REV-01 BSZ/05/10

## B.Sc. ZOOLOGY THIRD SEMESTER CELL BIOLOGY BSZ-301 (IDMi)

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Objective )

Marks: 20 Time: 30 mins.

Choose the correct answer from the following:

a. Slime molds

Which of the following microorganism have two nuclei? b. Cyanobacteria

c. Amoeba

d. Paramecium

This is not the function of plasma membrane:

a. Energy transduction

b. Intercellular interactions

c. Responding to external stimuli

d. Assisting in chromosome segregation

2023/12

Full Marks: 70

1×20=20

3. The lipids present in cell membrane are.....

a. Polar

b. Non-polar

c. Ampipathic

d. Charged

4. Shingolipids is the derivative of.....

a. Sphingosine

b. Shingomycin

c. Sphingoceramicin

d. Sphingolipid polymer

Genetic information stored in mRNA is translated to polypeptide by.....

a. Ribosome

b. Nucleus

c. Endoplasmic reticulum

d. Golgi apparatus

Name the control center of the eukaryotic cell.

a. Ribosome

b. Nucleus

c. Endoplasmic reticulum

d. Golgi apparatus

Which of the following microorganism have two nuclei?

a. Slime molds

b. Cyanobacteria

c. Amoeba

d. Paramecium

Which of the following organelle control intracellular digestion of macromolecules with the help of hydrolytic enzymes?

a. Plastid

b. Peroxisome

c. Lysosome

d. Actin

Digestion of cell's own component is known as.....

a. Autophagy

b. Heterophagy

c. Phagocytosis

d. Pinocytosis

10. The DNA threads which appear inside the nucleus at the time of cell division?

a. Spindle fibers

b. Centrioles

c. Asters

d. Chromosomes

USTM/COE/R-01

1

11.	The extra chromosomal circular Dna in pa. Nucleoid c. Plasmid	b.	yotes is called: Nucleolus Phagemid
12.	Which of the following structures is only a. Mitochondria c. Centrioles	y found	
13.	The granular structures found attached a. Ribosomes c. Desmosome	b.	endoplasmic reticulum are: Lysosome Nissle granules
14.	In mitochondria, cristae acts as the site for a. Protein synthesis c. Glycosylation	b.	Lipid synthesis ATP synthesis
15.	The acrosome in sperm is formed from: <ul><li>a. RER</li><li>c. Golgi apparatus</li></ul>		SER None of the above
16.	In the cells of higher plants, the golgi bo a. Desmosome c. Dictyosome	ь.	e called: Mesosome None of the above
17.	The long, flattened sac-like unbranched called:  a. Golgi apparatus  c. Smooth endoplasmic reticulum	b.	s, arranged parallel in cytoplasm a Microfilaments None of the above
18.	The nuclear envelopes are formed from: <ul><li>a. Plasma membrane</li><li>c. Golgi apparatus</li></ul>		Endoplasmic reticulum None of the above
19.	The longest stage in the cell cycle is:  a. Interphase c. Metaphase		Anaphase None of the above
20.	Which of these scientists formulated the a. Schleiden and Schwann c. Robert Koch	b.	eory? Rudolf Virchow Antony Von

USTM/COE/R-01

## (Descriptive)

Time: 2 hr. 30 mins. Marks: 50 [ Answer question no.1 & any four (4) from the rest ] 1. What were the postulates of cell theory? Differentiate between 3+7=10eukaryotic and prokaryotic cell. 2. Why mitochondrion is called the power house of the cell? Describe the 2+8=10 structure of mitochondria. What is synapsis? Describe how the metaphase stage of meiosis I is 2+8=10 different from metaphase stage of meiosis II. Describe the chemical composition of protoplasm. State the functions of 5+5=10 SER and RER. 5. What are lysosomes? Describe their origin, structure and types. 2+8=10 What are the different types of lipids found in the plasma membrane? 6+4=10 Discuss any four functions of the plasma membrane. What are the ribosomes? What is meant by a 70S and 80S ribosome? 2+4+4=10 Describe the structure of both types of ribosomes. Write short notes on: (any two) 5×2=10 a) Nucleus b) Chromosomes

== \*\*\* = =

c) Cytoskeleton

USTM/COE/R-01