Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – June 2021
VI Semester

Class : III UG **Time : 3 Hours**
Major : Biochemistry and Biotechnology **Max. Marks: 100**

18BBCC15 Molecular Physiology

Part A **10 x 1 = 10**
Choose the correct answer

1. Principle component of plasma membrane is CO1 K3
   a. Lipid b. Sugar
   c. Vitamin d. Nucleic acid

2. Phospholipid is made up of glycerol and CO2 K2
   a. amino acids b. sugars
   c. Phosphates d. vitamins

3. _____ is the chief neurotransmitter of parasympathetic nervous system CO3 K2
   a. acetylcholine b. methane
   c. neurons d. acids

4. Neuron containing the nucleus is called CO1 K3
   a. cell soma b. Cell stoma
   c. dendrites d. mitochondria

5. _____ is a form of active and bulk transport in cells CO4 K1
   a. exocytosis b. endocytosis
   c. active transport d. passive transport

6. _____ is a process by which substances are brought into the cell. CO3 K2
   a. endocytosis b. exocytosis
   c. neocytosis d. metacytosis

7. Sarcomere is a functional unit of a CO2 K2
   a. cell b. muscle fibre
   c. nucleus d. neuron

8. Troponin is a protein found in the muscles of the CO5 K2
   a. gall bladder b. skin
   c. Heart d. liver

9. Thick muscle fibres are composed of CO4 K1
   a. mucin b. mucous
   c. Myosin d. Coenzyme

10. _____ messengers are called as intracellular messengers CO5 K1
    a. second b. Glucanases
    c. Proteinases d. Horseradish peroxidase

Part B **5 x 6 = 30**

Answer ALL questions
Each answer should not exceed 400 words or two pages

11.a. Recall the molecular model of plasma membrane.	CO1 K1
(or)	
11.b. Write a note on passive membrane transport?	CO1 K1
12.a. Describe the role of acetylcholine.	CO2 K2
(or)	
12.b. Explain the role of neurons in a nerve cell .	CO3 K2
13.a. Summarize the functions of a muscles.	CO4 K2
(or)	
13.b. Give an account on structure of a muscle fibre.	CO5 K2
14.a. Discuss about the types of muscle protiens.	CO3 K2
(or)	
14.b. What are the energy sources involved in the movement of muscles.	CO1 K2
15.a. Elaborate on any one hormone involved in signal transduction.	CO4 K3
(or)	
15.b. Discuss about visual transduction in short.	CO5 K2

Part C **5 x 12 = 60**

Answer ALL questions
Each answer should not exceed 800 words or four pages

16.a. Distinguish active and passive transport in cells with diagram.	CO1 K2
(or)	
16.b. Describe exocytosis and endocytosis in a cell.	CO4 K2
17.a. Write an essay on organization of a nerve cell.	CO2 K3
(or)	
17.b. Outline the role of epinephrine and norepinephrine.	CO3 K1
18.a. Discuss the types and functions of muscles.	CO1 K2
(or)	
18.b. Summarize the molecular events in muscle contraction and relaxation.	CO2 K2
19.a. Explain the general mechanism of action of hormones.	CO K2
(or)	
19.b. Discuss the endocrine, paracrine and autocrine signalling pathways.	CO5 K2
20.a. Highlight the features and working of olfactory sensory transduction.	CO3 K1
(or)	
20.b. Explain the working of auditory transductions.	CO5 K3

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