

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

**CLASS: BE
BRANCH: BIOTECH**

**SEMESTER : VII
SESSION : MO/18**

SUBJECT: BT8021 BIOTECHNOLOGY MANAGEMENT

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 is the significance of biotechnology entrepreneurship? [2]
Q.1(b) What are the important parameters those must be analyzed before preparation of project for establishment of an enterprise? [4]
Q.1(c) Discuss the opportunities and challenges in setting up a biotechnology enterprise in India. [6]
- Q.2(a) Differentiate between standard deviation and standard error. [2]
Q.2(b) Find standard deviation and standard error for the data; 12, 16, 13, 14, 15, 12, 11 and 14. [4]
Q.2(c) Mean pulse rate of a population is found to be 70 per minute with standard deviation of 8 beats. Calculate the minimum size of sample to verify this, if allowable error is ± 1 beat at 5% risk. [6]
- Q.3(a) What do you understand with the term 'product' in context of biotechnology? [2]
Q.3(b) Discuss the meaning of five levels of a product. [4]
Q.3(c) What is branding and what are different methodologies adopted for branding decision? [6]
- Q.4(a) What is the need of guidelines for biosafety and bioethics? [2]
Q.4(b) Discuss the components of 'good manufacturing practices in industry'. [4]
Q.4(c) Explain the disposal processes of chemical and hazardous waste materials. [6]
- Q.5(a) How public relation supports the business objectives? [2]
Q.5(b) What communication tool you will prefer for a biotechnology product and why? [4]
Q.5(c) How an entrepreneur decides the timing and the marketplace for the marketing of his/her entirely new product? [6]
- Q.6(a) Enlist important economic impacts of biotechnology. [2]
Q.6(b) What are institutional and social issues involved in human genome project? [4]
Q.6(c) Discuss the role of biotechnology in food, agriculture and pharmaceutical industries. [6]
- Q.7(a) Why case studies are important for development of project proposals? [2]
Q.7(b) What are the key factors for the success of Wockhardt. [4]
Q.7(c) With the SWOT analysis explain the features of Wockhardt in Indian pharmaceutical and biotech market. [6]

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