

SETHU BHASKARA MHS SCHOOLQUARTERLY EXAM - 2022 STD: XSCIENCECHOOSEPART-I

6 × 1 = 6

1. (b) Nkg^{-1}
2. (c) Either positive (or) negative
3. (c) ohm
4. (c) 22.4 litre
5. (c) galvanization
6. (c) silica gel

PART-II

6 × 2 = 12

2-MARKS

- 13.) $M = F \times S$ force × perpendicular distance
between the line of action
of forces. \rightarrow 2 marks
(Correct statement)
- 14.) The wavelength of red colour is more than
other colours.
Red colour travel long distance. Red colour
gets least scattered. \rightarrow 2 marks
- 15.) $V \propto T$ (or) $\frac{V}{T} = \text{Constant}$.
constant, Volume is directly proportional to the
temperature of the gas. \rightarrow 2 marks

16.) (a) false.

Noble gases do not form compounds, hence they cannot occur in the form of diatomic molecules.

(b) molar mass of CO_2 is 44g - True
 \rightarrow 2 marks

17.) Reasons for alloying.

(a) To modify appearance and colour \rightarrow 2 marks

(b) To lower the melting point

(c) To modify chemical activity

(d) To increase hardness and tensile strength.

22.)
$$= \frac{45}{45+180} \times 100 \quad \text{--- 1 mark}$$

\rightarrow 1 mark

$$= \frac{45}{225} \times 100 = 20\% \quad \rightarrow 2 \text{ marks}$$

PART-III

$6 \times 4 = 24$

23.) ANY 4 points
 merits (LED bulb)

--- 4 marks

24.) based on law of conservation of linear momentum & Newton's IIIrd law \rightarrow 1 mark

when rocket fired, hot gas is ejected with high speed - 1 mark
 An equal and opposite reaction force is produced in ~~the~~
 combustion chamber.
 Escape velocity - 2 marks

25)

(3)

Real gas

If the molecules or atoms of a gases interact with each other with a definite amount of intermolecular attraction.

high Temperature (or) low pressure
NO interatomic (or) intermolecular force of attraction.

Ideal gas

If the atoms or molecules of a gas do not interact with each other.

gases will have a certain amount of interaction among them. these interactions are weaker when pressure is low (or) temperature is high.

Ideal gases obey Charles's and Boyle's law.
↳ 4 marks

26) "Modern atomic theory".

(ANY 5 points)

→ 4 marks

27) (i) CO_2 dissolved in water

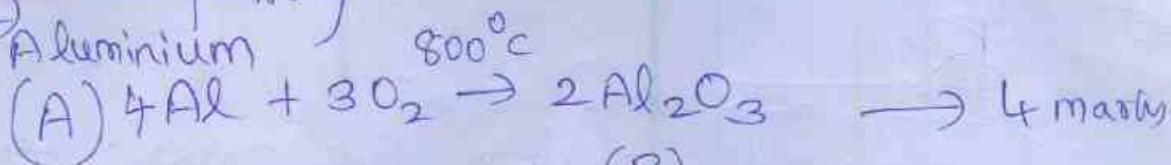
(ii) NaCl dissolved in water

(iii) Copper dissolved in gold

(iv) mixture of Helium - oxygen gases

→ 4 marks

(32) Compulsory
Aluminium



(B)

Aluminium oxide

Duralumin used in making the aircraft.

PART-IV

7 x 2 = 14

33 (a) Any 4 properties \rightarrow 4 marks

(b) The focal length of eye lens is reduced

(or)

The distance between eye lens and retina increases. The far point will not be infinity for such eyes, and the far point has come closer. \rightarrow 3 marks

(or)

(a) ideal gas equation

$$PV = \text{Constant}$$

$$\frac{V}{T} = \text{Constant}$$

$$\frac{V}{n} = \text{Constant}$$

$$PV/nT = \text{Constant}$$

$$n = \mu N_A$$

$$PV/\mu N_A T = \text{Constant}$$

$$PV/\mu N_A T = K_B$$

\rightarrow 7 marks

$$\mu N_A K_B = R$$

$$PV = \mu N_A K_B T$$

$$PV = RT$$

(5)

(34) (a) Uses of Copper — 2 marks
(2-uses)

(a) used in manufacturing electric cables and other electric appliances.

(b) used in electroplating.

(b) D/b hygroscopic and deliquescent substances

3 differences — 5 marks

(OR)

$V.D = \frac{\text{mass of a given volume of gas or vapour at STP}}{\text{mass of same volume of } H_2}$ $\rightarrow 1 \text{ mark}$

$= \frac{\text{mass of } n \text{ molecules of gas or vapour at STP}}{\text{mass of } n \text{ molecules of } H_2}$ $\rightarrow 1 \text{ mark}$

$= \frac{\text{mass of 1 molecule of gas or vapour at STP}}{\text{mass of 1 molecule of hydrogen}}$ $\rightarrow 1 \text{ mark}$

$= \frac{\text{mass of 1 molecule of gas or vapour at STP}}{\text{mass of 2 atoms of } H_2}$ $\rightarrow 1 \text{ mark}$

$= \frac{\text{mass of 1 molecule of gas or vapour at STP}}{2 \times \text{mass of 1 atom of } H_2}$ $\rightarrow 1 \text{ mark}$

$$RMM = \frac{\text{mass of 1 molecule of gas or vapour at STP}}{\text{mass of 1 atom of H}_2}$$

↳ 1 mark

$$V.D = \frac{\text{Relative molecular mass}}{2}$$

↳ 1 mark

— X —

STAFF HANDLING

1. ~~Jethan~~
30/9/22

2. C. ~~Desai~~

3. E.T. Joseph — E.T. Joseph
30/9/22

4. M. V. ~~...~~

(Signature)
30/9/22

SETHU BHASKARA MATRIC. HR SEC. SCHOOL

QUARTERLY EXAMINATION

X std

SCIENCE II

MAX MARKS
37

Part-I
I CHOOSE THE BEST ANSWER (6x1=6)

- 7 (b) stem
- 8 (b) warm blooded
- 9 (c) atrium → ventricles → arteries → veins
- 10 (b) sarcolemma
- 11 (b) Acromegaly
- 12 (d) DNA Ligase

Part-II

- 2 marks

- 18 (i) Dermal or epidermal tissue system
(ii) Ground tissue system
(iii) Vascular tissue system - 2 marks

- 19 CNS - Central Nervous System - 1 mark
ANS - Autonomic Nervous System - 1 mark

- 20 A - Guard cells
B - vacuole $4 \times \frac{1}{2} = 2 \text{ marks}$
C - stoma
d - nucleus

21 A - Both A and R are true and R is the correct explanation of A - 2 marks

part III

(- 4 marks)

28 (a) definition of phenotype - 1 mark
definition of genotype - 1 mark

(b) Scientifically correct definition of allozyme - 2 marks

- 4 marks

29 pollination and fertilization - 1 mark

Advantages of self pollination - $1\frac{1}{2}$ marks

Advantages of cross pollination - $1\frac{1}{2}$ marks

- 4 marks

30 Any 4 physiological effects of Gibberellins (4x1=4)

- 4 marks

31. 4 pairs of controversial points

that differentiate Aerobic and

an aerobic respiration

4x1=4 marks

part IV (- 7 marks)

35 (a) Any four functions of blood $4 \times 1 = 4$

(b) Valves prevent the back flow of the blood and regulate the blood flow - 1 mark

- (c)
- 1 Leukemia - Blood cancer
 - 2 platelets - Thrombocytes
 - 3 Monocytes - phagocytes $(4 \times \frac{1}{2} = 2)$
 - 4 Leucopenia - Decrease in leucocytes

(or)

Structure of Neuron diagram - 3 marks

Neuron - description

- axon - dendrites - cyton - myelin sheath -

Nuclei of Schwann

- 4 marks

Subject teachers sign

1. P. K. Pratik 29/9/22

2. 29/9/22

3. S. P. K. 28/9/22

you are Carol
30/9/22