Reliable INSTITUTE
(A Unit of **ALLEN** Career Institute)

R-NET(2021)
(Reliable National Entrance Test)

ACADEMIC SESSION : 2021-22

SAMPLE TEST PAPER (For X to XI Moving)

Duration : 18 Min.   **Max. Marks : 96**

Name : _____   Application Form Number _____

Reg. Number : | 2 | 0 | | | | | | | | | |

(GENERAL INSTRUCTIONS)

1. There are **06** pages in the booklet containing 24 questions of **Physics (1 to 6)**, **Chemistry (7 to 12)**, **Mathematics(13 to 18)**, **Mental ability (19 to 24)** each question carries 4 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 at the top 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. 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.

7. In case of any dispute, the answer filled in the OMR sheet available with the institute shall be final.

MARKING CRITERIA

| No. of Questions	Type	Marks		
		Correct	Incorrect	Blank
1-24	Only one correct	Q.No. 1 to 24 (4 Mark each)	−1 negative marks	0

PHYSICS

This section contains 6 multiple choice questions. Each question has four choices (1),(2),(3) and (4) out of which only one is correct

1. In the circuit shown in Fig. which of the following statement is correct ?
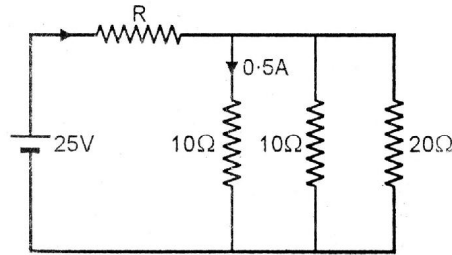
   (1) Pot. diff. across R is 10 V

   (2) Pot. diff. across the middle resistance is 15 V

   (3) Current through 20Ω resistance is 1A

   (4) Resistance R = 16Ω

2. No force acts on the charge fired through a magnetic field, when the angle between its velocity and magnetic field is

   (1) π (2) $\dfrac{3\pi}{4}$ (3) $\dfrac{\pi}{2}$ (4) $\dfrac{\pi}{4}$

3. Two bodies of masses m_1 & m_2 are falling near the surface of earth. The ratio of their accelerations is

   (1) $m_1 : m_2$ (2) $m_2 : m_1$ (3) 1:1 (4) None of these

4. Two equal bar magnets are kept as shown in the figure. The direction of resultant magnetic field indicated by the arrow head at the point P is (approximately) :
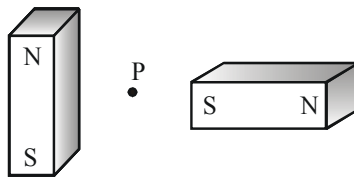
   (1) $\longrightarrow$ (2) $\nearrow$ (3) $\searrow$ (4) $\uparrow$

5. A current of 2A passing through conductor produces 80 J of heat in 10 seconds.The resistance of the conductor is

   (1) 0.5 Ω (2) 2 Ω (3) 4 Ω (4) 20 Ω

6. A metallic ring is attached with the wall of room in such a way that the plane of the ring lies in horizontal plane. When a magnet is vertically dropped along the axis of the ring, as shown in diagram, the induced current in the ring when seen from the top, will be :

(1) First clockwise then anticlockwise   (2) In clockwise direction

(3) In anticlockwise direction   (4) First anticlockwise then clockwise

CHEMISTRY

This section contains 6 multiple choice questions. Each question has four choices (1),(2),(3) and (4) out of which only one is correct

7. The set representing the correct order of first ionization enthalpy is

(1) K > Na > Li   (2) Be > Mg > Ca

(3) B > C > N   (4) Ge > Si > C

8. How many electrons are present in 'N' shell (IVth shell) of manganese (Atomic no. 25).

(1) 7   (2) 2   (3) 13   (4) 8

9. Which has the highest mass ?

(1) 50 g of iron   (2) 5 moles of N_2

(3) 0.1 g atom of Ag   (4) 10^{23} atoms of carbon

10. Mendelev's periodic law is based on–

(1) Atomic number   (2) Atomic weight

(3) Equivalent weight   (4) Valency

11. Weight of CO_2 in gram in a 10 L cylinder at 5 atm and 27º C is about

(1) 200 g   (2) 224 g   (3) 44 g   (4) 89.3 g

12. Which of the following is an organic compound–

(1) CO_2 (2) C_3O_2 (3) HCHO   (4) H_2CO_3

MATHEMATICS

This section contains 6 multiple choice questions. Each question has four choices (1),(2),(3) and (4) out of which only one is correct

13. The 5th and 13th term of an A.P. are 5 and –3 respectively. The first term of the A.P. is

    (1) 1   (2) 9   (3) – 15   (4) 2

14. Find the value of $\cos 1^{°} \cos 2^{°} \cos 3^{°} \ldots \cos 100^{°} =$

    (1) 1   (2) 0   (3) –1   (4) Can't be determined

15. Find L.C.M. of $\dfrac{1}{3}, \dfrac{5}{6}, \dfrac{5}{9}, \dfrac{10}{27}$

    (1) $\dfrac{1}{6}$ (2) $\dfrac{5}{27}$ (3) $\dfrac{10}{27}$ (4) $\dfrac{10}{3}$

16. Find the volume of the largest right circular cone that can be cut out of a cube whose edge is 9 cm :

    (1) 189.5 cm^3 (2) 190.93 cm^3 (3) 187.33 cm^3 (4) 201.35 cm^3

17. If one root of the polynomial $5x^2 – 13x + K$ is reciprocal of the other, then the value of K is

    (1) 0   (2) 5   (3) 6   (4) $\dfrac{1}{6}$

18. The coordinates of the point where the line $2(x – 3) = y – 8$, meet the x-axis

    (1) (3, 0)   (2) (2, 0)   (3) (–1 , 0)   (4) None of these

MENTAL ABILITY

This section contains 6 multiple choice questions. Each question has four choices (1),(2),(3) and (4) out of which only one is correct

19. Find analogous pair of C from the answer figures.
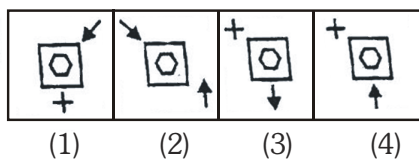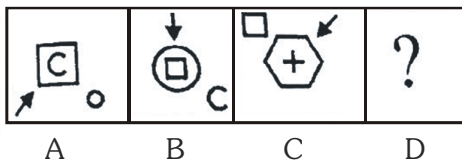
20. Pointing to a photograph, speaker tells Pramod, "I am the only daughter of this lady and her son is your maternal uncle." How is the speaker related to Pramod's father?

(1) Sister-in-law   (2) Wife

(3) Either (1) or (2)   (4) Neither (1) nor (2)

21. Five persons are standing in a line. Two persons, a professor and a businessman, are standing opposite to each other at extreme ends. An advocate is standing to the right of a student. An author is to the left of the businessman. The student is standing between the professor and the advocate. Counting from the left the advocate is at which place?

(1) 1st (2) 2nd (3) 3rd (4) 5th

22. A dice is numbered from 1 to 6 in different ways. If 1 is adjacent to 2, 3 and 5, then which of the following statements is necessarily true?

(1) 4 is adjacent to 6   (2) 2 is adjacent to 5

(3) 1 is adjacent to 6   (4) 1 is adjacent to 4

23. Seven friends P, Q, R, S, T, U and V are standing in a straight line facing north but not necessarily in the same order.

• U stands second from the left end of the line

• Only two persons stand between U and T.

• Only one person stands between P and R.

• V stands third to the left of R.

• Neither R nor U is an immediate neighbour of S

Which of the following is TRUE regarding Q?

(1) P stands second to the left of Q.

(2) S is one of the immediate neighbour of Q.

(3) Only one person stands between Q and T

(4) Q stands at one of the extreme ends of the line

24. In a certain language, If CALM is written as HEOO, YEAR may be written as

(1) DHDS   (2) DTDH   (3) DDHT   (4) DIDT

Space for rough work

R-NET (SAMPLE PAPER) (X to XI moving students)

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	4	1	3	3	2	4	2	2	2	2	4	3	2	2	4	2	2	3	4	2
Que.	21	22	23	24																
Ans.	3	1	1	4																