TERM-II

QUESTION PAPER (SAMPLE-3)

Class: XI Subject: Biology

Time Allowed-2 Hours Max.Marks.:35

Section-A 1*4 = 4 Marks

1. If a tissue has at a given time 1024 cells, how many cycles of mitosis had the original parental single cell undergone?

2. The diagram shows a bivalent at Prophase-I of meiosis. Which of the four chromatids can cross over?



- 3. What is serum?
- 4. What do grey and white matter in the brain represent?

Section- B 3*7=21 Marks

- 1. Write briefly the significance of mitosis and meiosis in multicellular organism.
- 2. Six turns of Calvin cycle are required to generate one mole of glucose. Explain.
- 3. Explain why is water splitting complex related to PSII.
- 4. Respiration is an energy releasing and enzymatically controlled catabolic process which involves a step-wise oxidative breakdown of organic substances inside living cells. In this statement about respiration explain the meaning of
 - 1) Step-wise oxidative breakdown, and
 - 2) Organic substances (used as substrates).
- 5. The role of ethylene and abscissic acid is both positive and negative. Justify the statement.
- 6. What is the role played by Renin-Angiotensin in the regulation of kidney function?
- 7. Discuss the role of Ca2+ ions in muscle contraction. Draw neat sketches to illustrate your answer.

Section- C 5*2= 10 Marks

- 1. a. Distinguish between
 - (a) IRV and ERV
 - (b) Inspiratory capacity and Expiratory capacity.
 - b. Define Tidal Volume.
- 2. Calcium plays a very important role in the formation of bones. Write on the role of endocrine glands and hormones responsible for maintaining Calcium homeostasis.