

- Note : 1) Draw diagram wherever it is necessary.
2) All questions are compulsory.
3) Right hand figures indicate full marks.

Q. 1 A) Answer the following question: (any 4)

- What is myofibril ? 8
- Name the different components of Actin filament.
- What do you mean by twitch ?
- What is Z-disc ?
- What do you mean by movement of locomotion in plant ?
- Define phototaxis movement.
- Define seismonasty. Give example.
- In your garden a plant has grown up around a solid log by wrapping around it - predict the movement of the plant.

B) Answer the following questions : (Any 2)

- Write a note on myofibril structure. 6
- Write a note on tetanus.
- Cycotropic movement - explain with respect to the hormone inducing it.
- What do you mean by spontaneous movements of plant ?

C) Answer the following question in brief (Any 1)

- How does contraction and relaxation of myofibril help in muscle contraction ? 6
- Explain spontaneous movements of growth.

Q. 2 A) Answer the following questions. (Any 4)

- What is motor neuron ? 8
- What is oligodendrocytes ?
- What is threshold potential ?
- What do you mean by sympathetic nervous system ?
- What is resting membrane potential ?
- Write down the structure of GABA.
- What do you mean by agonist molecule ?
- How does spinal cord help in response towards stimuli ?

B) Answer the following questions : (Any 2)

- Write a note on autonomic nervous system. 6
- Give structural and functional classification of nervous.
- What do you mean by repolarisation ?
- Write a short note on acetylcholine?

C) Answer the following questions in brief (any 1)

- Explain nerve impulse propagation in detail. 6
- Write a note on distribution of nervous system throughout human body.

Q. 3 A) Answer the following questions : (Any 4)

- What is the function of thoracic duct ? 8
- What is serum ?
- Define tissue fluid.
- Why human bile is yellow and green in colour ?
- Name the vitamins the bile salts help to absorb ? P.T.O.

- vi) What are Ketone bodies ?
- vii) What are diuretics ?
- viii) What do you mean by nephritis ?

6

B) Answer the following questions: (Any 2)

- i) What is the function of lacteals ?
- ii) State the different function of lymph.
- iii) In brief explain plasma protein.
- iv) State the different function of tissue fluid.

6

C) Answer the following in brief. (Any one)

- i) What do you mean by blood coagulation - explain.
- ii) How does bile help in the absorption of fat ?

2

Q. 4 1A) Define the following. (any 1)

- i) Phototaxis
- ii) Circular rotation.

3

1 B) Answer the following by choosing correct option (any 3)

- i) _____ binds with troponin A
(Calcium / Actin / Tropomyosin)
- ii) Myofibril is structural and functional unit of _____.
(smooth muscle / striated muscle / muscle)
- iii) Tropomyosin is a component of _____.
(actin / myosin / myofibril)
- iv) Rotation is a _____ type of movement
(ciliary / cyclosis / vibration)
- v) When movements of curvature is temporary, it is called _____.
(growth movement / vibration movement / tactic movement)
- vi) _____ shows thermotactic movement
(sunflower / Tulip / Mimosa pudica)

2

2 A) Define the following: (Any 1)

- i) Neurotransmitter
- ii) Synaptic nerve.

2 B) Answer the following questions choosing correct option. (any 3)

3

- i) Cranial nerve and spinal nerve are part of _____.
(CNS / PNS / ANS)
- ii) Motor nerve carry impulse from _____.
(brain to tissue / tissue to brain / brain to spinal)
- iii) During reflex arc _____ response.
(Brain / PNS / Spinal cord)
- iv) Length of synaptic cleft is _____.
(0.2 m / 0.02 m / 0.02 mm)
- v) Dopamine is a _____.
(acetylcholine / catecholamine / amino acid)
- vi) Neuroglia help in removal of dead _____.
(RBC / neuron / platelet)

3 A) Write a short notes: (any 1)

2

- i) Functions of blood
- ii) Starling's hypothesis.

(P.T.O.)

3 B) Fill in the blanks (any 3)

3

- i) In _____ there are no lymphatics
(spleen / CNS / digestive system)
- ii) The yellow colour of plasma is due to small amount of _____, carotene & xanthophyllin.
(Oxalate / Potassium / Bilirubin)
- iii) During clotting of blood, the fibrinogen is converted into _____.
(plasmin, plasminogen, fibrin)
- iv) Formation of _____ is retarded after administration of dicoumarin.
(factor I / factor V / factor VII)
- v) Bile is both a product of secretion as well as as excretion of _____.
(Bile / Liver / Pancreas)
- vi) _____ is the product of breakdown of creatine.
(creatinine, uric acid, bile)

— The End —