

M.PHARM. (PHARMACEUTICAL BIOTECHNOLOGY) SEM.-I (CBCS-2019 COURSE) :  
WINTER - 2021  
SUBJECT : MICROBIAL AND CELLULAR BIOLOGY

Day : Thursday  
Date : 18-11-2021

Time : 10:00AM TO 1:00 PM  
Max. Marks : 75

W-2021-20715

N.B.

- 1) Attempt ANY FIVE questions from the following.
- 2) Figures to the RIGHT indicate FULL marks.

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- Q.1** a) Give structures and differences of mRNA, rRNA and tRNA. (10)  
b) Write a note on RNA splicing. (05)
- Q.2** a) What is the central dogma of life? Explain the different processes. (10)  
b) What is post transcriptional modification of proteins? (05)
- Q.3** a) Describe mitochondrial structure and the theory of endosymbiosis. (07)  
b) How to isolate pure bacterial cultures? Describe various methods with their respective merits, limitations and significance. (08)
- Q.4** a) Give in details meiotic cell division. (07)  
b) Write a note on crossing over. (08)
- Q.5** a) What are the factors that determine microbial growth? (07)  
b) Which antimicrobials are used in the treatment of common bacterial and fungal infections? Explain with mechanism of action and examples. (08)
- Q.6** Write notes on the following. (15)  
a) HeLa cell line  
b) Apoptosis  
c) Events of fertilization

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