

KANCHI KALVI'S - JUNE MONTHLY TEST (2016-17)**X STD SCIENCE (Ln's- 1,9,15) MARKS – 50****TIME – 1.30hrs****I. Choose the correct answer; (10x1=10)**

1. In Mendel's *Pisum sativum* plant, the genetic material present is
i) DNA ii) RNA iii) Protein iv) Cytoplasm
2. In persons suffering from insulin-dependent diabetes, ___ cells of pancreas are degenerated.
i) Alpha ii) Beta iii) Gamma iv) Delta
3. Identical twins are born as a result of fertilization between ___
i) two eggs and two sperms ii) two eggs and one sperm
iii) one egg and one sperm iv) one egg and two sperms
4. ___ is derived from amylo proteins of bacteria
i) zymase ii) invertase iii) amylase iv) none
5. If two liquids are mutually soluble, they are called ___ liquids.
i) miscible ii) immiscible iii) both iv) none
6. In an endothermic process, solubility increases with ___ in temp.
i) increase ii) decrease iii) both iv) constant
7. Solubility of CuSO_4 in H_2O is _____ g at 20°C .
i) 22.7 ii) 21.7 iii) 20.7 iv) 20
8. Organisations which are not associated with Chandrayaan-I
i) ISRO ii) BARC iii) NASA iv) ESA v) WHO vi) ONGC
9. The momentum of a massive object at rest is _____.
i) very large ii) very small iii) zero iv) infinity
10. The freezing of biotechnology products like vaccines require
i) Helium ii) Nitrogen iii) Ammonia iv) Chlorine

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

11. Sequentially arrange the different species of man from primitive to modern man.
(Neanderthal man, *Homo habilis*, *Homo erectus*, *Homo sapiens*)
12. What do you mean by phenotype and genotype of an individual? Explain.
13. What are variations? Mention their types.
14. Who proposed the theory of Natural Selection? Mention the two principles of this theory.
15. What are monoclonal antibodies? Mention its use.
16. What is a clone? In what way is the cloning technique useful in the field of veterinary science?

17. Distinguish between the saturated and unsaturated solution
18. Differentiate true solution and colloidal solution.
19. You have prepared a saturated solution of sugar at room temperature. Is it possible to dissolve some more grams of sugar to this solution? Justify your answer.
20. Find the concentration of solution in terms of weight percent if 20gm of common salt is dissolved in 50gm of water
21. Name the type of solution formed in the following cases:
 - i) 20g of NaCl in 100g of water. ii) 36g of NaCl in 100g of water.
 - iii) 45g of NaCl in 100g of water at 80°C. iv) Sulphur dissolved in CS₂ v) Nitrogen in soil.
22. Give the dispersed phase and the dispersion medium in each of the following: a. cheese b. soda water c. Smoke
23. Why does a spanner have a long handle?
24. Why does a boxer always move along the direction of the punch of the opponent?
25. Write two principles that are used in rocket propulsion.
26. If the force experienced by a body of unit mass is gravitational field strength, find the gravitational field strength on the surface of the earth.
27. If the density of the earth is doubled to that of its original value, the radius remaining the same, what will be the change in acceleration due to gravity?

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

28. i) Space Stations are used to study the effects of long-space flight on the human body. justify.
- ii) $F = G \frac{m_1 m_2}{d^2}$ is the mathematical form of Newton's law of gravitation, G - gravitational constant, m₁ m₂, are the masses of two bodies separated by a distance d, then give the statement of Newton's law of gravitation.

29. List out the achievements of chandrayaan

PREPARED FOR THE BETTERMENT OF ALL CHILDREN

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