

2ndR-Nmk**SECOND REVISION TEST - Feb. 2023**10th - Std.**SCIENCE**

Time : 3.00 Hrs.

Marks : 75

PART - I**I. Choose the best answer.**

12 X 1 = 12

- The unit of 'g' is ms^{-2} . It can be also expressed as
a) cms^{-1} b) Nkg^{-1} c) $\text{Nm}^2 \text{kg}^{-1}$ d) $\text{cm}^2 \text{S}^{-2}$
 - If V_B, V_G, V_R be the velocity of blue, green and red light respectively in a glass prism, then which of the following statement gives the correct relation?
a) $V_B = V_G = V_R$ b) $V_B > V_G > V_R$ c) $V_B > V_G > V_R$ d) $V_B < V_G > V_R$
 - In the given diagram, the possible direction of heat energy transformation is
a) $A \leftarrow B, A \leftarrow C, B \leftarrow C,$ b) $A \rightarrow B, A \rightarrow C, B \rightarrow C,$
c) $A \rightarrow B, A \leftarrow C, B \rightarrow C,$ d) $A \leftarrow B, A \rightarrow C, B \leftarrow C,$
- | | | |
|-------|-------|-------|
| | 303 k | |
| | A | |
| 304 k | | 305 k |
| B | | C |
- The frequency, which is audible to the human ear is
a) 50 kHz b) 20 kHz c) 15000 kHz d) 10000 kHz
 - is an important metal to form amalgam
a) Ag b) Hg c) Mg d) Al
 - In the nucleus of ${}_{20}^{40}\text{Ca}$, there are
a) 20 protons and 40 neutrons b) 20 protons and 20 neutrons
c) 20 protons and 40 electrons d) 40 protons and 20 electrons
 - $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g})$ is a
a) Decomposition reaction b) Combination reaction
c) Single Displacement reaction d) Double displacement reaction
 - Which of the following statements is wrong about detergents?
a) It is a sodium salt of long chain fatty acids. b) It is sodium salts of sulphonic acids.
c) The ionic part in a detergent is $-\text{SO}_3^- \text{Na}^+$ d) It is effective even in hard water.
 - Which is the correct sequence of blood flow
a) Ventricle - atrium - vein - arteries b) atrium - ventricle - veins - arteries
c) atrium - ventricle - arteries - vein d) Ventricles - vein - atrium - arteries
 - Which nervous band connects the two cerebral hemispheres of brain?
a) Thalamus b) Hypothalamus c) Corpus callosum d) Pons
 - rDNA is a
a) Vector DNA b) Circular DNA c) Recombinant of vector DNA and desired DNA
d) Satellite DNA
 - Which software is used to create animation?
a) Paint b) PDF c) MS Word d) Scratch

PART - II

7 X 2 = 14

Answer any 7 questions. (Question No.22 is compulsory)

- Classify the types of force based on their application.
- Write any two elements which are used for inducing radioactivity?
- Fill in the blanks.

- The component present in lesser amount, in a solution is called
- Solubility is the amount of solute dissolved isg of solvent.

16. When an aqueous solution of potassium chloride is added to an aqueous solution of silver nitrate, a white precipitate is formed. Give the chemical equation of this reaction.
17. Assertion and Reason.
 Assertion : Detergents are more effective cleansing agents than soaps in hard water.
 Reason : Calcium and magnesium salts of detergents are water solution.
- a) A and R are correct, R explains the A. b) A is correct, R is wrong
 c) A is wrong, R is correct d) A and R are correct, R doesn't explain A.
18. Write the dental formula of rabbit.
19. Match the following
- | | | |
|-------------------------|---|-------------------------|
| i) Autosomes | - | Trisomy 21 |
| ii) Diplotoid condition | - | 9 : 3 : 3 : 1 |
| iii) Allosome | - | 22 pair of chromosome |
| iv) Down's syndrome | - | 2n |
| | - | 23rd pair of chromosome |
20. State true or false. Correct the false statements.
 i) The use and disuse theory of organs was postulated by Charles Darwin.
 ii) Birds have evolved from reptiles.
21. How are e-wastes generated?
22. How many electrons are passing per second in a circuit in which there is a current of 5A?

PART - III

7 X 4 = 28

Answer 7 questions : (Question No. 32 is compulsory)

23. Differentiate any four points of the eye defects : Myopia and Hypermetropia.
24. i) What is co-efficient of real expansion?
 ii) What is co-efficient of apparent expansion?
25. i) What is a longitudinal wave?
 ii) What is the audible range of frequency?
26. A is a reddish brown metal, which combines with O_2 at $< 1370\text{ K}$ gives B, a black coloured compound. At a temperature $> 1370\text{ K}$, A gives C which is red in colour. Find A, B and C with reaction.
27. What is aqueous and non-aqueous solution? Give an example.
28. Differentiate : Aerobic and Anaerobic respiration.
29. What are the hormones secreted by posterior lobe of the pituitary gland? Mention the tissues on which they exert their effect.
30. How can menstrual hygiene be maintained during menstrual days?
31. How is a cancer cell different from a normal cell?
32. Find the percentage of nitrogen in ammonia.

PART - IV

3 X 7 = 21

Answer all the questions :

33. What are the types of inertia? Give an example for each type. (or)
 a) What are the advantages of LED TV over the normal TV?
 b) List the merits of LED bulb.
34. Explain the factors influencing the rate of a reaction. (or)
 An organic compound 'A' is widely used as a preservative and has the molecular formula $C_2H_4O_2$. This compound reacts with ethanol to form a sweet smelling compound 'B'.
 i) Identify the compound 'B'
 ii) Write the Chemical equation for its reaction with ethanol to form compound 'B'.
 iii) Name the process.
35. Classify neurons based on its structure. (or)
 a) Give the name of wheat variety having higher dietary fibre and protein.
 b) Name the types of stem cells.
 c) What are transgenic organisms?
 d) Name two maize hybrids rich in amino acid lysine.