

Question Paper

Exam Date & Time: 24-Nov-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

INTERNATIONAL CENTRE FOR APPLIED SCIENCES THIRD SEMESTER B.Sc. Applied Sciences in Engg. END-SEMESTER THEORY EXAMINATIONS NOVEMBER - 2018 CELL MOLECULAR BIOLOGY [IBT 235]

Marks: 100

Duration: 180 mins.

Answer 5 out of 8 questions.

- 1) How was the Griffith's experiment concerning the "transforming principle" done and how did Avery and group improve upon it? (20)
- 2) How does the replication of retroviruses such as HIV, differ from replication of other RNA viruses and from that of DNA viruses? (20)
- 3) Explain the semiconservative model of DNA replication and highlight the role of each enzymes involved (20)
- 4) Compare and contrast transcription in prokaryotes and eukaryotes (20)
- 5) Comment on proof reading, mismatch, base excision and nucleotide excision repair. Mention the role of different enzymes/proteins involved in each process (20)
- 6) Compare and contrast translation in prokaryotes and eukaryotes (20)
- 7) Describe different models of replication (10)
 - A)
 - B)
- 8) How enhancer elements and promoters operate? What is their influence on transcriptional process? (10)
- 8) Explain lac operon and its regulation. Mention the role of promoter, operator, repressor and inducer (20)

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