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

CLASS: BE **SEMESTER : VII**
BRANCH: BT **SESSION : MO/19**

SUBJECT: BT7029 PHARMACEUTICAL BIOTECHNOLOGY

TIME: 3.00Hrs. **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.

Q.1(a)	What do you understand by the term Pharmacogenetics and Pharmacogenomics?	[2]
Q.1(b)	How genomics has revolutionized the medical field?	[4]
Q.1(c)	What is molecular medicines? What does HGP stands for? Give a brief introduction about it.	[6]
Q.2(a)	What is a QSAR?	[2]
Q.2(b)	How has the drug design strategy evolved with time? Give an explanation.	[4]
Q.2(c)	Write short note on Ligand based Drug Design.	[6]
Q.3(a)	What is a meant by Linkage?	[2]
Q.3(b)	Write a note on DNA hybridization techniques. Explain the procedure involved.	[4]
Q.3(c)	Write short note on different generation of DNA sequencing technique.	[6]
Q.4(a)	Differentiate between a Mab and chimerized Mab.	[2]
Q.4(b)	Explain the Hybridoma Technology in detail.	[4]
Q.4(c)	Ellaborate on Rituximab as genetrically engineered Mab and its application.	[6]
Q.5(a)	What are oncogenes?	[2]
Q.5(b)	What are the different factors to cause cancer? Illustrate the schematic representation for cancer development.	[4]
Q.5(c)	What is a pro-drug? Explain its utility in cancer treatment with suitable example.	[6]
Q.6(a)	What is meant by Gene Therapy? How is it classified?	[2]
Q.6(b)	What is the difference between a transgenic and a knock-out mice?	[4]
Q.6(c)	What is a Knock-out mice? Explain the steps involved in its generation.	[6]
Q.7(a)	What are genetically engineered pharmaceuticals?	[2]
Q.7(b)	Give the general schematic representation of biopharmaceutical formation from microorganism.	[4]
Q.7(c)	Demonstrate the synthesis of recombinant biopharmaceutical Humulin with suitable illustration.	[6]

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