

VGR COACHING CENTER
SCIENCE

CLASS-IX
MARK-75

PART-A (15×1=15)

1. Distance between Chennai and Kanyakumari can be found in
a. Kilometres b. Metres c. Centimetres d. Millimetres
2. Which among the following is not a device to measure mass?
a. Spring balance b. Beam balance c. Physical balance d. Digital balance
3. Slope of the velocity - time graph gives
a) speed b) displacement c) distance d) acceleration
4. The force responsible for drying of clothes in a washing machine is
a) Centripetal force b) Centrifugal force c) Gravitational force d) Electro static force
5. We can create enlarged, virtual images with
a) concave mirror b) convex mirror c) plane mirror
6. The focal length of a concave mirror is 5cm. Its radius of curvature is
a) 5 cm b) 10 cm c) 2.5 cm
7. The physical state of water at 373 K is _____
a) Solid b) liquid c) vapour d) plasma
8. Filtration method is effective in separating _____ mixture
a) Solid-solid b) solid-liquid c) liquid-liquid d) liquid-gas
9. The correct electronic configuration of potassium is
a) 2,8,9 b) 2,8,1 c) 2,8,8,1 d) 2,8,8,3
10. Change in the number of neutrons in an atom changes it to
a) an ion. b) an isotope. c) an isobar. d) another element.
11. The tropic movement that helps the climbing vines to find a suitable support is _____.
a) phototropism b) geotropism c) thigmotropism d) chemotropism
12. During photosynthesis plants exhale _____.
a) Carbon dioxide b) oxygen c) hydrogen d) helium
13. Dysentery is caused by

- (a) Entamoeba (b) Euglena (c) Plasmodium (d) Paramecium
14. Identify the animal having four chambered heart
(a) Lizard (b) Snake (c) Crocodile (d) Calotes
15. Food and Adulteration Act was enacted by Government of India in the year _____ a) 1964 b) 1954 c) 1950 d) 1963

PART-B ANY 20 **20×2=40**

16. Match the following

1. Column I

- a. Length
b. Mass
c. Time
d. Temperature

Column II

- Kelvin
metre
kilogram
second

17. Assertion(A): The scientifically correct expression “The mass of the bag is 10 kg”

Reason (R): In everyday life, we use the term weight instead of mass

- e. Both A and R are true but R is not the correct reason
f. Both A and R are true and R is the correct reason
g. A is true but R is false
h. A is false but R is true
18. Define least count of any device
19. Differentiate mass and weight
20. Distinguish distance and displacement?
21. What is meant by uniform circular motion? Give two examples of uniform circular motion.

22. Fill in the Blanks

Speed is a _____ quantity whereas velocity is a _____ quantity

Negative acceleration is called _____

23. A bus travel, a distance of 20km from Chennai central airport in 45 minutes. What is the average speed
24. Name the spherical mirror(s) that has/have i) Virtual principal focus
ii) Real principal focus

25. Concave mirrors are used by dentists to examine teeth. Why?
26. What is meant by magnification? Write its expression. What is its sign for the
real image b) virtual image
27. The speed of light in water is $2.25 \times 10^8 \text{ ms}^{-1}$. If the speed of light in vacuum is $3 \times 10^8 \text{ ms}^{-1}$, calculate the refractive index of water.
- 28. State whether the following statements are true or false. If false give the correct statement**
- a) Liquids expand more than gases on heating.
 - b) A compound cannot be broken into simpler substances chemically.
 - c) Water has a definite boiling point and freezing point.
 - d) Buttermilk is an example of heterogeneous mixture.
29. Why are gases easily compressible whereas solids are incompressible?
30. A few drops of 'Dettol' when added to water the mixture turns turbid. Why?
31. What is meant by Rf value?
- 32. Fill in the Blanks:-**
- Calcium and Argon are examples of a pair of _____
Total Number of electrons that can be accommodated in an orbit is given by _____
_____ isotope is used in the treatment of goiter
The number of neutrons present in lithium is _____
- 33. Match the following**
- | | |
|---------------|--------------------------|
| a) Dalton | 1. Hydrogen atom model |
| b) Thomson | 2. Planetary model |
| c) Rutherford | 3. First atomic theory |
| d) Neils Bohr | 4. Plum pudding model |
| | 5. Discovery of neutrons |
34. Compare the charge and mass of protons and electrons
35. List the uses of isotopes?
36. Draw the structure of oxygen and sulphur atoms

37. Analog

Towards a stimulus : _____ Away from the stimulus :

Negative tropism

Hydrotropism : Response towards water Phototropism :

38. Name the plant part a) Which bends in the direction of gravity but away from the light. Which bends towards light but away from the force of gravity.
39. Photosynthesis converts energy X into energy Y. a) What are X and Y?
40. b) Green plants are autotrophic in their mode of nutrition. Why
41. Assertion (A): The loss of excess water from the aerial parts of the plant in the form of water vapour is known as transpiration. Reason (R) : Stomata of the leaf perform transpiration.
- e)** A and R are incorrect
- f)** A is incorrect, R is correct
- g)** A is correct, R is incorrect
- h)** Both A and R are correct
42. Which organism is called as Friend of farmers? Why?
43. Are Jelly fish and star fish similar to catfish? Give reasons
44. Find the correct sequence
- F rog F ish Snake Dove Lion
 - F ish Snake F rog Lion Dove
 - F ish Snake F rog Lion Crow
 - F ish F rog Snake Dove Lion

45. Give abbreviations for the following food standards

ISI _____ FPO _____ AGMARK _____ FCI _____

46. Name any two naturally occurring toxic substances in food.

47. Give one reason for the following statements:

m. Salt is added as a preservative in pickles _____

n. We should not eat food items beyond the expiry date

o. Deficiency of calcium in diet leads to poor skeletal growth

PART-C(4×5=20)

SECTION-A(ANY 2)

48. How are vitamins useful to us? Tabulate the sources, deficiency diseases and symptoms of fat soluble vitamins
49. Describe the characteristic features of different Prochordates with suitable diagrams
50. Design an experiment to demonstrate hydrotropism.
51. There are 3 plants A, B and C. The flowers of A open their petals in bright light during the day but close them when it gets dark at night. On the other hand, the flowers of plant B open their petals at night but close them during the day when there is bright light. The leaves of plant C fold up and droop when touched when fingers or any other solid object.
- a) Name the phenomenon shown by the flowers of plant A and B.
- b) Name one flower each which behaves like the flowers of plant A and B.
- c) Name the phenomenon exhibited by the leaves of plant C.
- d) Name a plant whose leaves behave like those of plant C.

SECTION -B(ANY 1)

52. Explain the postulates of Bohr's atomic model
53. Write the differences between elements and compounds and give an example for each.

SECTION-C(ANY 1)

54. Draw ray diagrams to show how the image is formed, using a concave mirror when the position of object is i) at C ii) between C and F iii) between F and P of the mirror. Mention in the diagram the position and nature of image in each case
55. Derive the three equations of motion by graphical method.
56. How will you find the thickness of a one rupee coin?

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