



- c) Explain the structure of prokaryotic RNA polymerase. 2½
- d) Describe the 5' capping event in post transcriptional processing of m – RNA. 2½

**OR**

- e) Write a note on bidirectional and unidirectional replication. 2½
- f) Discuss the assembly of DNA Pol III holoenzyme on DNA template. 2½
- g) Describe the weak and strong promoters. 2½
- h) Write a note on inhibitors of prokaryotic transcription. 2½

**5.** Attempt **any ten** of the following. **10**

- a) Who proposed the Theta ( $\theta$ ) model of replication?
- b) What do you mean by semi discontinuous mode of replication?
- c) What is primer?
- d) What is klenow fragment?
- e) In E. Coli DNA ligase uses ----- as an energy source (Fill in the blanks).
- f) Give the significance of 3' → 5' exonuclease activity.
- g) Write on abortive initiation.
- h) What do you mean by sense strand?
- i) What is promoter?
- j) What are introns?
- k) Give the significance of polyadenylation.
- l) Write the full form of IPTG.

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