

RMI

10

- Std

Time ; 3.00 Hrs.

## FIRST REVISION TEST - 2023

## SCIENCE

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Marks : 75

## Part - I

Answer all the questions.

12 X 1 = 12

- One kilogram force equals to  
a) 9.8 dyne      b)  $9.8 \times 10^4$  N      c) 980 dyne      d)  $9.8 \times 10^4$  dyne
- SI unit of resistance is  
a) mho      b) joule      c) ohm      d) ohmmeter
- In the nuclear reaction  ${}_6^{X^{12}} \xrightarrow{\alpha\text{-decay}} {}_Z^{Y^A}$  the value of A & Z  
a) 8, 6      b) 8, 4      c) 4, 8      d) 12, 6
- Atoms of different elements having same number of ..... are called isotones.  
a) neutrons      b) atomic number      c) atomic mass      d) protons
- Among the given species  $A^-$ ,  $A^+$  and  $A$ , the smallest one in size is .....  
a)  $A^-$       b)  $A^+$       c)  $A$       d) 0
- When pressure is increased at constant temperature, the solubility of gases in liquid .....  
a) no change      b) increases      c) decreases      d) no reaction
- The endarch condition is the characteristic feature of  
a) root      b) stem      c) leaves      d) flower
- Nerve cells do not possess  
a) neurilemma      b) sarcolemma      c) axon      d) dendrites
- LH is secreted by  
a) Adrenal gland      b) Thyroid gland      c) Anterior pituitary      d) Hypothalamus
- A sexual reproduction takes place through budding in .....  
a) amoeba      b) yeast      c) plasmodium      d) bacteria
- The ..... units form the backbone of the DNA.  
a) 5 carbon sugar      b) phosphate      c) Nitrogenous bases      d) sugar phosphate
- All files are stored in the .....  
a) folder      b) box      c) paint      d) scanner

## Part - II

Answer any seven questions. (Q.No. 22 is compulsory)

7 X 2 = 14

- Why does the sky appear in blue colour?
- Define critical mass.
- What is aqueous and non-aqueous solution? Give an example.
- If the pH value of solution is zero then what will be the nature of the solution? Give reason.
- Draw the label the structure of oxysomes.
- How does leech suck blood from the host?

RMI 10 - அறிவியல் (EM) பக்கம் -1



19. Who discovered Rh factor? Why was it named so?
20. What is pollination?
21. What do you understand by the term phenotype and genotype?
22. A torch bulb is rated at 3v and 600mA. Calculate its resistance.

### Part - III

**Answer any seven questions. (Q.No. 32 is compulsory)**

**7 X 4 = 28**

23. i) **Fill up :** a) Opening a door : Moment of force, opening a water tap : .....  
b) Pushing a bus by a group of people : Like parallel forces,  
Tug of war : .....  
ii) The power of a lens is -2D. Find the focal length of a lens.
24. **Match it :**

a) Electric current	-	Volt
b) Potential difference	-	Ohm meter
c) Resistivity	-	Watt
d) Electric power	-	Ampere
25. Difference between the sound and light waves.
26. a) Define - Relative Atomic Mass. b) Give any two examples for hetero diatomic molecules.
27. How do detergents cause water pollution? Suggest remedial measures to prevent this pollution.
28. i) Why are the rings of cartilages found in trachea of rabbit?  
ii) Define reflex arc.
29. Draw the external structure of human heart and label the parts.
30. Define Ethnobotany and write its importance.
31. Explain about Gene therapy.
32. a) Give the function of control rods in a nuclear reactor.  
b) Calculate the pH of  $1.0 \times 10^{-4}$  molar solution of  $\text{HNO}_3$ .

### Part - IV

**Answer all the questions. Draw diagrams wherever necessary.**

**3 X 7 = 21**

33. a) i) State Newton's law of motion. (5)  
ii) Write the uses of Telescope. (2) **(OR)**  
b) Compare the properties of Alpha, beta, and gamma radiations.
34. a) i) Give the salient features of 'modern atomic theory'. (5)  
ii) Write any two applications of 'Avogadro's law'. (2) **(OR)**  
b) What is called homologous series? Give its characteristics.
35. a) i) What is respiratory quotient? (2)  
ii) What is eothesion? (2)  
iii) What are the effects of hybrid rigour in animals? (3) **(OR)**  
b) i) What are the various routes by which transmission of human immuno deficiency virus takes place? (3) ii) Enumerate the importance of forest. (4)