

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: BIOTECHNOLOGY**

**SEMESTER: V
SESSION : MO/2018**

SUBJECT : BT5025 FUNCTIONAL GENOMICS AND rDNA TECHNOLOGY

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

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- Q1 (a) Describe the characteristics of a plasmid. [2]
(b) Discuss about immobilized metal ion chromatography and its role in protein purification. [3]
- Q2 (a) What are the different types of artificial chromosome? [2]
(b) Discuss about prokaryotic and eukaryotic expression vectors. [3]
- Q3 (a) Describe about the world of RNA hypothesis. [2]
(b) What do you understand about functional genomics? Write its applications. [3]
- Q4 (a) Discuss about the role of ribozyme. [2]
(b) What do you understand about reverse genetics? Enumerate its applications. [3]
- Q5 (a) Discuss about Northern blot and its applications. [2]
(b) How real time PCR is helpful in gene expression study? Describe. [3]
- Q6 (a) Describe about the restriction enzymes. [2]
(b) What is site directed mutagenesis? Discuss its importance. [3]

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