MONTHLY TEST - QUESTION PAPER

STD: X   **MARKS: 50**

SUB: SCIENCE (UNIT-5, 10, 19, 20)   **TIME: 1.30hrs**

PART-I

Choose the most suitable answer and write the code with corresponding answer   **(5×1=5)**

1. The frequency, which is audible to the human air is _____
   a) 50kHz   b) 20kHz   c) 15000kHz   d) 10000kHz
2. The persistence of hearing for human ears in _____ second.
   a) 1   b) 0.1   c)100   d) 0
3. The chemical equation $Na_2SO_{4\,(aq)}$ + $BaCl_{2\,(aq)} \rightarrow$ + $BaSO_{4\,(s)} \downarrow$ + $2NaCl_{(aq)}$ represents which of the following types of reaction?
   a) Neutralization   b) Combustion   c) Precipitation   d) Single displacement
4. The 'use and disuse theory' was proposed by _____
   a) Ernst Haeckel   b) Lamarck   c) Mendel   d) Charles Darwin
5. Pusa komal is a disease resistant variety of ____
   a) sugarcane   b) Rice   c) Chilli   d) Wheat

PART-II

Answer Any Four of the following: **(4×2=8)**
(Question number 11 is compulsory)

6. (i).What is a longitudinal wave?
   (ii).Name three animals, which can hear ultrasonic vibrations.
7. Differentiate reversible and irreversible reactions.
8. Can a nickel spatula be used to stir copper sulphate solution? Justify your answer.
9. (i).Name two maize hybrids rich in amino acid lysine.
   (ii).Name the types of stem cells
10. Define Genetic engineering.
11. A sound wave has a frequency of 200Hz and a speed of 400m/s in a medium. Find the wavelength of the sound wave.

PART– III

iii. Answer any Four of the following:
(Question number 17 is compulsory)   **(4×4=16)**

12.a. What do you understand by the term 'ultrasonic vibration'?

b. State three uses of ultrasonic vibrations.

13. (i). Write the differences between the sound and light waves.

(ii). Mention two cases in which there is no Doppler effect in sound.

14.What are called thermolysis reactions?

15. a. How can you determine the age of the fossils?

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

16.Distinguish between

(i).Somatic gene therapy

(ii).Undifferentiated cells and differentiated cells.

17. (i).The hydroxyl ion concentration of a solution is 1×10^{-9}M. What is the P^{OH} of the solution?

(ii). Define combination reaction. Give one example for an exothermic combination reaction.

PART-IV

Note. (i) Answer all the questions: (3×7=21)

18. a. (i). What are the factors that affect the speed of sound in gases?

(ii).Define Doppler Effect.

(OR)

b. (i).What is an echo?

(ii).State two conditions necessary for hearing an echo.

(iii).What are the medical applications of echo?

(iv).How can you calculate the speed of sound using echo?

19.a. (i). What is a chemical equilibrium? What are its characteristics?

(ii).A solid compound 'A' decomposes on heating into 'B' and a gas 'C' on passing the gas 'C' through the water, it becomes acidic. Identify A, B and C.

(OR)

b. How does P^H play an important role in everyday life?

20. a. (i).How do you differentiate homologous organs from analogous organs?

(ii).Imprints of fossils tell us about evolution – How?

(OR)

b. Describe mutation breeding with an example.

ALL THE BEST