

SET - 4

I. CHOOSE THE CORRECT ANSWER

12X1=12

- Unit of radioactivity is _____
a) Roentgen (b) curie (c) Becquerel (d) all the above
- Artificial radioactivity was discovered by _____
a) Bequerel (b) Irene Curie (c) Roentgen (d) Neils Bohr
- Photolysis is a decomposition reaction caused by
a) heat (b) electricity (c) light (d) mechanical energy
- The pH of a solution is 3. Its $[OH^-]$ concentration is
(a) $1 \times 10^{-3} M$ (b) $3 M$ (c) $1 \times 10^{-11} M$ (d) $11 M$
- The molecular formula of an open chain organic compound is C_3H_6 . The class of the compound is
a) alkane (b) alkene (c) alkyne (d) alcohol
- The secondary suffix used in IUPAC nomenclature of an aldehyde is _____
a) -ol (b) -oic acid (c) -al (d) -one
- World 'No Tobacco Day' is observed on
a) May 31 (b) June 6 (c) April 22 (d) October 2
- Cancer cells are more easily damaged by radiations than normal cells because they are
a) Different in structure (b) Non dividing (c) Starved mutation (d) Undergoing rapid division
- Common energy source in village is
a) electricity (b) coal (c) biogas (d) wood and animal dung
- Green house effect refers to
a) cooling of earth (b) trapping of UV rays (c) cultivation of plants (d) warming of earth
- Which of the following statement is wrong with respect to wind energy
a) wind energy is a renewable energy
b) the blades of wind mill are operated with the help of electric motor
c) production of wind energy is pollution free
d) usage of wind energy can reduce the consumption of fossil fuels.
- Which is used to edit programs?
a) Inkscape (b) script editor (c) stage (d) sprite

II. ANSWER ANY 7 QUESTIONS: (Q.NO. 22 IS COMPULSARY)

7X2=14

- Write any three features of natural and artificial radioactivity.
- Define combination reaction.
- Classify the following compounds based on the pattern of carbon chain and give their structural formula.
a) Propane (b) Furan
- Write the IUPAC name of $CH_3 - CH_2 - CH_2 - CH = CH_2$.
- Mention the diseases caused by tobacco smoke.
- Expand the following abbreviations

1. IDDM 2. HIV 3. BMI 4. AIDS

19. What will happen if trees are cut down?
 20. What would happen if the habitat of wild animals is disturbed?
 21. What are the agents of soil erosion?
 22. Calculate the pH of 1.0×10^{-4} molar solution of HNO_3 .

III. ANSWER ANY 7 QUESTIONS: (Q.NO- 32 is compulsory)

7X4=28

23. What are thermolysis reaction?
 24. State Soddy and Fajan's displacement law.
 25. How does pH play an important role in every day life?
 26. i) What are the various routes by which transmission of human immuno deficiency virus takes place ?
 ii) **Assertion:** All drugs act on the brain
Reason: Drugs disturb the functioning of the body and mind.
 a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion
 b) If both Assertion and Reason are true that Reason is not the correct explanation of Asssertion
 c) Assertion is true but Reason is false
 d) Both Assertion and Reason are false
 27. How is a cancer cell different from a normal cell ?
 28. What is the importance of rainwater harvesting?
 29 .What are the advantages of using biogas?
 30. What are the consequences of deforestation?
 31. i) What is Scratch?
 ii) What is Stage?
 32. The molecular formula of an alcohol is $\text{C}_4\text{H}_{10}\text{O}$. The locant number of its $-\text{OH}$ group is 2.
 i) Draw its structural formula
 ii) Give its IUPAC name.
 iii) Is it saturated or unsaturated?

IV. ANSWER IN DETAIL

3X7=21

- 33.a) Compare the properties of alpha, beta and gamma radiations.
 b) Define one Roentgen.
OR
 Explain the process of controlled and uncontrolled chain reaction.
 34. a) What is homologous series? Give any three of its characteristics?
 b) Differentiate soaps and detergents.
OR
 Explain the mechanism of cleansing action of soap.
 35. a) Suggest measures to overcome the problems of an alcoholic.
 b) What precautions can be taken for preventing heart diseases ?
OR
 a) How does rainwater harvesting structures recharge ground water?
 b) Enumerate the importance of forest.
