

STDX

I CHOOSE THE BEST ANSWER

- 1) b) 2F
- 2) c) difference in T.E and P.E
- 3) a) 2A
- 4) 14g
- 5) reducing agent
- 6) 25ml of alcohol in 75 ml of water.

II ANSWER IN ONE (OR) TWO SENTENCES

- 13) i) Like parallel force (ii) unlike parallel force. $\rightarrow 1m$
- 14) At const pressure, the volume of gas is proportional to the temperature. $\rightarrow 2m$

$$\frac{V}{T} = \text{a const.}$$

- 15) a) Atomic number (b) Hydrated ferric oxide $\rightarrow 1m$

$$22) \text{ MASS \%} = \frac{\text{MASS of solute}}{\text{MASS of solution}} \times 100 \rightarrow 1m$$

$$= \frac{45}{45+180} \times 100 \rightarrow \frac{1}{2} m$$

$$M \% = \frac{4500}{100}$$

$$\boxed{\text{MASS \%} = 20\%} \rightarrow \frac{1m}{2}$$

III ANSWER IN BRIEF

23) convex lens

- i) converging lens
- ii) Forms real image
- iii) To treat hypermetropia
- iv) Thicker in middle

concave lens.

- i) Diverging lens
- ii) Forms virtual image.
- iii) Treat myopia.
- iv) Thinner in middle.

Each point carry 1m

match it

- 24) a) change in length
2 change in area

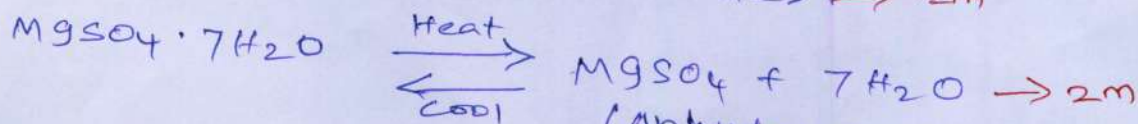
- (3) Hot body to cold body
(4) $1.38 \times 10^{-23} \text{ JK}^{-1}$

- b) i) scalar $\rightarrow 1\text{m}$ (ii) straight line $\rightarrow 1\text{m}$

Each ans carry $\frac{1}{2}\text{m}$

25) ATOM	MOLECULE
i) smallest particle of an element	i) smallest particle of an element (or) compound.
ii) does not exist in free state	ii) Exist in a free state.
iii) Atoms are highly reactive	iii) Molecule are less reactive.
iv) non bonded entity	iv) Bonded entity (Each point carry 1m)

- 26) It loses seven water molecules $\rightarrow 2\text{m}$



(Anhydrous magnesium sulphate)

32) $R_1 + R_2 = 9$ - (1)
 $\frac{1}{R_1} + \frac{1}{R_2} = \frac{1}{2}$ - (2) $\rightarrow 1\text{m}$

$R_2 = 9 - R_1$ - (3)

sub (3) in (2)

$$\frac{1}{R_1} + \frac{1}{9 - R_1} = \frac{1}{2}$$

$$\frac{9 - R_1 + R_1}{R_1 (9 - R_1)} = \frac{1}{2}$$

$$9R_1 - R_1^2 = 18$$

$$R_1^2 - 9R_1 + 18 = 0$$

$$(R_1 - 3)(R_1 - 6) = 0$$

$$R_1 = 3, 6$$

When $R_1 = 3 \Omega$

$$R_2 = 9 - R_1$$

$$R_2 = 9 - 3$$

$$\boxed{R_2 = 6 \Omega} \rightarrow 1\text{m}$$

When $R_1 = 6 \Omega$

$$R_2 = 9 - R_1$$

$$= 9 - 6$$

$$\boxed{R_2 = 3 \Omega} \rightarrow 1\text{m}$$

IV. Detail answers

- 33) a) Newton's Laws of motion, (correct statement) $\rightarrow 2m$
- Ist law: Every body continues to be in the state of rest (or) motion in a straight line unless it is acted upon by the external force.
- IInd law: Force is prop to rate of change in momentum of the body and which takes place in the direction of force $\boxed{F = ma} \rightarrow 2m$
- IIIrd law: Every action there is an equal and opposite reaction $F_1 = -F_2 \rightarrow 3m$

(or)

- b) i) Rate of flow of charge in a wire $\rightarrow 2m$
- ii) ampere. $1A = \frac{1 \text{ coulomb}}{1 \text{ second}} \rightarrow 2m$
- iii) Ammeter, series. $\rightarrow 1m$

34) a) Relationship b/w R.M.M and V.D.

$$R.M.M = \frac{\text{mass of 1 molecule of gas (or) vapour at STP}}{\text{mass of 1 atom of H}_2} \rightarrow 2m$$

$$V.D = \frac{\text{mass of 1 volume of gas (or) vapour at STP}}{\text{mass of 1 volume of H}_2} \rightarrow 2m$$

According to Avogadro's law equal volume of all gas consist of equal number of molecules.

$$V.D = \frac{\text{mass of 1 molecule of gas (or) vapour at STP}}{\text{mass of 1 molecule of H}_2}$$

since hydrogen is diatomic

$$V.D = \frac{\text{mass of 1 molecule of gas (or) vapour}}{\text{mass of } 2 \times \text{atom of Hydrogen}}$$

$$\boxed{2 \times V.D = R.M.M}$$

(or)

b) solubility: no of grams of a solute that can be dissolved in 100g of solvent to form a saturated solution at a

Given temperature and Pressure $\rightarrow 2m$

ii) Alloys $\rightarrow 2m$

iii) Hygroscopic

i) They absorb moisture and do not dissolve

ii) It does not change its physical state

iii) They are amorphous

iv) EG conc. H_2SO_4

Deliquescent

i) They absorb moisture and dissolve.

ii) It changes its physical state.

iii) Crystalline solids.

iv) EG $NaOH$, KOH .

$\rightarrow 3m$
(Three Point)

Vice Principal Sign

M. Mathi
23/9/20
H.M's Sign

Teacher's handling

1. C. Prabha

2. J. Mathi

3. A.

COMMON QUARTERLY EXAMINATION - 2026-27
KEY ANSWER FOR - SCIENCE-II

STD: X

MARKS:- 45

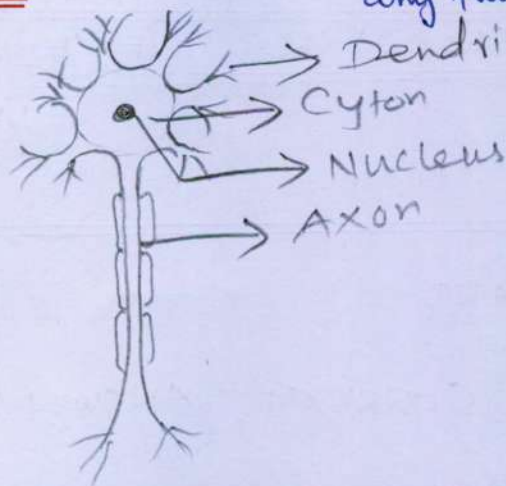
PART-I

I. CHOOSE THE CORRECT ANSWER:- $6 \times 1 = 6$

Q. NO.	ANSWER	MARKS
7	a) Warm blooded	1 Mark
8	a) SA node	1 Mark
9	b) Sarclemma	1 Mark
10	b) Cytokinin	1 Mark
11	c) Zygote	1 Mark
12	b) Aneuploidy	1 Mark
PART-II		$6 \times 2 = 12$
16)	<u>Tissue system:-</u> i) Dermal / Epidermal tissue system ii) Ground tissue system iii) Vascular tissue system	2 marks
17)	<u>Double circulation:-</u> Human it is double circulation because the heart contains completely separated 4-chambers. During one complete cardiac cycle, the blood circulates twice to the heart.	2 marks

18) Neuron:-Diagram - 1 Mark
any two labels - 1 Mark

2 Marks

19) Personality Hormone - Thyroid Hormones:-

Thyroid hormone are essential for normal physical, Mental & personality development. So it is known as personality hormone

2 Marks.

20) Insect pollinated flowers:-

* To attract insects these flowers are large, brightly coloured, have good smell & nectar.

* The exine is pitted, spiny etc; so they can be adhered firmly on the sticky stigma

2 Marks

21) Phenotype:- External expression of a particular trait.

1M

} 2M

Genotype:- Genetic constitution of a organism

1M

PART-III

5x4 = 20

ANSWER THE FOLLOWING QUESTIONS:-

27) a) Dental Formula of Rabbit.

$$\frac{2033}{1023} \text{ (or) } I \frac{2}{0}; C \frac{0}{0}; PM \frac{3}{2}; M \frac{3}{3}$$

(2M)

b) Heterodont:-

In Rabbit teeth are of different types.
Hence, it is called Heterodont.

4M

4- Kinds I - Incisors
C - Canines
PM - Premolars
M - Molars

(2M)

28)

Artery

Vein

- i) Distributing Vessel
- ii) Pink in colour
- iii) Deep location
- iv) Blood flow with high pressure
- v) Wall of artery is strong, thick & Elastic
- vi) Internal Valves are absent

- Collecting Vessel
- Red in colour
- Superficial in location.
- Blood flow with Low pressure
- Wall of Vein is weak, thin and non-elastic
- Internal Valves are present

4x1 = 4

(any 4-points)

2a) a) Adrenal gland:-

- A - Capsule
- B - Cortex
- C - Medulla
- D - Blood Vessels

(2M)

4M

b) Adrenal hormones (or) Adrenaline (or)
 Nor adrenaline (or) Epinephrine (or)
 (any one name)
 Nor Epinephrine

(2M)

3c) a) Secondary sex organs in Male:

- i) Vas deferens ii) Epididymis
- iii) Seminal Vesicle iv) prostate gland
- v) penis

(any 4 - 2 Marks)

4M

b)

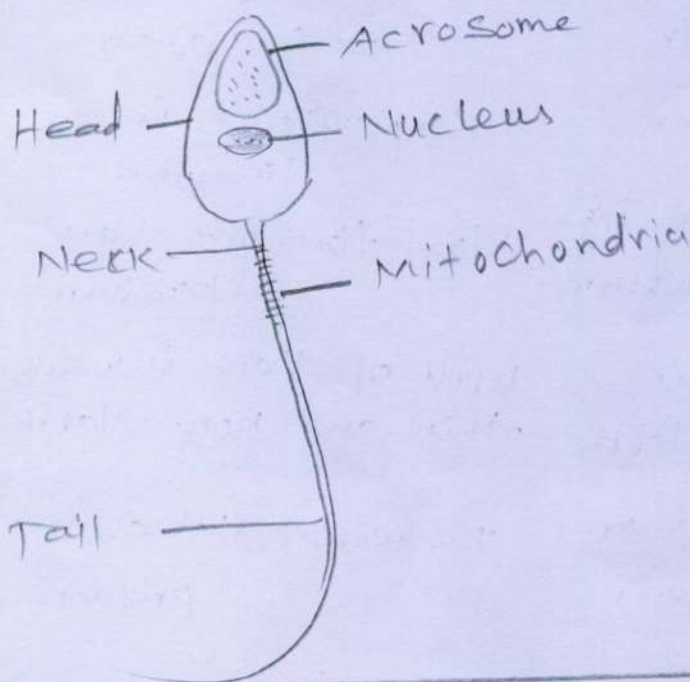


Diagram - 1 1/2 Marks

2M

Label - 1/2 Mark

3) Structure of DNA:-

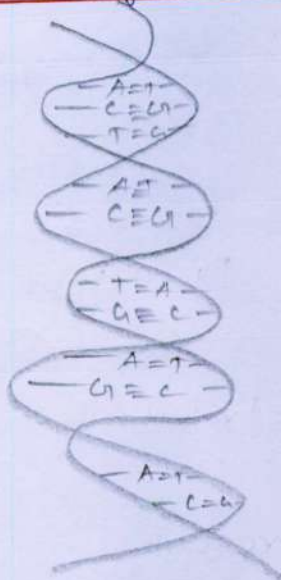


Diagram - 1 Mark

4M

Explanation - 3 Marks
(Any 3 points)

- i) DNA molecule consists of two polynucleotide chains.
- ii) These chains form a double helix structure with two strands which run anti-parallel to one another.
- iii) Nitrogenous bases in the centre are linked to sugar-phosphate units which form the back bone of the DNA.
- iv) The nucleotides in a helix are joined together by phosphodiester bonds.
- v) $A = T$; $C \equiv G$
- vi) Hydrogen bonds between nitrogenous bases
- vii) Each turn of the double helix is $34 \text{ \AA}$.

PART-IV

ANSWER IN DETAIL :

1x7=7

35)

a)

i) Monocot Root		Dicot root
NO. of xylem	Polyarch	Tetrarch
Cambium	Absent	present
Secondary growth	Absent	present
pith	present	Absent
ii) Aerobic respiration		Anaerobic respiration
i) presence of oxygen		absence of oxygen
ii) It occurs in most plants & Animals		It occurs in some bacteria
iii) Glucose $\rightarrow$ CO ₂		Glucose $\rightarrow$ Ethanol
iv) CO ₂ , H ₂ O, energy		Ethanol & energy

4M

7M

3M

(or)

35)

b) i) Hind brain

a) Cerebellum b) pons c) Medulla oblongata
(2 marks)

ii) Classify Neurons:-

a) Unipolar - only one nerve process arises from the cyton.

b) Bipolar:- two nerve processes

c) Multipolar:- many dendrons & Axon
(3 marks)

Location

unipolar - embryos

Bipolar - Retina of eye

Multipolar - Cerebral Cortex of Brain
(1 mark)

7M

Signature of Subject Teacher:

- 1) S.P.N
- 2) S.N.Nab
- 3) ggy.
- 4) s.f

Signature of The H.N's! - M. Mathi
24/9/26