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21UZY304

FOR THE CANDIDATES ADMITTED  
DURING THE ACADEMIC YEAR 2021 ONLY)

REG.NO

NGM COLLEGE (AUTONOMOUS) POLLACHI  
END-OF-SEMESTER EXAMINATIONS: DECEMBER-2022

B. Sc-ZOOLOGY

MAXIMUM MARKS: 70

III SEMESTER

TIME: 3 HOURS

PART III  
CELL BIOLOGY

SECTION – A (10 X1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS

MULTIPLE CHOICE QUESTIONS

(K1)

1. The protoplasm theory was proposed by \_\_\_\_\_  
a) Hertwig      b) Mirabel      c) Brown      d) Donne
2. Fluid mosaic model explains the structure of \_\_\_\_\_  
a) Golgi complex      b) Plasma membrane      c) Nucleus      d) Mitochondria
3. The inner mitochondrial membrane produces finger-like projections known as \_\_\_\_\_  
a) Matrix      b) F<sub>1</sub> particles      c) Cristae      d) outer
4. The small piece of chromosome located beyond the secondary constriction is called \_\_\_\_\_  
a) q arm      b) outer zone      c) Centromere      d) Statellite
5. The division of the nucleus into two daughter nuclei is called \_\_\_\_\_  
a) Karyokinesis      b) Cytokinesis      c) Amitosis      d) Resting phase

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. Acidic stains
7. Desmosomes
8. Sucidial bags
9. Teleocentric chromosomes
10. Amitosis

ETHICAL PAPER

(CONTD.....2)

**SECTION – B** **(5 X 4 = 20 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)**

11. a) State germplasm theory. Explain its salient features.  
**(OR)**  
b) Write short notes on corona virus.
12. a) Describe the structure of Endoplasmic reticulum with a neat sketch.  
**(OR)**  
b) Classify the types of ribosomes.
13. a) Describe the polymorphic structures of Lysosomes.  
**(OR)**  
b) Illustrate the structure of nucleolus.
14. a) Explain the structure of chromosome and functions.  
**(OR)**  
b) Describe the Watson and crick model of DNA.
15. a) Elaborate the prophase stage of cell division.  
**(OR)**  
b) Describe the salient features of genetic code.

**SECTION – C** **(4 X 10 = 40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS.****(16TH QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Q.NO: 17 TO 21 )****(K4) OR (K5)**

16. Write an essay on the functions of Golgi complex.
17. Describe the structure of a prokaryotic cell.
18. Give an detailed account on the structure and functions of plasma membrane.
19. Explain the ultra structure of nucleus and its function.
20. Describe the semi- conservative model of DNA replication.
21. Illustrate the characteristic & cell transduction pathways signaling.