

MA
10/3
Class : 10

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SECOND MID TERM TEST - 2024

Time Allowed : 1.30 Hours]

SCIENCE

[Max. Marks : 50

PART - I

YouTube/ Akwa Academy

1. Choose the correct answer. 10x1= 10
1. Speed of sound waves in air at NTP is
 - a) 340 ms^{-1}
 - b) $34 \times 10^4 \text{ ms}^{-1}$
 - c) $3 \times 10^8 \text{ ms}^{-1}$
 - d) none of these
 2. Photolysis is a decomposition reaction caused by
 - a) heat
 - b) electricity
 - c) light
 - d) Mechanical energy
 3. The frequency, which is audible to the human ear is -----
 - a) 50 kHz
 - b) 20 kHz
 - c) 15000 kHz
 - d) 10000 kHz
 4. Unit of Radioactivity is -----
 - a) roentgen
 - b) curie
 - c) becquerel
 - d) All the above
 5. In which of the following the mass number of daughter nucleus decreases by four
 - a) α decay
 - b) β decay
 - c) γ decay
 - d) Neutron decay
 6. The use and disuse theory was proposed by
 - a) Charles Darwin
 - b) Ernst Haeckel
 - c) Jean Baptiste Lamarck
 - d) Gregor Mendel
 7. The pH of the solution is 3. Its $[\text{OH}^-]$ concentration is -----
 - a) $1 \times 10^{-3} \text{M}$
 - b) 3M
 - c) $1 \times 10^{-11} \text{M}$
 - d) 11M
 8. We can cut the DNA with the help of
 - a) scissors
 - b) Restriction endonucleases
 - c) Knife
 - d) R.N.Aase
 9. The term Ethnobotany was coined by
 - a) Khorna
 - b) J.W. Harshberger
 - c) Ronald Ross
 - d) Hugo de Vries
 10. Pusa Komal is a disease resistant variety of
 - a) Sugar cane
 - b) rice
 - c) cow pea
 - d) maize

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PART – II

- II. Answer any Briefly (any 5). Q.No.18 is compulsory. 5x2=10
11. What is a longitudinal wave?
 12. Mention two cases in which there is no Doppler effect in sound?
 13. Difference between Nuclear fission and fusion.
 14. Define combination reaction. Give one example for an exothermic combination reaction.
 15. Why is Archaeopteryx considered to be a connecting link?
 16. Define Genetic engineering.
 17. Name two maize hybrids rich in amino acid lysine
 18. A Sound wave has a frequency of 200 Hz and the speed of 400 ms^{-1} in a medium. Find the wavelength of the sound wave.

PART – III

- III. Answer any four questions. (Question number 24 is compulsory) 4x4=16
19. a) Why does sound travel faster on a rainy day than a one a dry day? (2)
b) Why does empty vessel produce more sound than a filled one? (2)
 20. State soddy and Fajan's law.
 21. Differentiate reversible and irreversible reactions.
 22. State the applications of DNA finger printing technique.
 23. Define Ethanobotany and write its importance.
 24. What is P^H of 1×10^{-5} molar solution of KOH.

PART – IV

- IV. Answer Briefly: 2x7=14
25. a) What do you understand by the term Ultrasonic Vibration ?
b) State 3 uses of Ultrasonic Vibrations?
c) Name 3 animals which can hear ultrasonic Vibrations.

(OR)

Compare the properties of alpha, beta and gamma radiations.

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

(OR)

With neat labelled diagram explain the techniques involved in gene cloning.

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