

Sample Paper – 2014
Class – X
Subject – Science

TIME – 2 ½ HOUR MAXIMUM
MARKS = 60

(Each question carries 1 mark)

1. Name the functional group present in CH_3COCH_3 .
2. State modern periodic law.
3. Why are detergents harmful?
4. Define menopause.
5. Write the full form of IUCD.
6. What is genetic drift.
7. Name the type of fission carried out by Amoeba.
8. What does a negative sign in the value of magnification of a mirror indicate?
9. Name the type of mirror used by dentists.
10. When light travels from one medium to another medium, which of the following changes:
 - a. Wavelength.
 - b. Frequency.

(Each question carries 2 marks)

11. An element E has following electronic configuration: K L M 2 8 6

- a. To which group of the periodic table does element E belong?
- b. To which period of the periodic table does element E belong?
- c. State the number of valence electrons present in element E.
- d. State the valency of the element E.

12. What is Pollination? Describe Cross Pollination.

13. The organisms formed by asexual reproduction are considered as clones. Why? State the

advantage of sexual reproduction over asexual reproduction.

14. What is the significance of variations?

15. A woman has only daughters. Analyse the situation genetically and provide a suitable explanation.

16. Give a test that can be used to differentiate between butter and cooking oil.

17. How does ciliary muscles control the power of accommodation?

(Each question carries 3 marks)

18. What is esterification reaction? Write chemical equation for the reaction. Write chemical equation for the reaction of an ester with a base.

19. Two elements X and Y have atomic numbers 12 and 16 respectively. Write the electronic configuration for these elements. To which period of the modern periodic table do these two elements belong? What

type of bond will be formed between them and why?

20. (a). What is placenta? Mention its role.

(b). What will happen if egg is not fertilized?

21. What is regeneration of an organism?

Describe with a neat diagram different steps of

regeneration in Planaria.

Or

How do Mendel's experiments show that traits are inherited independently? Depict with the

help of a cross.

22. Why does sun appear oval shaped at morning and evening?

23. A needle 4 cm high is placed in front of a lens. Image of the needle is real, inverted and 6 cm

high, when the distance between the needle and its image is 20 cm. find the focal length of lens

and also write the type of the lens. Draw the ray diagram also.

24. Answer the following:

a. Why is LPG considered a better fuel than coal?

b. Why is ozone layer getting depleted at the higher level of the atmosphere?

c. Name the gases, other than carbon dioxide, that are given out during burning

of fossil fuel and contribute towards acid rain formation.

(Each question carries 5 marks)

25. What is soil erosion? What are its causes and what are its effects? How can it be checked?

26. An organic compound 'A' is widely used as a preservative in pickles and has a molecular formula

$C_2H_4O_2$. This compound reacts with ethanol to form a sweet smelling compound 'B' a. Identify the compound 'A'.

b. Write the chemical equation for its reaction with ethanol to form compound 'B'.

c. How can we get compound 'A' back from 'B'?

d. Name the process and write corresponding chemical equation.

27. Answer the following:

a. The far point of a near sighted person is 100cm in front of eye. What is the nature and power of the lens required to enable him to see very distant object?

b. How can a plane mirror, a convex mirror and concave mirror be identified without touching them?

c. What is hypermetropia? How is it

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