (C) temperature of ice is lower than that of water.  
 (D) temperature of water is higher than that of ice.
45. The boiling point of water on plains is  $100^\circ C$ . At hills it will be -  
 (A)  $100^\circ C$  (B) More than  $100^\circ C$   
 (C) Less than  $100^\circ C$  (D) None of these
46. Villi are present in :  
 (A) Stomach (B) Oesophagus  
 (C) Large intestine (D) Small intestine
47. In mammals the body cavity is partitioned into thoracic and abdominal parts by  
 (A) liver (B) lungs  
 (C) ribs (D) diaphragm
48. Loss of water from the tips of leaves is called -  
 (A) guttation (B) transpiration  
 (C) respiration (D) bleeding
49. Fertilisation of an ovum with a sperm takes place in -  
 (A) fallopian tube (B) uterus  
 (C) cervix (D) vagina
50. During light reaction of photosynthesis  
 (A) production of ATP occurs  
 (B) production of  $NADPH_2$  occurs  
 (C) photolysis of water occurs  
 (D) all of the above.
51. Leaves respire with the help of :  
 (A) Lenticles (B) Stomata  
 (C) Plasmodesmata (D) Cuticle
52. Blood leaving lungs is rich in :  
 (A) Oxygen (B) Carbon dioxide  
 (C) Haemoglobin (D) Number of RBC
53. Human heart is divided into :  
 (A) 4 Chambers (B) 5 Chambers  
 (C) 3 Chambers (D) 2 Chambers
54. Which is the correct sequence of the food chain in grassland ?  
 (A) Grass → wolf → deer → buffalo  
 (B) Grass → insects → bird → snake  
 (C) Grass → snake → insects → deer  
 (D) Grass → snake → insects → wolf
55. Proteins are the polymers of  
 (A) Amino acids (B) Natural proteins  
 (C) Enzymes (D) Nucleic acids

**Directions : (56 to 59) Find the missing numbers :**

56. 2, 5, 7, 12, 15, 17, 22, ?

- (A) 25 (B) 26  
 (C) 27 (D) 28

57. 
$$\begin{array}{ccc} & 4 & & & 8 & & & 0 \\ & \circ & & & \circ & & & \circ \\ 5 & \circ & 6 & & 7 & \circ & 6 & & 11 & \circ & 2 \\ & 7 & & & 4 & & & & 2 & & \end{array}$$

- (A) 12 (B) 10  
 (C) 11 (D) 0

58. 2, 3, 10, 15, 26, ?, 50

- (A) 32 (B) 33  
 (C) 34 (D) 35

(Space For Rough Work)

|    |    |    |
|----|----|----|
| 25 | 17 | 41 |
| 32 | 83 | 11 |
| 26 | ?  | 31 |

59.

- (A) 26 (B) 25  
(C) 34 (D) 38

60. A husband and wife had five married sons, three unmarried daughters. The married had four children each. How many members were there in the family ?

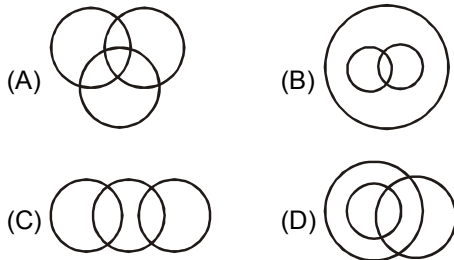
- (A) 30 (B) 32  
(C) 35 (D) 34

**Direction : (61)** In the following questions choose the missing word in place of sign ? On the basis of the relationship between the words given on the left hand side of sign :

61. Bird : Fly :: Snake : ?

- (A) Timid (B) Clatter  
(C) Crawl (D) Hole

62. Which one of the following diagrams correctly represents the relationship among the classes: Tennis fans, Cricket players, Students ?



**Directions (63 to 64): Find the missing numbers/ letter/terms :**

63. 2.5, 3.5, 11, 42, 184, ?

- (A) 920 (B) 945  
(C) 960 (D) 985

64. A1A, B8D, C27I, H64H, ?

- (A) E125O (B) J125O  
(C) J120L (D) L120M

**Direction : (65)** Which sequence of letters when placed at the blanks one after the other will complete the given letter series ?

65. cb \_ ab \_ cb \_ a \_ cc \_ a

- (A) aacbb (B) acabb  
(C) abacb (D) ababc

66. Choose from the alternatives, the boxes that will be formed when figure (X) is folded ?



- (A) (B)   
(C) (D)

**Directions : (67)** Arrange the following group such that when arranged in a specific order, meaningful word is formed.

67. T L E M N A  
1 2 3 4 5 6

- (A) 2,6,4,5,3,1 (B) 3,2,4,6,5,1  
(C) 4,3,5,1,6,2 (D) 5,3,2,4,6,1

68. There are four towns P, Q, R and T. Q is to the South-west of P, R is to the east of Q and south-east of P, and T is to the north of R in line with QP. In which direction of P is T located ?

- (A) South-east (B) North  
(C) North-east (D) East

(Space For Rough Work)

69. How many times the same number comes three times one after the other ?  
958539963685444639902081364293569666  
(A) 1 (B) 3  
(C) 2 (D) 0
70. Saloni travels 3 kms towards the west, turns left and goes 3 kms turns right and goes 1 km, again turns right and goes 3 kms. How far is she from the starting points ?  
(A) 7 kms (B) 4 kms  
(C) 5 kms (D) 6 kms

## ANSWER KEY

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