Max. marks- 30 **Time- 45mins**

Instructions-

a. Read the questions carefully before answering.

b. For long answers, you have to write two points for one mark.

1. Select the right option and write in the answer sheet. 2

a. In viewing an electron micrograph of a cell, ribosomes, pili and a single circular chromosome are observed. What other structure is likely to be present?

   i. The rough endoplasmic reticulum (rER)

   ii. Mitochondria

   iii. A nuclear membrane

   iv. A plasmid

b. Lysosomes are cell organelles which:

   i. modify and sort proteins which are to be exported from the cell

   ii. produce hydrogen peroxide

   iii. can digest proteins ingested by phagocytosis

   iv. contain the enzymes of the Kreb's cycle

c. Which of the following structures is surrounded by a double membrane?

   i. cell

   ii. mitochondrion

   iii. peroxisome

   iv. lysosome

d. Which of the following subcellular structures does not include membranes?

   i. Golgi apparatus

   ii. centriole

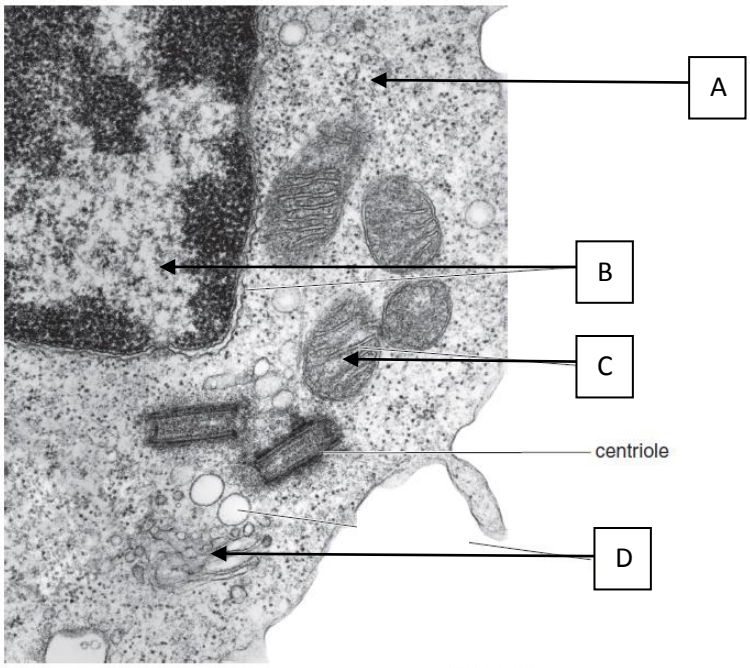
   iii. pinocytotic vesicles

   iv. smooth endoplasmic reticulum

2. **Fill in the blanks:** **2**

1. The circular DNA in prokaryotes is called _____.
2. The layer next to capsule in the bacterial cell is made up of _____
3. The ground substance of cytoplasm is called _____ and the cell organelle is _____.

3. Following figure is that of a eukaryotic cell. Observe and answer the questions.

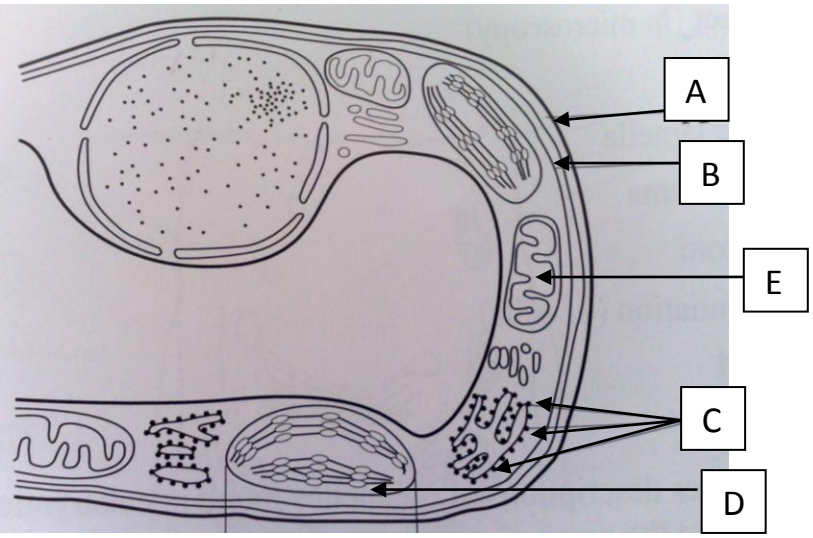


X 10,000

a. Identify the structures A-D 2
b. What is the function of part D? 1
c. How is structure C different from other organelle? 2

4. Identify the given organelle and draw and label it. **3**

5. **Figure shows the part of a cell as seen under an electron microscope.**



a. Identify the structures A to D. 2

b. How is structure A formed? 1

c. Which cell is this? Give reason for your answer. 2

d. Give a comparative account of structure D and E. 4

6. Describe the ways by which plant cells communicate with each other. 2

7. Compare the structure of eukaryotic cell and prokaryotic cell. 3

8. Lysosomes show polymorphism. Explain. 4