

Komarasamy Gounder mat.hr.school – Kurumandur

6th Full portion test

Time : 3 hours

Physical science

maximum marks : 75

Part : A1. CHOOSE THE CORRECT ANSWER :12 X 1 = 12

1. The mass of a body is measured on planet Earth as M kg. When it is taken to a planet of radius half that of the Earth then its value will be kg.
a) $4M$ b) $2M$ c) $M/4$ d) M
2. The eye defect 'presbyopia' can be corrected by:
a) convex lens b) concave lens
c) convex mirror d) Bi focal lenses
3. Temperature is the average of the molecules of a substance.
a) difference in K.E and P.E b) sum of P.E and K.E
c) difference in T.E and P.E d) difference in K.E and T.E
4. Kilowatt hour is the unit of:
a) resistivity b) conductivity
c) electrical energy d) electrical power
5. The velocity of sound in the atmosphere of a planet is 500 ms^{-1} . The minimum distance between the sources of sound and the obstacle to hearing the echo should be _____.
a) 17 m b) 20 m c) 25 m d) 50 m.
6. Artificial radioactivity was discovered by:
a) Becquerel b) Irene Curie
c) Roentgen d) Neils Bohr
7. 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
8. Which of the following inert gas has electrons in the outermost shell?
a) He b) Ne c) Ar d) Kr
9. A 25% alcohol solution means _____.
a) 25 ml of alcohol in. 100 ml of water b) 25 ml of alcohol in 25 ml of water
c) 25 ml of alcohol in 75 ml of water d) 75 ml of alcohol in 25 ml of water.
10. Photolysis is a decomposition reaction caused by _____.
a) heat b) electricity c) light d) mechanical energy
11. TFM in soaps represents ____ content in soap.
a) mineral b) vitamin c) fatty acid d) carbohydrate
12. The Heterocyclic compound is:
a) Benzene b) Pyridine c) Naphthalene d) Camphor

PART - B

II. ANSWER ANY SEVEN OF THE FOLLOWING : (Q.NO.22 IS COMPULSORY) 7 X 2 = 14

13. How do detergents cause water pollution? Suggest remedial measures to prevent this pollution?
14. True or False: (If false give the correct statement)
 1. Silver metal can replace hydrogen gas from nitric acid.
 2. The pH of rain water containing dissolved gases like SO_3 , CO_2 , NO_2 will be less than 7.
15. The aquatic animals live more in a cold region. Why?
16. What is rust? Give the equation for the formation of rust.
17. Find the percentage of nitrogen in ammonia
18. Why does an empty vessel produce more sound than a filled one?
19. Which hazardous radiation is the cause for the genetic disease?
20. State Ohm's law.
21. Distinguish between ideal gas and real gas.
22. A concave lens has focal length of 15 cm. At what distance should the object from the lens be placed so that it forms an image 10 cm from the lens?

PART - III

III. ANSWER ANY SEVEN QUESTION (Q.NO 32 IS COMPULSORY) 7 X 4 = 28

23. i) State Newton's second law.
ii) State Snell's law.
24. i) What is the coefficient of apparent expansion?
ii. If you keep ice at $0^\circ C$ and water at $0^\circ C$ in either of your hands, in which hand you will feel more chillness? Why?
25. a) State Joule's law of heating.
b) An alloy of nickel and chromium is used as the heating element. Why?
26. a) Write any three features of natural and artificial radioactivity.
b) Define critical mass.
27. Give any four salient features of "Modern atomic theory".
28. a) Identify the bond between H and F in HF molecule.
b) How does the property vary in periods and in groups?
29. Differentiate reversible and irreversible reactions.
30. Differentiate soaps and detergents.
31. Write the characteristics of organic compounds.
32. An electric iron consumes energy at the rate of 420 W when heating is at the maximum rate and 180 W when heating is at the minimum rate. The applied voltage is 220 V. What is the current in each case?

PART - IV

ANSWER ALL THE QUESTION :

3 X 7 = 21

33. Compare the properties of alpha, beta and gamma radiations.

OR

a) Explain the experiment of measuring the real and apparent expansion of a liquid with a neat diagram.

b) If you keep ice at 0°C and water at 0°C in either of your hands, in which hand you will feel more chillness? Why?

34. a) What are the methods used to prevent corrosion?

b) Write the uses of copper.

Or

Explain the factors influencing the rate of a reaction.

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

Or

How many grams are there in the following?

i) 2 moles of a hydrogen molecule, H_2

ii) 3 moles of chlorine molecule, Cl_2

iii) 5 moles of sulphur molecule, S_8

iv) 4 moles of a phosphorous molecule, P_4