

FIRST REVISION EXAMINATION - 2025

Std: 10

SCIENCE

Marks : 75

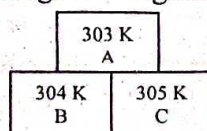
Time : 3.00 hr

PART - I

I. Choose the correct words.

12×1=12

1. In the given diagram, the possible direction of heat energy transformation is



- a) $A \leftarrow B, A \leftarrow C, B \leftarrow C$
 c) $A \rightarrow B, A \leftarrow C, B \rightarrow C$

- b) $A \rightarrow B, A \rightarrow C, B \rightarrow C$
 d) $A \leftarrow B, A \rightarrow C, B \leftarrow C$

2. When a sound wave travels through air, the air particles

- a) vibrate along the direction of the wave motion b) vibrate but not in any fixed direction
 c) vibrate perpendicular to the direction of the wave motion d) do not vibrate

3. To project the rockets which of the following principle (s) is / (are) required?

- a) Newton's third law of motion b) Newton's law of gravitation
 c) law of conservation of linear momentum d) both a and c

4. The number of components in a binary solution is _____

- a) 2 b) 3 c) 4 d) 5

5. Which of the following pairs can be the successive members of a homologous series?

- a) C_3H_8 and C_4H_{10} b) C_2H_2 and C_2H_4 c) CH_4 and C_3H_6 d) C_2H_5 or and C_4H_8 OH

6. The gram molecular mass of oxygen molecule is

- a) 16g b) 18g c) 32g d) 17g

7. Bipolar neurons are found in

- a) retina of eye b) cerebral cortex c) embryo d) respiratory epithelium

8. Anemophilous flowers have _____

- a) sessile stigma b) small smooth stigma c) colored flower d) large feathery stigma

9. The animals which give birth to young ones are

- a) oviparous b) viviparous c) ovoviviparous d) all the above

10. Which type of cancer affects lymph nodes and spleen?

- a) carcinoma b) sarcoma c) leukemia d) lymphoma

11. Which software is used to create animation?

- a) paint b) PDF c) MS word d) scratch

12. The term Ethno botany was coined by

- a) Khorana b) J.W. Harshberger c) Ronald Ross d) Hngdevries

PART - II

II. Short answer (any 7) [Question No: 22 compulsory]

7×2=14

13. What connection is used in domestic appliances and why?

14. Match :

Column - I		column - II
1. Co - 60	→	Age of fossil
2. I - 131	→	Function of heart
3. Na - 24	→	Leukemia
4. C - 14	→	Thyroid disease

15. Draw a ray diagram to show the image formed by a convex lens when the object is placed between F and 2 F.

16. Write a short note on mesophyll.

17. Answer in a word or sentence :

- a) What is the shape of RBC in human blood?
 b) Why is the colour of the blood red?

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18. Define combination reaction. Give one example for an exothermic combination reaction.
19. What is bolting? How can it be induced artificially?
20. Organic farming is better than green Revolution. Give reasons.
21. Metal A belongs to period 3 and group 13. A in red hot condition reacts with steam to form B. A with strong alkali forms C. Find A, B and C with reactions.
22. What do you understand by the term phenotype and genotype?

PART - III

II. Answer Briefly (any seven) (Q No : 32 Compulsory)

7x4=28

23. Explain the process of controlled and uncontrolled chain reactions.
24. 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.
25. a) Distinguish between ideal gas and real gas
b) If you keep ice at 0°C and water at 0°C in either of your hands, in which hand you will feel more chilliness? Why?
26. a) How does pH play an important role in every day life?
b) What is called homologous series?
27. List out the parasitic adaptations in leech?
28. In what way hygroscopic substances differ from deliquescent substances?
29. Differentiate between systole and diastole. Explain the conduction of heart beat?
30. a) Define Ethnobotany and write its importance?
b) Define genetic engineering?
31. a) What will be the frequency sound having 0.20 m as its wavelength, when it travels with a speed of 331 ms^{-1} ?
b) A sound wave has a frequency of 200 Hz and a speed of 400 ms^{-1} in a medium. Find the wavelength of the sound wave.
32. Write the events involved in the sexual reproduction of a flowering plant.
a) Discuss the first event and write the types.
b) Mention the advantages and the disadvantages of that event?

PART - IV

IV. Answer briefly in all questions:

3x7=21

33. a) i) Derive the relationship between Relative molecular mass and vapour density
ii) Define relative atomic mass. (or)
a) The molecular formula of an alcohol is $C_4H_{10}O$. The locant number of its $-OH$ group is 2.
i) Draw its structural formula.
ii) Give its IUPAC names.
iii) Is it saturated or unsaturated?
b) How is ethanoic acid prepared from ethanol? Give the chemical equation?
34. a) i) State and prove the law of conservation of linear momentum
ii) Differentiate the eye defects, myopia and Hypermetropia. (or)
b) State Joule's law of heating
i) An alloy of nickel and chromium is used as the heating element why?
ii) Why does sound travel faster on a rainy day than on a dry day?
35. a) i) Illustrates the structure and functions of brain.
ii) Why should the light dependent reaction occur before the light independent reaction?
b) i) What is the importance of rainwater harvesting?
ii) What are the various routes by which transmission of human immunodeficiency virus takes place?
iii) How is a cancer cell different from a normal cell?

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