

OCTOBER MONTHLY TEST – 2024

X – SCIENCE

TIME : 45 MINUTES

TOTAL MARKS: 25

PART – I

I) Answer all the questions:

4×1=4

1. The frequency which is audible to the human ear is

- a) 50 kHz b) 20 kHz c) 15000 kHz d) 10000 kHz

2. Which of the following is not an “element + element → compound” type reaction?

- a)
- $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)}$
- b)
- $2K_{(s)} + Br_{2(l)} \rightarrow 2KBr_{(s)}$
-
- c)
- $2CO_{(g)} + O_{2(g)} \rightarrow 2CO_{2(g)}$
- d)
- $4Fe_{(s)} + 3O_{2(g)} \rightarrow 2Fe_2O_{3(g)}$

3. The best way of direct dating fossils of recent origin is by

- a) Radio-carbon method b) Uranium lead method
-
- c) Potassium-argon method d) Both (a) and (c)

4. _____ is called as the ‘ Father of Indian Paleobotany ’.

- a) Khorana b) Birbal Sahani c) Hugo de Vries d) Ronald Ross

PART – II

II) Answer any three questions :

3×2=6

5. Explain why the ceilings of concert halls are curved?

6. What will be the frequency of sound having 0.20 m as its wavelength, when it travels with a speed of 331 ms^{-1} ?

7. Why does the reaction rate of a reaction increase on raising the temperature?

8. The degenerated wing of a kiwi is an acquired character. Why is it an acquired character?

9. Why is Archaeopteryx considered to be a connecting link?

PART – III

III) Answer any two questions :

2×4=8

10. a) Why does sound travel faster on a rainy day than on a dry day?

b) Mention two cases in which there is no Doppler effect in sound?

11. Differentiate reversible and irreversible reactions.

12. Define Ethnobotany and its importance.

PART – IV

IV) Answer the following :

1×7=7

13. a) (i) What do you understand by the term 'Ultrasonic vibrations'?

(ii) State three uses of ultrasonic vibrations.

(iii) Name three animals which can hear ultrasonic vibrations.

(OR)

b) (i) Explain the double displacement reactions with examples.

(ii) Calculate the pH of 1.0×10^{-4} molar solution of HNO_3 .