Register No. ☐☐☐☐☐☐

X Std. Monthly Test, July - 2019

Time : 2-00 Hours] **SCIENCE** [Maximum Marks : 50

Part-I

10 × 1 = 10

Choose the correct answer :

1. Plotting a graph for momentum on the X-axis and time on Y-axis. Slope of momentum-time graph gives
   a) Impulsive force b) Acceleration c) Force d) Rate of force

2. The unit of 'g' is ms^{-2}. It can be also expressed as
   a) $cm\ s^{-1}$ b) $N\ kg^{-1}$ c) $N\ m^2\ kg^{-1}$ d) $cm^2\ s^{-2}$

3. The CGS unit of Force is -------
   a) Newton b) Kilogram c) Dyne d) kg f

4. The volume occupied by 4.4 g of CO_2 at S.T.P
   a) 22.4 litre b) 2.24 litre c) 0.24 litre d) 0.1 litre

5. Atoms with different atomic mass are called
   a) Isobars b) Isotopes c) Chemical reaction d) nuclear reaction

6. Kreb's cycle takes place in
   a) Chloroplast b) mitochondrial matrix c) stomata
   d) inner mitochondrial membrane

7. Photosynthesis takes place inside the
   a) Chloroplast b) mitochondria c) parenchyma d) mesophyll

8. The brain of leech lies above the
   a) Mouth b) Buccal Cavity c) Pharynx d) Crop

9. The animals which give birth to young ones are
   a) Qviparous b) Viviparous c) Ovoviviparous d) All the above

10. The salivary secretion of leech contains ----------.
    a) blood b) crop c) hirudin d) proteolytic enzyme
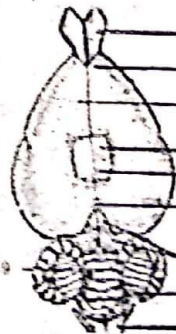
Part-II

Answer any 15 of the following : 15 × 2 = 30

11. Define moment of a couple.
12. How does an astronaut float in a space shuttle?
13. Fill in the blanks.
    a) To produce a displacement ------- is required
    b) ------- is used to change the speed of car.
14. A swing is pushed at a point whose distance from hinges is 60 cm, with a force of 30N. calculate the moment of the force about the hinges.
15. Correct the statement if it is false:
    a) Apparent weight of a person is always equal to his actual weight
    b) Weight of a body is greater at the equator and less at the polar region.

[P.T.O.

16. Assertion (A) : The Relative Molecular Mass of Chlorine is 35.5 a.m.u.
    Reason (R): The natural abundance of Chlorine isotopes are not equal.
    i) A and R are correct, R explains the A.   ii) A is correct, R is wrong.
    iii) A is wrong, R is correct.   iv) A and R are correct, R doesn't explains A.

17. Define : Atomicity

18. Give any two examples for hetero diatomic molecules.

19. Match the Following
    a. Avagadro number   - $C_{12}H_{22}O_{11}$
    b. Molar Volume   - $C_6H_{12}O_6$
    c. Glucose   - 6.023×10^{23}
    d. Sucrose   -   22.4 Litre

20. Calculate % of Sulphur " S " in H_2SO_4

21. Draw and label the structure of oxysomes.

22. Name the three basic tissues system in flowering plants.

23. Write the reaction for photosynthesis.

24. Differentiate dicot and monocot leaf.

25. Write the functions of epidermal tissue system.

26. Match the Following :
    Organs   Membranous covering
    a. Brain   -   capsule
    b. Kidney   -   pleura
    c. Heart   -   meninges
    d. Lungs   -   pericardium

27. a) Give the common name of the Hinrudinaria granulose.
    b) How does leech respire?

28. Leeches do not have an elaborate secretion of digestive juices and
    enzymes - why?

29. Identify the Diagram and label parts given
    a) cerebellum
    b) Olfactory lobe
    c) Medulla oblongata

30. Why is the tooth of rabbit called heterodont?

Part - III

Answer any one from each section of the following : $2 \times 5 = 10$

Section - 1

31. a) Derive the Relation between g and G.
    b) State the universal law of gravitation.

32. Derive the relationship between Relative molecular mass and Vapour density.

Section - 2

33. Explain the T.S. of a dicot root with suitable diagram.

34. How does locomotion take place in leech?

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