

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

CLASS: M. SC.
BRANCH: BIOTECHNOLOGY

SEMESTER : I
SESSION : MO/19

SUBJECT: BT407 GENOMICS

TIME: 3.00Hrs.

FULL MARKS: 50

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 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) Critically evaluate the differences between prokaryotic and eukaryotic genome. [5]
Q.1(b) Discuss the significance of central dogma of molecular biology. [5]
- Q.2(a) Evaluate the usefulness of genome annotation in whole genome sequencing research. [5]
Q.2(b) Justify that comparative genomics has eased the functional characterization of genes. [5]
- Q.3(a) Discuss the importance of various blotting techniques in genomics. [5]
Q.3(b) Write the importance of CRISPR-Cas9 in genome editing. [5]
- Q.4(a) Write about the advances made in rice genomics and its role in assuring the food security. [5]
Q.4(b) Point out the advances in wheat genomics and its application in wheat production. [5]
- Q.5(a) Justify that advances in genomics has eased the production of recombinant proteins. [5]
Q.5(b) Evaluate that applications of genomics in the development of value-added crops. [5]

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