

PAPER-ZOOA-CC2-4-TH

THEORY-FM-25

Answer question 1 and any four from rest.

Q1 Answer any five (5x1)

- a. Write names of 2 lysozomal enzymes.
- b. What is macula adherens?
- c. What is endomembrane system?
- d. What is zone of exclusion?
- e. What is GERL region?
- f. Write names of 2 inner membrane enzymes of mitochondria.
- g. What is cristae?
- h. What are the three forms of SER?

Q2 What is the general design of fluid mosaic model? (5)

Q3 Write biochemical functions of ER. (5)

Q4 Schematically enumerate initiation of clathrin coated vesicles. (5)

Q5 Write difference between peripheral and integral protein. (5)

Q6 How does the cell progress through various stages of the cell cycle? (5)

Q7 State differences between receptor-mediated apoptosis and mitochondria-mediated apoptosis. (5)

Q8 Write the role of caspase in apoptosis. (5)

Q9 Write the significance of acetylation of core histones. (5)

PAPER-ZOOA-CC2-4-P

PRACTICAL- FM-15

All questions are compulsory

1. Identify the following stage of Meiosis with reasons. 2+3



2. What is Barr body? How many Barr bodies will a normal human male have? 3+2
3. Write the procedure of stained preparation of DNA by Feulgen reaction. 5

PAPER-ZOOA-CC2-4-IA

INTERNAL ASSESMENT-FM-10

Choose the right option

- 1.This is not the function of plasma membrane
 - (a) Energy transduction
 - (b) Intercellular interactions
 - (c) Responding to external stimuli
 - (d) Assisting in chromosome segregation
2. In the plasma membrane, carbohydrates
 - (a) always faces outwards, towards extracellular space
 - (b) directed to all sides in the membrane randomly
 - (c) always faces to the lumen of cells
 - (d) always faces inward to the nonpolar portion of the membrane
- 3.Plasma membrane is made up of
 - (a) A protein, a lipid and a cellulose layer
 - (b) Bimolecular lipid layer surrounded by protein layers
 - (c) A protein layer between two lipid layers
 - (d) A lipid layer between two protein layers
- 4.Which of the following is the largest single membrane-bound intracellular compartment?
 - (a) Ribosome
 - (b) Golgi apparatus
 - (c) Nucleus
 - (d) Endoplasmic reticulum
- 5.Endoplasmic reticulum membrane which is associated with ribosomes is called_____
 - (a) ER lumen
 - (b) Smooth endoplasmic reticulum
 - (c) Rough endoplasmic reticulum
 - (d) Endosome
- 6.Name the sequence which allows the resident protein to retain in ER lumen?
 - (a) KDEL
 - (b) KKXX
 - (c) KLDE
 - (d) KXXK
- 7.Which of the following coated vesicle transport protein from ER to Golgi?
 - (a) Clathrin
 - (b) COP II
 - (c) COP I
 - (d) COP III

8. Cristae in mitochondria serve as sites for

- (a) oxidation reduction reaction
- (b) protein synthesis
- (c) macromolecules breakdown
- (d) flavoproteins are phosphorylated

9. Pick the incorrect statement

- (a) mitochondrial DNA is known as mtDNA
- (b) mitochondria is the powerhouse of the cell
- (c) mitochondria is the site for calvin cycle
- (d) mitochondria is the site for krebs cycle and oxidative phosphorylation

10. In the beads on a string model, the bead is made up of _____

- (a) 6 histone proteins
- (b) 8 histone proteins
- (c) 6 histone proteins and DNA
- (d) 8 histone proteins and DNA