

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: B. PHARM
BRANCH: PHARMACY

SEMESTER : VII
SESSION : MO/19

SUBJECT: PS7415 PHARMACEUTICAL BIOTECHNOLOGY

TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What are the different types of RNA? [2]
Q.1(b) Discuss the role of promoter regions during prokaryotic transcription. [4]
Q.1(c) Elaborate the steps in translation of proteins [6]
- Q.2(a) Classify plasmids based on their function. [2]
Q.2(b) Illustrate different methods of recombinant identification. [4]
Q.2(c) Discuss in brief the different models of gene regulation. [6]
- Q.3(a) What are phagemids? [2]
Q.3(b) Explain the construction of a cloning vector based on M13 bacteriophage [4]
Q.3(c) Write note on Hybridoma technology and its application. [6]
- Q.4(a) How cDNA could be prepared? [2]
Q.4(b) Write a note on recombinant insulin preparation [4]
Q.4(c) Detail out the steps in PCR and optimal factors for conducting PCR. [6]
- Q.5(a) Enlist the techniques for viewing nucleic acids and proteins on a gel. [2]
Q.5(b) Write note on western blotting and its application. [4]
Q.5(c) Discuss the principle and process of Agarose Gel Electrophoresis in brief. [6]
- Q.6(a) What is cellular totipotency? [2]
Q.6(b) Give an outline on the components of media for tissue culture. [4]
Q.6(c) How the plant cells are processed for isolation of protoplasts? Detail out the procedure. [6]
- Q.7(a) Classify nucleases. [2]
Q.7(b) What is colony and plaque hybridization? [4]
Q.7(c) How labelling of molecular probe is carried out? [6]

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