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Or

Explain biotechnological approach for drug designing.

- (D) What do you mean by biological inhibitors in drug designing ? 12

Or

Give detail account on pharma and biology with their applications.



Roll No.

Total No. of Sections : 4

Total No. of Printed Pages : 4

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III Semester Examination

M.Sc.

BIOTECHNOLOGY

Paper I

[Instrumentation, Nanobiotechnology and Drug Designing]

Time : Three Hours]

[Maximum Marks : 80

[Min. Passing Marks : 16

Note : Part A and B of each question in each unit consists of Very Short Answer Type Questions which are to be answered in one or two sentences. Part C (Short Answer Type) of each question will be answered 200-250 words. Part D (Long Answer Type) of each question should be answered within the word limit 400-450.

Unit-I

1. (A) What is the principle of HPTLC ? 2
- (B) What do you mean by centrifugation ? 2
- (C) Describe UV visible spectroscopy. 4

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Explain Physico Chemical technique.

- (D) Describe principle and application of HPLC in detail with diagram. **12**

Or

Give detail account on Electron spin resonance.

Unit-II

2. (A) What do you understand by specimen ? **2**
(B) What is AFM ? **2**
(C) Describe X-Ray diffraction and their uses in Biology. **4**

Or

How you will explain crystals and their symmetries ?

- (D) Describe principle and application of lyophilization in detail. **12**

Or

Differentiate TEM and SEM with detail account.

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Unit-III

3. (A) Mention four uses of nanoparticle. **2**
(B) Mention the existence of nanobiotechnology. **2**
(C) Describe thin film of nanowires and their uses. **4**

Or

What is the role of nanoparticle in drug delivery ?

- (D) Explain nanoparticle characterization in detail. **12**

Or

Give detail account on biological production of nanoparticle.

Unit-IV

4. (A) What is chemistry of drug designing ? **2**
(B) Mention social impact of Drug. **2**
(C) List few examples of biological drugs. **4**

[3]

P. T. O.