

CLASS 10TH**VGR COACHING CENTER****SCIENCE****MARK-75****CHAPTER -5,6,10,18,20,21,22**

1. The frequency, which is audible to the human ear is
a) 50 kHz b) 20 kHz c) 15000 kHz d) 10000 kHz
2. Unit of radioactivity is _____
a. roentgen b. curie c. becquerel d. all the above
3. _____ aprons are used to protect us from gamma radiations
a. Lead oxide b. Iron c. Lead d. Aluminium
4. Photolysis is a decomposition reaction caused by _____
a. heat b. electricity c. light d. mechanical energy
5. Okasaki fragments are joined together by _____.
a) Helicase b) DNA polymerase c) RNA primer d) DNA ligase
6. The centromere is found at the centre of the _____ chromosome.
a) Telocentric b) Metacentric c) Sub-metacentric d) Acrocentric
7. Pusa Komal is a disease resistant variety of _____.
a. sugarcane b. rice c. cow pea d. maize
8. We can cut the DNA with the help of
a. scissors b. restriction endonucleases c. knife d. RNAase
9. World 'No Tobacco Day' is observed on
a) May 31 b) June 6 c) April 22 d) October 2
10. Which type of cancer affects lymph nodes and spleen?
a) Carcinoma b) Sarcoma c) Leukemia d) Lymphoma
11. Soil erosion is more where there is
a) no rain fall b) low rainfall c) rain fall is high d) none of these
12. An inexhaustible resources is
a) wind power b) soil fertility c) wild life d) all of the above

PART-II**Note: Answer any seven questions. Q-22 is compulsory.****7x2=14****13. Match: II**

- | | |
|-----------------|--------------|
| a. Fuel | lead |
| b. Moderator | heavy water |
| c. Control rods | cadmium rods |
| d. Shield | uranium |

14. What are Okazaki fragments?

15. Give any two uses of radio isotopes in the field of agriculture?
16. Name two maize hybrids rich in amino acid lysine
17. Name three animals, which can hear ultrasonic vibrations.
18. Differentiate reversible and irreversible Reactions
19. What are the agents of soil erosion?
20. Mention the diseases caused by tobacco smoke
21. Define combination reaction. Give one example for an exothermic combination reaction.
22. $^{88}\text{Ra}^{226}$ experiences three α - decay. Find the number of neutrons in the daughter element

PART-III

Note: Answer any 7 questions i) Q-33 is compulsory. $7 \times 4 = 28$

23. A. Write any three features of natural and artificial radioactivity.
B. Define one roentgen
24. What is mean by reflection of sound?
Explain: a) reflection at the boundary of a rarer medium
b) reflection at the boundary of a denser medium
25. What is a chemical equilibrium? What are its characteristics?
26. Explain the structure of a chromosome.
27. A. How is a cancer cell different from a normal cell ?
B. Differentiate between Type-1 and Type-2 diabetes mellitus
28. A. State the applications of DNA fingerprinting technique
B. What precautions can be taken for preventing heart diseases ?
29. A. Suggest measures to overcome the problems of an alcoholic.
B. Define genetic engineering
30. What is the importance of rainwater harvesting?
31. Explain the types of double displacement reactions with examples
32. The sex of the new born child is a matter of chance and neither of the parents may be considered responsible for it. What would be the possible fusion of gametes to determine the sex of the child?
33. A. Differentiate between outbreeding and inbreeding.

B. What are the contributing factors for Obesity?

PART-IV

34. 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?

C. What is stellar energy?

OR

What is an echo?

a) **State two conditions necessary for hearing an echo.**

b) **What are the medical applications of echo?**

c) **How can you calculate the speed of sound using echo?**

35. A. Compare the properties of alpha, beta and gamma radiations.

B. Use the analogy to fill in the blank

Spontaneous process : Natural Radioactivity, Induced process : _____

Nuclear Fusion : Extreme temperature, Nuclear Fission : _____

Increasing crops : Radio phosphorous, Effective functioning of heart : _____

a) Deflected by electric field : α ray, Null Deflection : _____

OR

A. What are the sources of solid wastes? How are solid wastes managed?

B. Enumerate the importance of forest.

36. A. Explain with an example the inheritance of dihybrid cross. How is it different from monohybrid cross?

B. What do you understand by the term phenotype and genotype?

OR

37. A. What are called thermolysis reactions?

B. Why did Mendel select pea plant for his experiments?

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