

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

CLASS: BPHARM
BRANCH: PHARMACY

SEMESTER :VII
SESSION : MO/18

SUBJECT: PS7415 PHARMACEUTICAL BIOTECHNOLOGY

TIME: 3 Hrs.

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 do you mean by vector? [2]
Q.1(b) Discuss the plasmid cloning vector in brief using suitable diagram. [4]
Q.1(c) Discuss the types of restriction enzyme in detail using classification based on restriction site, recognition site & enzymatic cofactors. [6]
- Q.2(a) What do you mean by agarose gel electrophoresis? [2]
Q.2(b) Discuss the factors affecting the movement of DNA in agarose gel. [4]
Q.2(c) Discuss the agarose gel electrophoresis in detail. [6]
- Q.3(a) What do you mean blotting technique? [2]
Q.3(b) Discuss the southern blotting in detail. [4]
Q.3(c) Discuss the western blotting in detail. [6]
- Q.4(a) Write the composition of resuspension buffer used in plasmid isolation. [2]
Q.4(b) Discuss the function of Neutralization buffer used in plasmid isolation. [4]
Q.4(c) Discuss the steps of plasmid isolation in detail. [6]
- Q.5(a) What do you mean by gene sequencing? [2]
Q.5(b) Discuss the principle of gene sequencing by dideoxy method. [4]
Q.5(c) Discuss the sanger or dideoxy method of gene sequencing. [6]
- Q.6(a) Define translation or protein synthesis. [2]
Q.6(b) Discuss the two steps of activation of amino acid used in translation process. [4]
Q.6(c) Discuss the initiation step of translation process. [6]
- Q.7(a) What do you mean by lac operon? [2]
Q.7(b) What do you mean by negative control of trp operon system? [4]
Q.7(c) Discuss the "ON condition" of lac operon in detail. [6]

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