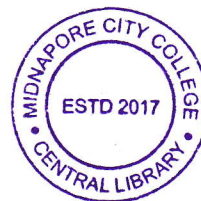


The West Bengal University of Health Sciences
B.Sc. in Medical Microbiology 1st Semester June-July, 2022
Examination

Subject : Cell Biology



Time : 2 hrs.

Full Marks : 50

Attempt all questions

1. Tick the correct answer : 10 x 1
- a) Which of the following feature will help you in distinguishing a plant cell from an animal cell?
 - i) Cell wall. ii) Cell membrane. iii) Ribosome. iv) Mitochondria.
 - b) Which of the following is not a cell?
 - i) Red Blood Corpuscle (RBC). ii) Bacterium.
 - iii) Spermatozoa. iv) Virus.
 - c) The association of more than one ribosome with a single molecule of m-RNA complex is called as :
 - i) Polypeptide. ii) Polysome. iii) Polymer. iv) Polysaccharide.
 - d) The number of chromosomes in human is :
 - i) 26 pairs. ii) 46 pairs. iii) 23 pairs. iv) 30 pairs.
 - e) Chromosomes are composed of :
 - i) Proteins & phospholipids. ii) Proteins & RNA.
 - iii) Proteins & DNA. iv) DNA & RNA.
 - f) The suicidal bags of the cell are :
 - i) Chromosomes. ii) Lysosomes. iii) Nucleus. iv) Ribosomes.
 - g) Ribosomes take part in :
 - i) Secretion of enzymes. ii) Protein synthesis.
 - iii) Production of energy. iv) Carbohydrate formation.
 - h) Fluid mosaic model of cell membrane was proposed by :
 - i) Danielli & Davson. ii) Singer & Nicholson.
 - iii) Robert Hooke. iv) Robert Brown.
 - i) The isolation of cell components is called :
 - i) Compartmentation. ii) Composition.
 - iii) Fractionation. iv) Decomposition.
 - j) The membrane surrounding the vacuole is known as :
 - i) Tonoplast. ii) Leucoplast. iii) Chromoplast. iv) Chloroplast.
2. Answer **any four** of the following questions : 4 x 2
- a) Mention the cell theory proposed by Schwann and Schleiden.
 - b) Define secondary active transport with example.
 - c) Define cell fractionation.
 - d) Mention any two functions of Mitochondria.
 - e) Draw and label polysome.
 - f) Define Tight junctions.
3. Answer **any four** of the following questions. 4 x 4
- a) Discuss the functions of Ribosome.
 - b) Describe the structure of Mitochondria with diagram.
 - c) Write a short note on Vacuole.
 - d) Discuss the role of Endoplasmic reticulum in protein segregation.
 - e) Write a short note on facilitate diffusion.
 - f) Describe the biogenesis of Golgi complex.
4. Answer **any two** of the following questions:
- a) Describe the structure and functions of Nucleus. 4+4
 - b) Enumerate Extracellular matrix components (at least four) and mention their function. What are proteoglycans? 6+2
 - c) Discuss in brief about gap junction, adherence junction and syndesmos of intracellular junctions. Give two other examples of plasma membrane modification. 6+2