

HSS

HALF YEARLY EXAMINATION - 2024

9 - Std

SCIENCE



Time : 3.00 hrs.

Marks : 75

I Choose the correct answer.

12 X 1 = 12

- 1 metric ton is equal to
a) 100 quintals b) 10 quintals c) 1/10 quintals d) 1/100 quintals
- The centrifugal force is
a) a real force b) the force of reaction of centripetal force
c) a virtual force d) directed towards the centre of circle path
- Rubbing of comb with hair
a) creates electric charge b) transfers electric charge
c) either (a) or (b) d) neither (a) or (b)
- We can create enlarge, virtual images with
a) concave mirror b) plane mirror c) convex mirror
- has the same properties throughout the sample.
a) pure substance b) mixture c) colloid d) suspension
- Among the following the odd pair is
a) $^{18}_8O$, $^{19}_9F$ b) $^{40}_{18}Ar$, $^{14}_7N$ c) $^{30}_{14}Si$, $^{31}_{15}P$ d) $^{40}_{20}Cr$, $^{39}_{19}K$
- Oxidising agents are also called as because they remove electrons from other substances.
a) Electron donors b) Electron acceptors
- The hydrated salt of copper sulphate has colour.
a) red b) white d) blue
- Hermaphrodite organisms are
a) Hydra, tape worm, earthworm, amphioxus
b) Hydra, tape worm, earthworm, balanoglossus
c) Hydra, tape worm, earthworm, acidian
d) Hydra, tape worm, ascaris, earthworm
- Which of the following is a complex tissue?
a) Parenchyma b) Collenchyma c) Xylem d) Chlorenchyma
- The structural and functional unit of the kidney is
a) villi b) liver c) nephron d) water
- Food and adulteration act was enforced by government of India in the year
a) 1964 b) 1954 c) 1950 d) 1963

II Answer any seven questions. Q.No. 22 is compulsory.

7 X 2 = 14

- Differentiate mass and weight?
- Define velocity?
- On what factors the Pressure exerted by the liquid depends on?
- Pick out the concave and convex mirrors from the following and tabulate them.
Rear - view mirror, Dentists mirror, torch light mirror, mirrors in shopping malls, make up mirror.
- What is neutralization reaction? Give an example.
- Explain octet rule with an example.

19. Mention any two vital functions of human kidney.
20. Name any two naturally occurring toxic substances in food.
21. Name the vector of the malarial parasite. Mention the species of malarial parasite which cause malignant and fatal malaria.
22. The speed of light in air is $3 \times 10^8 \text{ms}^{-1}$ and in glass it is $2 \times 10^8 \text{ms}^{-1}$. What is the refractive index of glass?

III Answer any seven questions. Q.NO. 32 is compulsory.

7 X 4 = 28

23. a) Compare speed and velocity. b) What is meant by uniform circular motion? Give two examples of uniform circular motion.
24. State the advantages of ac over dc.
25. a) State the laws of flotation. b) Why does a helium balloon float in air?
26. What conclusions were made from the observations of gold foil experiment?
27. State any five features of modern periodic table.
28. Sulphuric acid is called king of chemicals. Why it called so?
29. a) Name the types of teeth present in an adult, human being. Mention the functions of each.
b) Photosynthesis converts energy X into energy Y. i) What are X and Y.
ii) Green plants are autotrophic in their mode of nutrition. Why?
30. a) Give an account on Phylum Annelida.
b) How does locomotion take place in starfish?
31. a) What is a presentation. b) What is a slide.
32. Find the oxidation number of the elements in the following compounds.
a) CinCO_2 b) Nin HNO_3

IV Answer all questions. Draw diagram wherever necessary.

3 X 7 = 21

33. a) Explain the construction and working of a hydrometer with diagram.
b) Why it is easy to swim in sea water than in river water? **(OR)**
Draw a neat diagram of a AC generator and explain its working.
34. a) Explain Tyndall effect and Brownian movement with suitable diagram.
b) How are homogenous solutions different from heterogenous solution? Explain with examples. **(OR)** a) Give the tests to identify acids and bases.
b) Correct the mistakes :
i) Washing soda is used for making cakes and bread soft, spongy. ii) Calcium sulphate hemihydrate is used in textile industry for bleaching cloths.
35. a) Explain the role of food control agencies in India.
b) i) The process of affecting the natural composition and the quality of food substance is known as
ii) Food should not be purchased beyond the date of **(OR)**
a) How will you differentiate the different types of transpiration?
b) Match it.

i) Sclereids	-	Chlorenchyma
ii) Chloroplast	-	Sclerenchyma
iii) Simple tissue	-	Collenchyma
iv) Companion cell	-	Xylem
	-	Phloem