

**Standard 9
SCIENCE
PART - I**

Marks: 75

Time: 2.30 Hours

12x1=12**I. Choose the best answer:**

- 1) The area under velocity - time graph represents the
 - a) velocity of the moving object
 - b) displacement covered by the moving object
 - c) speed of the moving object
 - d) acceleration of the moving object
- 2) Resistance of a wire depends on
 - a) temperature
 - b) geometry
 - c) nature of material
 - d) all the above
- 3) When a beam of white light passes through a prism it gets
 - a) reflected
 - b) only deviated
 - c) only dispersed
 - d) deviated and dispersed
- 4) A device in which the loss of heat due to conduction convection and radiation is minimized is
 - a) Solar cell
 - b) Solar cooker
 - c) Thermometer
 - d) thermos flask
- 5) Modern periodic law states that the physical and chemical properties of elements are the periodic functions of their
 - a) atomic numbers
 - b) atomic masses
 - c) similarities
 - d) anomalies
- 6) Elements with stable electronic configurations have eight electrons in their valence cell. They are
 - a) halogens
 - b) metals
 - c) noble gases
 - d) non-metals
- 7) The hydrated salt of copper sulphate has colour
 - a) red
 - b) white
 - c) blue
 - d) orange
- 8) Identify the animal having four chambered heart
 - a) lizard
 - b) snake
 - c) crocodile
 - d) calotes
- 9) The chemical reaction occurs during photo synthesis is
 - a) CO_2 is reduced and water is oxidized
 - b) Water is reduced and CO_2 is oxidized
 - c) both CO_2 and water are oxidized
 - d) both CO_2 and water are produced
- 10) The nutrient required in trace amounts to accomplish various body function is
 - a) carbohydrate
 - b) protein
 - c) vitamin
 - d) fat
- 11) The organ affected by jaundice is
 - a) liver
 - b) lungs
 - c) Kidney
 - d) brain
- 12) The slides are grouped together in a sequence to form
 - a) slide show
 - b) shorts
 - c) page
 - d) messages

PART - II**II. Answer any 7 of the following questions.****7x2=14****Qn.No. 22 is compulsory.**

- 13) What do you mean by uniform motion?
- 14) Name any two appliances which work under the principle of heating effect of current
- 15) How does the water kept in an earthen pot remain cool?
- 16) What are groups and periods in the modern periodic table?
- 17) **Match the following**

i) Trades	- Newlands
ii) Alkali metal	- Calcium
iii) Law of octaves	- Henry Moseley
iv) Alkaline earth metal	- Sodium
v) Modern periodic law	- Dobereiner
- 18) How do atoms attain Noble gas electronic configuration?

TslBS: : :

V. Answer any 10 of the following (Q.No. 35 is compulsory)**10x2=20**

- 24) Give two examples to verify that a force changes the shape of a body?
- 25) State the laws of reflection
- 26) What is an Ultrasonic sound
- 27) Define Galaxy
- 28) What is the role of a catalyst in a chemical reaction?
- 29) What is global warming?
- 30) State the law of conservation of Mass
- 31) Name the places in Tamilnadu harnessing wind energy from wind mills
- 32) Write the names of any three protozoans
- 33) Differentiate tendons and ligaments
- 34) What is fertilization?
- 35) An iron ball requires 1000J of heat of raise its temperature by 20°C. Calculate the heat capacity of the ball

VI. Answer any 8 of the following :**8x4=32**

- 36) State Pascal's law and mention its application
- 37) a) Name three types of heat transfer,
b) Define one calorie
- 38) Give reason for the following
a) When a glass rod is rubbed with silk cloth both get charged
b) When a comb is rubbed with dry hair it attracts small bits of paper
- 39) List any four uses of magnets
- 40) Mention any four compounds and their uses
- 41) Balance the following equation
i) $\text{Na} + \text{O}_2 \rightarrow \text{Na}_2\text{O}$
ii) $\text{Ca} + \text{N}_2 \rightarrow \text{Ca}_3\text{N}_2$
iii) $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$
iv) $\text{CaCO}_3 + \text{HCl} \rightarrow \text{CaCl}_2 + \text{CO}_2 + \text{H}_2\text{O}$
- 42) What is neutralization reaction
- 43) Write any four characters of pteridophytes
- 44) Differentiate between inhalation and exhalation
- 45) Explain the agricultural practices

VII. Answer in Detail :**3x7=21**

- 46) a) List out the base quantities with the units
(OR)
b) What are the achievements of Chandrayaan - I?
 - 47) a) What are the effects of acid rain? How can we prevent them?
(OR)
b) Explain the different types of Coal?
 - 48) a) What can you suggest to your class mates to keep clean and healthy?
(OR)
b) What is deforestation? Explain the causes and effects of deforestation?
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