

PG CBCS
M.Sc. Semester-I Examination, 2020
FOOD SCIENCE & NUTRITION
 PAPER: FSN 103
CELL BIOLOGY AND APPLIED PHYSIOLOGY

Full Marks: 40**Time: 2 Hours****Answer any four questions:****10X4=40**

1. Describe fluid mosaic model with a suitable diagram? Mention the name of four cytoplasmic inclusion molecules? What is the significance of gap junction? 6+2+2
2. Define passive transport with an example? Describe facilitated diffusion with an example? Define antiport with an example? What is receptor mediated endocytosis? 3+3+2+2
3. Describe about the extrinsic innervation of gastrointestinal tract with a flow diagram? Describe the synthesis functions of liver? Mention about three functions of cholecystokinin? 4+3+3
4. What are the characteristic features of a stem cell? Describe different stages of erythropoiesis and the changes occurring in the cells of erythroid series during maturation? Mention about any two kind of transport functions of plasma protein. 2+6+2
5. Define stroke volume and cardiac index? What do you mean by primary and secondary hypertension? Write a short note on erythroblastosis fetalis? 3+3+4
6. Describe the role of thyroid hormones on carbohydrate metabolism and growth hormone on protein metabolism? What do you mean by lipolytic and lipogenic effects of glucocorticoids? 3+3+4
7. Describe the basic structure of an antibody with a suitable diagram? What is the function of plasma cell and memory B cells? Define histocompatibility antigen with an example? 5+3+2
8. Define chemical and electrical synapse? Write a short note on properties of synaptic transmission? 4+6
9. Describe the ultrastructure of glomerular membrane with a suitable diagram? Discuss the role of kidney in maintaining the pH of blood? 4+6
10. Write a short note on oxygen transport in arterial blood? Describe about the cardio-respiratory changes during exercise? 5+5
