

Duration: 2 hrs and 30 mins.

MaxMarks-75

N.B 1) All Questions are compulsory.

2) Draw neat and labeled diagrams wherever necessary.

3) Figures to right indicate full marks.

Q.1) Answer the following. (Each question carries 4 marks)

20

a) Describe the structure of myosin and actin.

OR

a) Describe movements of curvature in plants.

b) Write a brief note on Cyclosis.

OR

b) Explain in detail the structure of a muscle fibre.

c) What is muscle contraction?

OR

c) Write a note on phototropism.

d) Write a note on thigmonasty?

OR

d). Explain the mechanism of muscle relaxation.

e) Write a note on chemotaxis.

OR

e) Write a note on thermotaxis.

Q.2) Answer the following. (Each question carries 4 marks)

20

a) Explain different types of neuroglia cells and their functions.

OR

a) Write a note on Action potential.

b) Explain the terms depolarization and hyper polarization

OR

b) Describe the structure of Neuron with the help of a diagram.

c) Explain mechanism of synaptic transmission.

OR

c) Explain three different types of neurons with examples.

d) What is a neurotransmitter? Write different types of neurotransmitters.

OR

d) Write a note on formation of myelin sheath.

e) Explain role of calcium in nerve impulse transmission.

OR

e) With structure explain the function of catecholamines as neurotransmitters.

Q.3) Answer the following. ( Each question carries 4 marks)

20

a) Explain composition of blood along with functions.

OR

a) Explain the mechanism of bile formation.

b) Write a note on functions of lymph.

OR

b) What is blood clotting? Which are the factors involved in it?

c) Discuss the normal constituents of urine.

OR

c) What are the characteristics and functions of bile in human body?

d) Enlist the normal constituents of bile.

OR

d) Explain the process of urine formation

e) Elaborate on physiological effects related to abnormal constituents in urine.

OR

e) Explain the composition and storage of lymph.

Q.4) A) Answer the following. (Each question carries 3 marks)

15

a) Explain the term- geotropism.

OR

a) Write a brief note on hyponasty.

b) Write a note on the classification of nervous system

OR

b) Explain chemical synapse.

c) How will you test the presence of normal constituents present in urine?

OR

c) How will you test the presence of abnormal constituents present in urine?

Q.4) B) Answer the following. (Each question carries 2 marks)

a) Explain the term- hydrotropism.

OR

a) What is a sarcomere?

b) What are neuroglia?

OR

b) What is the function of myelin sheath ?

c) State Starling hypothesis.

OR

c) What is Billirubin and Billiverdin?