

[Answer any four of the following questions]

1.▶



Fig: A

- What is synapse?
- What do you mean by dendrite and cone cell?
- Briefly discuss the classes of above figure?
- Describe the structure of above figure.

2.▶

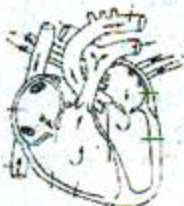


fig: B

- What is hormone?
- Write down the dental formula?
- Describe the above-figure?
- Describe the circulation of blood through figure B.

3.▶ Mr. Lara bought a female white leghorn and a male white Plymouth Rock from market. After crossing between two this bird he found that all offspring of F_1 generation are white but in F_2 generation some are white and some are colored.

- What is gastro vascular cavity?
- What do you mean by macrophage?
- Write down the law that has been deviated above crossing.
- Why in second generation Lara got some colored birds? Explain it.

4.▶ Cadet mess of Mirzapur Cadet College is very important place. Everyday three hundred Cadets take their meal together.

Today they have been given bread, egg, and vegetable at breakfast Cadet Moinul has taken breakfast with bread and eggs but Cadet Arif has taken only egg.

- What is lethal gene?
- What do you mean by T cell?
- Write down name of essential enzymes for digestion of Arif's breakfast.
- Describe the digestion of breakfast of Moinul.

5.▶ One day Sakib was watching a peculiar aquatic animal on national geography channel. He noticed that this animal look like a flower base. Its upper end contains a pore that surrounded by some thread like structure. It chases a larva of prawn. During chasing it was changed its position by frequently bend upper end to the ground and up right the lower end.

- What is bronchus?
- What do mean by Rh factor?
- What are the differences between two aquatic animals of above stem?
- Describe the changing process of position of peculiar animal.

6.▶ 2.▶



fig: C

- What is nematocyst?
- What do mean by nephron?
- Draw the label diagram of above figure.
- How a man hear a sound through the organ of above figure.

[Darken the circle (O) with black ball point pen from the alternatives]

- What is the phylum of Grasshopper?
 (a) Arthropoda (b) Chordata
 (c) Echinodermata (d) Mollusca
- Which artery carry the Carbondioxide mixing blood?
 (a) Aorta (b) Pulmonary
 (c) Carotid (d) Dorsal
- What is the percentage of Plasma in human blood?
 (a) 25% (b) 35%
 (c) 45% (d) 55%
- Which one is diploblastic animal?
 (a) Lizards (b) Parrot
 (c) Hydra (d) Human
- How many chambers are there in the heart of Rui fish?
 (a) One (b) Two
 (c) Three (d) Four
- Open heart surgery is required to —
 i. Preform a coronary artery bypass graft
 ii. Repare or replace heart valves
 iii. Repare abnormal or damaged structures in the hart
 Which is correct of the following?
 (a) i (b) i and ii
 (c) i and iii (d) i, ii and iii
- The cardiac muscle is —
 i. Epicardium
 ii. Myocardium
 iii. Endocardium
 Which is correct?
 (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii
- What is the ratio of complementary gene?
 (a) 1 : 2 : 1 (b) 3 : 1
 (c) 13 : 3 (d) 9 : 7
- Which animal reproduces by budding?
 (a) Hydra (b) Grasshopper
 (c) Cockroach (d) Rui fish
- Which blood group has both antibody?
 (a) A (b) B
 (c) AB (d) O
- Hasan learnt from his teacher that, Rh factor is very much important in human life. For mentioned Rh factor—
 i. If the male is Rh + and famale Rh⁻, First child will be Rh⁺
 ii. Rh⁺ is dominant
 iii. Cause of erythroblastosis foetalis
 Which is correct?
 (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii
- Which blood group has no antigen?
 (a) A (b) B
 (c) AB (d) O
- Which is correct for hemophilia?
 (a) It is a bacterial disease
 (b) It is a viral disease
 (c) It is an inheritant disease
 (d) It is not a disease at all
- Which genotype is for colourblind?
 (a) X⁺Y (b) X⁺X⁺
 (c) X⁺Y^o (d) X⁻Y
- Which is the function of interstitial cell?
 (a) It may convert in any cell
 (b) It stimulates the sense
 (c) Helps for locomotion
 (d) Helps for sexual reproduction
- Mendel discovered the laws of heridity by doing research on which organism?
 (a) Guinea pig
 (b) drosophila fly
 (c) pea plant
 (d) maize
- For what type of epistasis the ratio becomes 13 : 3?
 (a) Recessjve
 (b) Dominant
 (c) duplicate recessive
 (d) duplicate dominant
- How many pairs of autsome are there in man?
 (a) 1 (b) 2
 (c) 22 (d) 23
- What is called the inhibiting gene in the process of gene interaction situating in different loci?
 (a) Dominant gene
 (b) epistatic gene
 (c) hypostatic gene
 (d) lethal gene
- What is the structural and functional unit of kideny?
 (a) Nuron (b) Nephron
 (c) Plura (d) Peri ostium
- Which is the part of the eye of Grasshopper/Cockroach?
 (a) Rhabdom
 (b) Malpigian tubules
 (c) Trachea
 (d) Spiracle
- What is Haemocoel?
 (a) One type of gland
 (b) One type of blood
 (c) One type cavity
 (d) One type of enzyme
- What is spiracle?
 (a) Respiratory opening
 (b) Part of blood
 (c) Part of bone
 (d) Mouth opening
- Haemocoel is divided into how many chambers in grasshopper/cockroach?
 (a) 2 (b) 3
 (c) 4 (d) 5
- What is the function of limph?
 (a) Lymph acts as mediator
 (b) Circulate the blood
 (c) Helps in movement
 (d) Excretion
- What is the range of WBC in human blood plasma?
 (a) about 6-8 thousand/cmm
 (b) about 8-11 thousand/cmm
 (c) about 3-5 thousand/cmm
 (d) about 5-12 thousand/cmm
- Which diseases is the diseases of reproductive system of human body?
 (a) Arthritis (b) Meningitis
 (c) Gonorrhoea (d) Haemophilia
- Which is the characteristic of artery?
 (a) Wall is thin (b) Vulve is absent
 (c) Lumen is wide (d) Note elastic
- The vision mechanism of Grasshopper is —
 i. Superposition
 ii. Apposition
 iii. Bio-position
 Which is correct?
 (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii
- Which is the scale of Labeo rohita?
 (a) Tenoid (b) Ganoid
 (c) Cosmoid (d) Cycloid
- What is the name of the cover of lungs?
 (a) Plura (b) Pericardium
 (c) Periostium (d) Meninges
- What is dialysis?
 (a) To separate the enzyme
 (b) To separate the hormone
 (c) To separate coloidal materials of a solution
 (d) To separate the nutrient materials of a solution?
- What is the colour of humans lungs?
 (a) Pink (b) Black
 (c) White (d) Red
- What is the scientific name of Grasshopper?
 (a) Dokilocerus pictus
 (b) Pokilocerus pictus
 (c) Pokilotherus pictus
 (d) Pokilotherus picture
- Which type of scale remain present in Labeo rohita?
 (a) Cycloid (b) Cosmoid
 (c) Placoid (d) Ganoid

1	(a)	2	(b)	3	(d)	4	(c)	5	(b)	6	(d)	7	(d)	8	(d)	9	(a)	10	(d)	11	(d)	12	(d)	13	(c)	14	(d)	15	(a)	16	(c)
17	(b)	18	(c)	19	(c)	20	(b)	21	(a)	22	(c)	23	(a)	24	(b)	25	(a)	26	(a)	27	(c)	28	(b)	29	(a)	30	(d)	31	(a)	32	(c)
33	(a)	34	(b)	35	(a)																										