# ST. JOSEPH'S COLLEGE, PRAYAGRAJ

## FIRST UNIT TEST 2025-26

## BIOLOGY

## CLASS – X

**TIME: 1 Hour** **MM: 30**

**Q 1) Choose the correct option for each of the following questions:** **[6]**

1.Gycolysis occur in the------- of a cell
a) Nucleus b) Cytoplasm c) Ribosomes d) Centrosome

2.A yellow coloured pigment Xanthophyll is located in
a) Chloroplast b) Leucoplast c) Chromoplast d) Vacuole

3.In DNA, the type of bond which joins the complementary nitrogenous bases
a) Ionic bond b) Covalent bond c) Coordinate bond d) Hydrogen bond

4. Name the phase which comes after mitotic phase.
a) $G_1$ phase b) S phase c) $G_2$ phase d) M phase

5.The finger like projections from the inner walls of mitochondria is called
a) Cisternae b) Centriole c) Cristae d) Cellulose

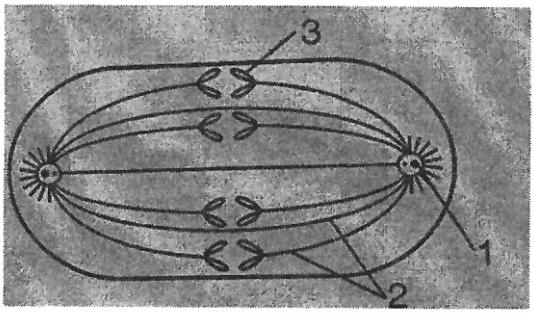
6.23$^{rd}$ pair of chromosomes is called
a) Autosomes b) Allosomes c) Heterosomes d) Centrosomes

**Q 2) Answer the questions briefly:** **[12]**

1.Define Gene.
2.What is the significance of meiosis? Give two points.
3.Give reasons for the following shape of the cells:
a) RBC is circular and biconcave.
b) Nerve cells are long.
4.Differentiate between nucleosome and nucleotide.
5.Name the organelle known as suicidal bags. Give reason.
6.What are cell inclusions? Mention their functions.

**Q 3)** What is Cytokinesis? With the help of neat diagrams show how cytokinesis differs in a plant cell and an animal cell. **[3]**

**Q 4) Study the diagram and answer the questions that follow:** **[3]**




a) Identify the stage of cell division.
b) Name the parts labelled 1 and 2.
c) What is the chromosome number of the cell?

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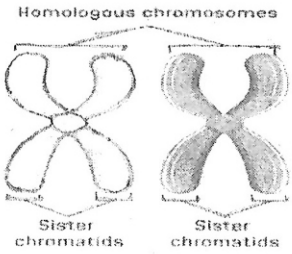
**Q 5)** The diagram represents the structure of Chromosome. Observe the diagram and answer the questions: **[3]**




a) What are sister chromatids?
b) What is the function of centromere?
c) Differentiate between centrosome and centromere.

**Q 6)** Given below is a double helical structure of DNA. Observe the diagram and answer the questions that follow: **[3]**

a) Expand the abbreviation: DNA
b) Name the four nitrogenous bases found in DNA.

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