Reg.No…… **FYCBTA22/5**
Name……..

FIRST YEAR HIGHER SECONDARY PRE MODEL EXAMINATION

Part – III

BIOLOGY

PART – A: BOTANY

(Maximum: 30 Scores)

Time: I Hour
Cool-off time: 10 Minutes

PART I

Answer any seven questions from 1 to 10. Each carries 1 score. **(7x1=7)**

1. Observe the relationship of the first pair and fill in the blank.
   Cisternae: Golgi apparatus
   Chromatin : _____

2. Which one of the following leucoplast stores oils and fats?
   (a) *Amyloplast*
   (b) *Elaioplast*
   (c) *Aleuroplast*

3. Fill in the blank.
   The vacuole is bound by a single membrane called_____.

4. Name the layer which holds or glues the neighbouring plant cells together.

5. Fill in the blank.
   Nucleus as a cell organelle was first described by _____.

6. Which among the following organelle is found to be rich in hydrolytic enzymes?
   (a) *Microbodies* (b) *Lysosome*
   (c) *Chloroplast* (d) *Vacuole*

7. Name the structure from which *cilium* and *flagellum* emerge.

8. What are *polyribosomes* or *polysome*?

9. Name the basic proteins seen in chromatin.

10. Which are the <u>two fat soluble pigments</u> present in *Chromoplas*t ?

PART II

Answer any seven questions from 11 to 20. Each carries 2 scores. **(7x2=14)**

11. Endoplasmic reticulum is of two types, RER and SER.
Differentiate RER and SER.

12. Bacterial cell envelop is a tightly bound three layered structure.
(a) Name the different layers in the bacterial cell envelope.
(b) State any one function of cell envelope.

13. Match the following compounds and their site of synthesis

Column A	Column B
1. r RNA	*a. SER*
2. Glycoproteins	*b. RER*
3. Carbohydrate	*c. Nucleolus*
4. Steroid hormones	*d. Chloroplast*
	e. Golgi bodies

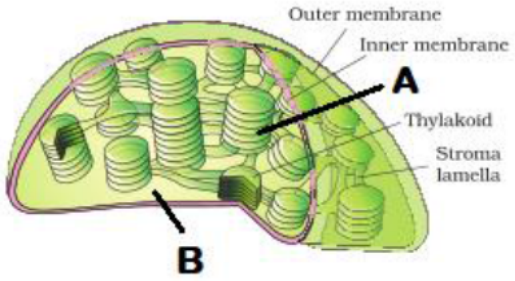
14. Bacteria can be classified into two groups on the basis of the differences in the cell envelopes and the manner in which they respond to a staining procedure .
(a) Name the two groups
(b) Why are they called so ?

15. Name the cell organelles included in the endomembrane system of a eukaryotic cell.

16. Bacterial cells have special membranous structure which is formed by the extension of plasma membrane in to the cell.
(a) Name this special membranous structure of bacteria.
(b) Write any two functions of it.

17. Find the odd one and justify your answer.
(a) Stroma, Grana, Cristae, Stroma lamellae.
(b) Chromatid, Fimbriae, Kinetochore, Centromere.

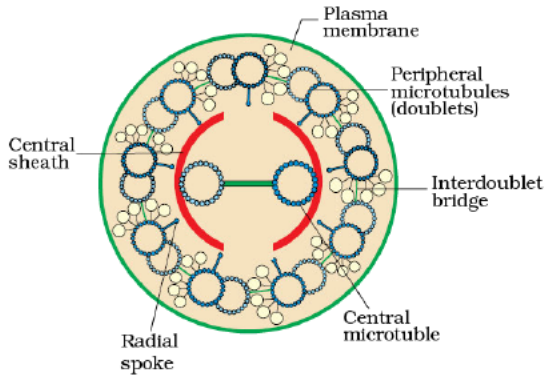
18. Observe the diagram given below
(a) Identify the Plastid
(b) Label the parts marked as A & B



19. In 1855, Rudolf Virchow modified the cell theory to a final shape.
(a) Who proposed cell theory?
(b) Write the two main points in cell theory.

20. Observe the section of cilia/flagella given below.

.



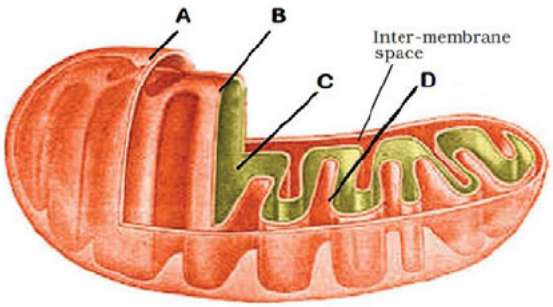
(a) What is axoneme?
(b) What is the arrangement of axonemal microtubules seen in cilia and flagella?

PART III

Answer any three questions from 21 to 25.each carries three scores. (3X3=9)

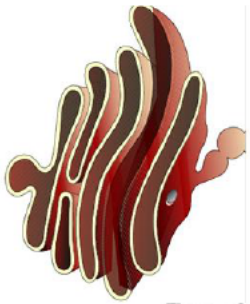
21. Diagram of mitochondria is given below.
(a) Label the parts A, B, C and D
(b) Why is it called as the '<u>power house</u>' of the cell?

.



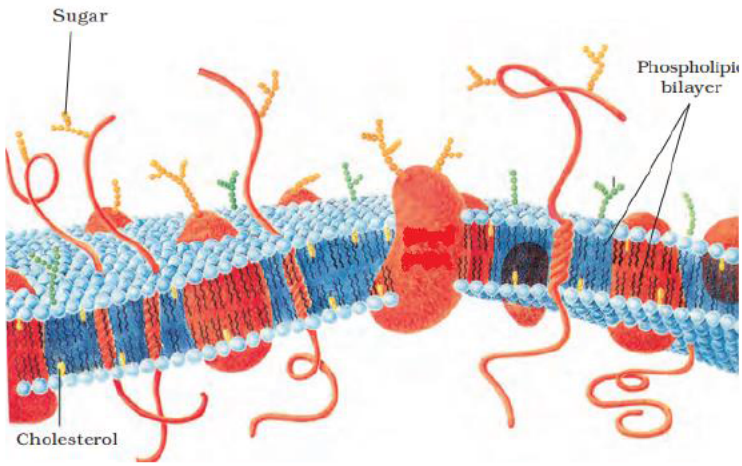
22. Ribosomes are non-membrane bound organelles found in all cells – both prokaryotic as well as eukaryotic.
(a) Name the scientist who first observed ribosomes.
(b) How prokaryotic ribosomes differ from eukaryotic ribosomes?

23. Observe the diagram given below
    (a) Identify the organelle
    (b) What is its function?
    (c) Why is it seen in close association with ER



24. Based on the position of the centromere, the chromosomes can be classified into four types.
    a) Explain the four types of chromosomes.
    b) What are Satellite chromosomes?

25. The given diagram shows an improved model of plasma membrane .



(a) Who proposed this model?
(b) Name the model of plasma membrane proposed by these scientists.
(c) What are the two types of proteins seen in plasma membrane?

<<<<◇>>>>>