

14

15 x 1 = 15

I. Choose the correct answer:

1. Inertia of a body depends on
 - a) weight of the object
 - b) acceleration due to gravity of the planet
 - c) mass of the object
 - d) both (a) & (b)
2. A person whose mass is 60 kg on the surface of earth would weigh
 - a) 97.5 N
 - b) 60 N
 - c) 588 N
 - d) 65 N
3. Power of a lens is $-4D$ then its focal length is
 - a) 4 m
 - b) -40 m
 - c) -0.25 m
 - d) -2.5 m
4. Astigmatism can be corrected by _____ lenses.
 - a) convex lenses
 - b) concave lenses
 - c) bifocal lenses
 - d) concave lenses

Cylindrical
5. Which of the following is a triatomic molecule?
 - a) glucose
 - b) helium
 - c) carbo dioxide
 - d) hydrogen
6. 1 mole contains
 - a) 6.023×10^{23} atoms
 - b) 6.023×10^{23} molecules
 - c) 6.023×10^{23} ions
 - d) all of the above
7. The number of periods and groups in the periodic table are
 - a) 6,16
 - b) 7,17
 - c) 8,18
 - d) 7,18
8. _____ alloy is used to make propeller.
 - a) stainless steel
 - b) duralumin
 - c) nickel steel
 - d) magnalium
9. Oxygen is produced at what point during photo synthesis?
 - a) when ATP is converted to ADP
 - b) when CO_2 is fixed
 - c) when H_2O is splitted
 - d) all of these
10. Bulliform or motor cells are presented on
 - a) root
 - b) stem
 - c) isobilateral leaf
 - d) dorsiventral leaf
11. The animals which give birth to young ones are
 - a) oviparous
 - b) viviparous
 - c) ovoviviparous
 - d) all the above
12. In leech locomotion is performed by
 - a) anterior sucker
 - b) posterior sucker
 - c) setae
 - d) none of the above
13. Heart of heart is called
 - a) SA node
 - b) AV node
 - c) purkinje fibres
 - d) bundle of His
14. Root hairs are
 - a) corticall cell
 - b) projection of epidermal
 - c) unicellular
 - d) both (b) and (c)

(2)

15. Vomiting centre is located in

- a) medulla oblongata
c) cerebrum

- b) stomach
d) hypothalamus

Part - II

II. Answer any 10 questions:

10 x 2 = 20

16. While catching a cricket ball the fielder lower his hands backwards. Why?

17. Why does the sky appear in blue colour?

18. The focal length of the concave lens is 7 m. Calculate the power of lens.

19. Match the following:

- i) 8 g of O_2 - 4 moles 3
ii) 4 g of H_2 - 0.25 moles
iii) 52 g of He - 2 moles 2
iv) 112 g of N_2 - 0.5 moles
- 13 moles 4

20. Calculate the % of oxygen in $Al_2(SO_4)_3$

[Atomic mass: Al - 27, O - 16, S - 32]

21. What is rust? Give the equation for formation of rust.

22. Say true or false.

- i) Phloem tissue is involved in the transport of water in plant.
ii) Mesophyll contains chlorophyll.

23. List out the parasitic adaptations in leech.

24. Write the dental formula of rabbit.

25. What causes the opening and closing of guard cells of stomata during transpiration?

26. Medullated and Non-medullated nerve fibres - Differentiate.

27. Fill in the blanks.

- i) The normal human heartbeat rate is about _____ time per minute.
ii) The part of human which acts as relay centre is _____.

Part - III

III. Answer any 3 questions:

3 x 5 = 15

28. State and prove the law of conservation of linear momentum.

29. Explain the construction and working of a 'Compound Microscope'.

30. Give the salient features of "Modern atomic theory".

31. Differentiate:- Monocot root and Dicot root.

32. With a neat labelled diagram explain the structure of a neuron.
