

Question Paper

Exam Date & Time: 24-Sep-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. N.M.T. DEGREE EXAMINATION - SEPTEMBER 2022
SUBJECT: NMT1201 - CELL AND MOLECULAR BIOLOGY
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Discuss in detail how proteins are synthesized with the help of mRNA. (20)
- 2) Write in detail on RNA transcription. (20)
- 3) "Life originated on earth from simple molecules" provide support for this statement. (10)
- 4) Discuss in detail transport of macromolecules across nuclear pore complex. (10)
- 5A) Write a short note on unfolded protein response. (5)
- 5B) Discuss the importance of semi-permeability of plasma membrane. (5)
- 5C) Write a short note on glyoxylate cycle. (5)
- 5D) Write a short note on nucleolus. (5)
- 5E) Write a short note on how RNA is processed. (5)
- 5F) Discuss the functions of smooth endoplasmic reticulum and golgi apparatus. (5)
- 6A) Draw well-labelled diagram of mitochondria. (2)
- 6B) What is osmosis? (2)
- 6C) Enlist modes of cell signalling. (2)
- 6D) Mention role of DNA supercoiling. (2)
- 6E) List major type of RNA found in the cells. (2)

-----End-----