KANCHI KALVI'S - JULY MONTHLY TEST (2016-17)

X STD   SCIENCE (Ln's- 4,10)   MARKS – 50

TIME – 1.30hrs

I. Choose the correct answer;   (10x1=10)

1. The product of triple fusion which acts as nutritive tissue for the
    development of an embryo is _____.
     i) zygote ii) placenta iii) scutellum iv) endosperm

2. The disadvantage of self-pollination is _____.
     i) There is no wastage of pollen grains. ii) The seeds are less in number.
    iii) Self-pollination is sure in bisexual flowers iv) Flowers need not depend
       on agents of pollination.

3. The flower is important to a plant because it helps in _____
    i) attracting ii) production of nectar iii) pollination iv) sexual reproduction

4. The essential organs of the flower are _____ .
     i) Calyx and Corolla   ii) Androecium and Gynoecium
     iii) Calyx and Androecium   iv) Corolla and Gynoecium

5. Cross pollination is important for producing _____ .
     i) new varieties of plants   ii) plants with better growth
     iii) disease resistant plants iv) all of the above

6. Anemophily occurs in _____ .
     i) Vallisneria ii) Grass iii) Coconut   iv) Datura

7. If a water soaked seed is pressed, a small drop of water comes out
    through the _____.
     i) stomata ii) lenticel iii) micropyle iv) radicle

8. The mango fruit is called a stone fruit because it has _____.
     i) skinny epicarp ii) stony mesocarp iii) fleshy endocarp iv) hard endocarp

9. In sexual reproduction of flowering plants, the first event involved in this
     i) fertilization   ii) germination   iii) regeneration   iv) pollination

10. __is an active mechanism of self dispersal of fruits and seeds.
      i) Autochory ii) hydrochory iii) zoochory   iv) none

II.Answer (any15) of the following;   (15x2=30)

11. Coconut seeds are dispersed by Hydrochory (dispersal by water).
     Mention the part of the fruit whose modification help in this mechanism

12. What is double fertilization?

13. What is triple fusion?

14. Differentiate dehiscent fruits and indehiscent fruits with examples.

15. What are monocotyledons and dicotyledons? Give examples.

16. **Give suitable terms for the following methods of seed / fruit dispersal, with one example each: (i) by wind (ii) by water (iii) by animals.**

17. **Give any two examples for each of the following cases where dispersal of fruits and seeds take place : (i) by birds (through excreta) (ii) by human beings**

18. **Write any two differences between asexual and sexual modes of Reproduction**

19. **Calculate the number of water molecules present in one drop of water which weighs 0.18 grams.**

20. **Find the gram molecular mass of the following from the data given:**
    i) NO_2 ii) H_2SO_4

21. **From the given examples, form the pair of isotopes and the pair of isobars: $_{18}Ar^{40}$, $_{17}Cl^{35}$, $_{20}Ca^{40}$, $_{17}Cl^{37}$**

22. **Molecular mass of Nitrogen is 28. Its atomic mass is 14. Find the atomicity of Nitrogen.**

23. **Gram molecular mass of Oxygen is 32g. Density of Oxygen is 1.429g/cc. Find thegram molecular volume of Oxygen.**

24. **Calculate the mass of 18.069×10^{23} molecules of SO_2**

25. **Calculate the number of moles in 90g of water**

26. **State Gay-Lussac's Law of Combining Volumes of Gases***

III. Answer the following in detail;   (2x5=10)

27. Find how many moles of atoms are there in:
    i) 2 g of nitrogen.   ii) 23 g of sodium   iii) 40 g of calcium.
    iv) 1.4 g of lithium   v) 32 g of sulphur.

       (OR) List out the applications of Avogadro's Law

28. Describe the structure of a dicot seed

       (OR)   a monocot seed.

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