

Academic Session: 2023-24

SAMPLE TEST PAPER

# ResoNET-2023

(Resonance National Entrance Test for Admission in PCCP Classroom Contact Programmes-PCCPs)

**FOR STUDENTS MOVING IN CLASS- VIII\_IN 2023-2024  
(PRESENTLY STUDYING IN CLASS – VII\_IN 2022-2023)**

COURSE NAME : PARADISE

COURSE CODE : PZ

**Duration: 1½ Hours | Max. Marks: 210**



Name : \_\_\_\_\_ Application Form Number : \_\_\_\_\_

*Please read the next & last page of this booklet for the instructions.*

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## IMPORTANT INSTRUCTIONS

### GENERAL INSTRUCTIONS

1. This booklet is your Question Paper.
2. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form are not allowed to be used.
3. Write your **Name & Application Form Number** in the space provided in the first page of this booklet.
4. 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.
5. No query related to question paper of any type is to be put to the invigilator.

### INSTRUCTIONS FOR OPTICAL RESPONSE SHEET (ORS)

- Darken the appropriate bubbles on the original by applying sufficient pressure.
- The original is machine-gradable and will be collected by the invigilator at the end of the examination.
- Do not tamper with or mutilate the ORS.
- Write your name, Application form number and the name of the examination centre and sign with pen in the space provided for this purpose on the original. **Do not write any of these details anywhere else.** Darken the appropriate bubble under each digit of your roll number.
- Before answering the paper, fill up the required details in the blank space provided in the Objective Response Sheet (ORS).
- Do not forget to mention your paper code and **Application Form Number** neatly and clearly in the blank space provided in the Objective Response Sheet (ORS) / Answer Sheet.
- Use a **BLACK BALL POINT** to darken the bubbles in the upper sheet.
- Darken the bubble **COMPLETELY**.
- Darken the bubble **ONLY** if you are sure of the answer.
- The correct way of darkening a bubble is as shown here : ●
- There is **NO** way to erase or "un-darkened bubble.
- The marking scheme given at the beginning of each section gives details of how darkened and **not darkened** bubbles are evaluated.

**Marks distribution of questions is as follows.**

### Reso NET 2023-24

S.No.	Subject	Nature of Questions	Marks to be awarded			
			No. of Questions	Correct	Wrong	Total
1 to 25	PART-I (Maths)	Single Choice Questions (SCQ)	25	3	0	75
26 to 35	PART-II (Physics)	Single Choice Questions (SCQ)	10	3	0	30
36 to 45	PART-III (Chemistry)	Single Choice Questions (SCQ)	10	3	0	30
46 to 55	PART-IV (Biology)	Single Choice Questions (SCQ)	10	3	0	30
56 to 70	PART-V (Mental Ability)	Single Choice Questions (SCQ)	15	3	0	45
		<b>Total</b>	<b>70</b>			<b>210</b>

Zero marks '0' if none of the options is chosen (i.e. the question is unanswered).



# Syllabus of class-VII\_ Reso NET

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## MATHEMATICS :

- ❖ Integer
- ❖ Rational numbers
- ❖ Triangle
- ❖ Exponent
- ❖ Fraction & decimal
- ❖ Lines and angles
- ❖ Congruency of triangle
- ❖ Algebraic expressions

## PHYSICS :

- ❖ Measurement
- ❖ Heat
- ❖ Motion & time
- ❖ Sound

## CHEMISTRY :

- ❖ General chemistry
- ❖ Acids, bases & salts
- ❖ Fibre to fabric

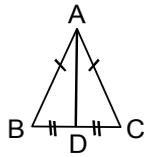
## BIOLOGY :

- ❖ Nutrition in plant
- ❖ Weather climate and adaptation
- ❖ Transportation
- ❖ Nutrition in animals
- ❖ Respiration

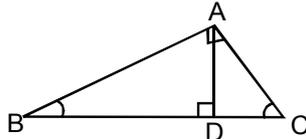
## MENTAL ABILITY :

- ❖ Number series
- ❖ Letter repeating series:
- ❖ Alphabet Ttest:
- ❖ Direction sense test
- ❖ Mathematical operations
- ❖ Alphabet series
- ❖ Missing term in figure
- ❖ Codiing-decoding
- ❖ Ranking ordering test

1. In the given  $\triangle ABC$  if  $AB = AC$  and  $BD = DC$ , then  $\angle ADC =$



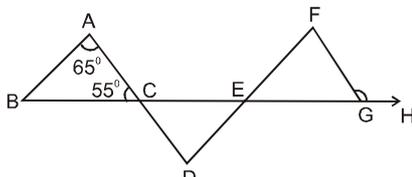
- (A)  $60^\circ$  (B)  $120^\circ$   
 (C)  $90^\circ$  (D)  $45^\circ$
2. In  $\triangle ABC$ ,  $AB \perp AC$  and  $AD \perp BC$ . If  $\angle BAD = 50^\circ$ , then  $\angle ACD$  is



- (A)  $40^\circ$  (B)  $50^\circ$   
 (C)  $140^\circ$  (D)  $60^\circ$
3. If  $\left(\frac{1}{5}\right)^{3y} = 0.008$ , then  $(0.25)^y$  will be \_\_\_\_\_.

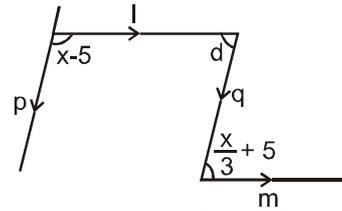
- (A) 1 (B) 0.25  
 (C) 0.0625 (D) 0.125

4. In given figure if  $AB \parallel DF$ ,  $AD \parallel FG$ ,  $\angle BAC = 65^\circ$ ,  $\angle ACB = 55^\circ$ , then  $\angle FGH$  is :



- (A)  $120^\circ$  (B)  $125^\circ$   
 (C)  $115^\circ$  (D)  $140^\circ$
5. The measure of that angle which is four times its supplement is :
- (A)  $36^\circ$  (B)  $144^\circ$   
 (C)  $155^\circ$  (D)  $180^\circ$

6. In the given figure lines  $p$  and  $q$  are parallel. Find value of  $x$  so that lines  $l$  and  $m$  be parallel.



- (A)  $45^\circ$  (B)  $100^\circ$   
 (C)  $135^\circ$  (D)  $60^\circ$
7. The value of  $(-5) + (-4) - (-4) - (-5) + (-5) + (-4) - (-5) + (-4)$  is
- (A) -4 (B) -5  
 (C) 0 (D) -8

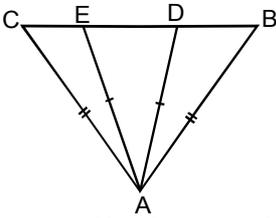
8. Simplify  $222 - \left[ \frac{1}{3} \{ 42 + (56 - 8 + 9) \} + 108 \right]$

- (A) 87 (B) 100  
 (C) 89 (D) 90
9. For integers :
- (A) Addition is associative  
 (B) Addition is commutative  
 (C) Integer "0" is the identity under addition  
 (D) All of the above

10. Find the value.  $4\frac{5}{6} - 2\frac{3}{8} + 3\frac{7}{12}$

- (A)  $\frac{145}{24}$  (B)  $\frac{145}{12}$   
 (C)  $\frac{92}{21}$  (D)  $\frac{145}{4}$

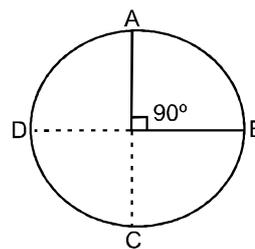
(Space For Rough Work)

11. Descending order of fractions  $\frac{1}{5}, \frac{3}{7}, \frac{7}{10}, \frac{13}{28}$ .
- (A)  $\frac{13}{28} > \frac{7}{10} > \frac{3}{7} > \frac{1}{5}$   
 (B)  $\frac{13}{8} < \frac{7}{10} < \frac{3}{7} < \frac{1}{5}$   
 (C)  $\frac{7}{10} > \frac{13}{28} > \frac{3}{7} > \frac{1}{5}$   
 (D) None of these
12. If  $x = 2$ , then find the value of  $x + \frac{2}{1 - \frac{1}{1 - \frac{1}{x}}}$
- (A) -3 (B)  $\frac{3}{4}$   
 (C)  $\frac{4}{3}$  (D) 0
13. If  $\frac{-9}{5} = \frac{a}{20} = \frac{27}{b} = \frac{-45}{c}$ , then values of a, b and c are
- (A) -15, 25, -36 (B) -36, -15, 25  
 (C) 25, -36, -15 (D) -15, -36, 25
14. The number of rational numbers between two numbers is
- (A) zero. (B) one.  
 (C) two. (D) infinite.
15. A tin of oil was  $\frac{4}{5}$  full. When six bottles of oil were taken out and four bottles of oil were poured in, it was  $\frac{3}{4}$  full. How many bottles of oil did the tin contain initially ?
- (A) 16 (B) 40  
 (C) 32 (D) None of these
16.  $a^4 + 4a^2b^2 + b^4$  is more than  $a^4 - 8a^2b^2 + b^4$  by :
- (A)  $12a^2b^2$  (B)  $-12a^2b^2$   
 (C)  $2a^4 + 2b^4$  (D) None of these
17.  $\triangle PQR \cong \triangle SRQ$  by SAS axiom. Which of the following is not a matching part ?
- (A)  $PQ = SR$  (B)  $\angle PQR = \angle SRQ$   
 (C)  $PQ = SQ$  (D)  $QR = RQ$
18. If  $8 \times 2^{n+2} = 32$ , find the value of 'n'.
- (A) 0 (B) -1  
 (C) 1 (D) 2
19. In the figure,  $AB = AC$  and  $AD = AE$
- 
- Which of the following statement is not true ?
- (A)  $\angle CAE = \angle DAB$  (B)  $\triangle ACE \cong \triangle ABD$   
 (C)  $\triangle AEC \cong \triangle ABD$  (D)  $BE = DC$
20. How many one sixth are there in  $3\frac{1}{3}$  ?
- (A) 20 (B) 19  
 (C) 10 (D) 5
21. Find the continued product :  $(x + 2)(x - 2)(x^2 + 4)$
- (A)  $x^4 - 8$  (B)  $x^2 - 16$   
 (C)  $x^4 - 16$  (D)  $x^4 - 4$
22. What should be subtracted from 0.1 to get 0.03 ?
- (A) 0.7 (B) .07  
 (C) .007 (D) None of these

(Space For Rough Work)

23. Solve for  $x$ :  $3^{2x} \times 3^{x+3} \times 3^{4-x} = (\sqrt{3})^{10}$   
 (A) -1 (B) 1  
 (C) 3 (D) -3
24. The product of two integers is 12, if one integer is -3 then the other one is :  
 (A) +4 (B) -4  
 (C) 3 (D) -3
25. If  $(a + b)^2 = a^2 + b^2 + 2ab$  and  $ab = 6$ ;  $a + b = 5$ , find value of  $a^2 + b^2$ .  
 (A) 11 (B) 12  
 (C) 13 (D) 16
26. The full form of MKS is :  
 (A) Metre, kilogram, second.  
 (B) Mole, kilogram, second.  
 (C) Mole, kelvin, second.  
 (D) Metre, kilobyte, second.
27. Oscillatory motion is also known as :  
 (A) Rectilinear motion.  
 (B) Circular motion.  
 (C) Nonuniform motion.  
 (D) Periodic motion.
28. An object undergoes an acceleration of  $10 \text{ m/s}^2$  starting from rest, find velocity after 5 seconds:  
 (A) 100 m/s (B) 125 m/s  
 (C) 50 m/s (D) 150 m/s

29. In the given figure find displacement between A and B of circular path of radius 2 metre :



- (A)  $\sqrt{8}$  (B)  $\sqrt{3}$   
 (C)  $\sqrt{4}$  (D)  $\sqrt{5}$
30. Name the mode of heat transfer in which the particles actually move to the source of heat :  
 (A) Conduction (B) Convection  
 (C) Radiation (D) None of these
31. When the temperature of a substance is increased :  
 (A) Kinetic energy of the molecules of the substance increases.  
 (B) Kinetic energy of the molecules of the substance decreases.  
 (C) The amplitude of vibrations of molecules of the substance about their mean position decreases.  
 (D) Kinetic energy of the molecules of the substance remains same.
32. The use of sound waves to determine distance or find objects is called :  
 (A) Ultrasound (B) Infrasound  
 (C) Acoustics (D) None of these
33. Velocity of sound in fresh water is :  
 (A) More than that in sea water  
 (B) Less than that in air  
 (C) Less than that in sea water  
 (D) More than that in alcohol
34. The noise becomes painful above  
 (A) 80dB. (B) 70dB.  
 (C) 60dB. (D) 50dB.

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(Space For Rough Work)

35. SONAR is used to detect objects in sea beds by the phenomenon of  
(A) vibrations. (B) waves.  
(C) echo. (D) light.
36. Atomic number of an element represents -  
(A) number of neutrons in the nucleus.  
(B) atomic mass of an element.  
(C) valency of an element  
(D) number of protons in the nucleus.
37. The substance that shows different colours in acidic and basic solutions is  
(A) indicators. (B) lacto metre  
(C) lux metre. (D) ammetre
38. Silk is obtained from  
(A) banana tree.  
(B) jute stem.  
(C) silk worm.  
(D) mango tree
39. The difference between ions and atoms is of -  
(A) relative size  
(B) electronic configuration  
(C) presence of charge  
(D) all of these
40. Which fibres are used to make clothes ?  
(A) Natural (B) Synthetic  
(C) Both (D) None of these
41. A protein substance, which is the chief component of wool fibres, is  
(A) elastin. (B) keratin.  
(C) collagen. (D) casein.
42. The wool which breaks during the combing process in manufacturing is a  
(A) virgin wool. (B) worst wool.  
(C) tender wool. (D) merino wool
43. Which of the following is not an indicator ?  
(A) Methyl orange (B) Litmus  
(C) China rose (D) Sunflower
44. The strongest variety of silk is  
(A) mulberry silk. (B) mooga silk.  
(C) tasar silk. (D) oak tasar silk
45. When a drop of phenolphthalein is introduced in lime water, the solution turns.  
(A) Blue (B) Red  
(C) Milky (D) Pink
46. Photosynthesis is a  
(A) physical process.  
(B) chemical process.  
(C) manmade process.  
(D) None of these
47. Lactic acid is formed in  
(A) Muscles (B) Bacteria  
(C) Yeast (D) None of these
48. Humans develop  
(A) two sets of teeth during their lifetime.  
(B) one set of teeth which lasts for a lifetime.  
(C) a total of twenty four teeth.  
(D) a total of sixteen teeth.
49. Food moves in the alimentary canal from one region to another by a process called  
(A) locomotion. (B) pumping.  
(C) peristalsis. (D) diastole.
50. Most of the photosynthesis (80%) which takes place on this earth is carried on by  
(A) green plants on land  
(B) algae present in fresh water  
(C) algae found in ocean  
(D) algae present in ocean and fresh water sources
51. Weather at a place is the day to day condition of atmosphere with respect to  
(A) wind, humidity, rainfall and temperature.  
(B) sun, daylength, moisture and heat.  
(C) rainfall, temperature, sunlight and moonlight.  
(D) sunlight, moonlight, wind and temperature.
52. On an average, at rest an adult human being breathes  
(A) 5-10 times in a minute.  
(B) 10-13 times in a minute.  
(C) 15-18 times in a minute.  
(D) 22-25 times in a minute.

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*(Space For Rough Work)*

53. Valves that direct the flow of blood only in one direction are present in  
 (A) arteries.  
 (B) veins.  
 (C) capillaries.  
 (D) arteries, veins and capillaries.
54. From which of the four chambers of ruminant stomach, semi-digested food is moved back to mouth ?  
 (A) Rumen (B) Abomasum  
 (C) Omasum (D) All of these
55. In plants, gas exchange takes place through  
 (A) wood. (B) stomata.  
 (C) root. (D) fruit.

**Directions (56 to 68) :** Find the missing numbers :

56. 16, 19, 22, 25, ?  
 (A) 27 (B) 28  
 (C) 29 (D) 25
57. 2, 5, 10, 17, ?  
 (A) 25 (B) 26  
 (C) 22 (D) 24
58. 8, 11, 15, 22, 33, 51, ?, 127, 203  
 (A) 80 (B) 53  
 (C) 58 (D) 69
59. If the following words are arranged as found in the dictionary, then what will be the fourth letter from the left in the last word ?  
**INTIMATION , INFORMATION , INTEREST, INTERROGATION , INSTIGATION**  
 (A) R (B) O  
 (C) T (D) I
60. Which letter is midway between 22nd letter from the left and 21st letter from the right ?  
 (A) L (B) M  
 (C) O (D) None of these

61. Arrange the following group such that when arranged in a specific order, meaningful word is formed.

**R T A O U H**  
**1 2 3 4 5 6**

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

62. Find which one word can be made from the letters of the given word.

MEASUREMENT

- (A) MASTER (B) MANTLE  
 (C) SUMMIT (D) ASSURE



- 63.

- (A) 96 (B) 81  
 (C) 100 (D) 169

1	5	9
4	8	12
7	(?)	15

- 64.

- (A) 12 (B) 11  
 (C) 13 (D) 16

65. If **PINK** is written as **NGLI** how will **IRON** be written ?

- (A) G P M L (B) K M P L  
 (C) G M P L (D) K P M L

66. If in any code language **NATIONAL** is written as **MZGRLMZO** than how is **JAIPUR** written in that language

- (A) QRZKFI (B) QZRKFI  
 (C) QZRFKI (D) QZRIFK

(Space For Rough Work)

67. If **light** is called **dark**, **dark** is called **green**, **green** is called **blue**, **blue** is called **red**, **red** is called **white** and **white** is called **yellow**, what is the colour of blood ?  
 (A) Red (B) Dark  
 (C) White (D) Yellow
68. At my house I am facing West, then I turn left and go 10 m, then I turn 90° anticlockwise and go 5 m, and then I go 5 m to the South and from there 5 m to the West. In which direction am I from my house ?  
 (A) East (B) West  
 (C) North (D) South
69. A man walked 3 metre towards North, turned West and walked 2 metre then turned North and walked 1 metre and finally turned East and walked 5 metre. How far is he from the starting point ?  
 (A) 12 metre (B) 8 metre  
 (C) 10 metre (D) 5 metre
70. BDF, HKN, QUY, ?, RXD  
 (A) CHM (B) BGL  
 (C) CIO (D) BHN

## 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	B	B	B	C	D	A	D	A	C	D	B	D	C
<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>	A	A	A	C	A	C	B	A	B	C	A	D	C	A	B
<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	A	C	A	C	D	A	C	D	C	B	C	D	B	D
<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>	B	A	A	C	D	A	C	B	A	B	B	B	A	D	D
<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>	D	A	C	B	A	B	C	D	D	A					