

No. of Printed Pages : 04

Roll No.

18BB1454

M. Tech. EXAMINATION, 2020

(Second Semester)

(C Scheme) (Re-appear)

BIOTECHNOLOGY

BT524C

Biotechnology in Health Care

Time : 2½ Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Four* questions in all. All questions carry equal marks.

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1. (a) Describe, how acid-fast bacilli able to grow in macrophage. Explain the diagnosis and treatment of disease caused by acid fast bacilli.
(b) What do you mean by endotoxin ? Explain its biological significance.
2. (a) Discuss different factors that help in bacterial adhesion on the cell surface.
(b) Depict the replicative cycle of HIV virus and explain retroviral therapy for treatment of HIV infection.
3. (a) What is major histocompatibility complex ? Justify its importance in immune system.
(b) Differentiate between cytotoxic and delayed type Hypersensitivity by citing specific examples.
4. Write in details about autoimmune disease and its classification by citing examples of each class.

5. Write in detail the mechanism of RNAi in plant and its future applications.
6. Write short notes on the following :
 - (a) Radiosensitizer agent
 - (b) Bacterial polysaccharide-protein Vaccine
 - (c) Ribozyme.
7. (a) How does repetitive sequence help in predicting the disease state of subject. Justify by citing examples.
 - (b) What are different sites of action of antifungal drugs on fungi by citing examples in each case ?
8. (a) What are ACE inhibitors and its importance ? Explain its mechanisms of action.
 - (b) Write therapeutic uses of synthetic sex analogs by giving examples.

9. Explain the following briefly (Do any *five*) :

- (i) IgM
- (ii) Dimorphic fungi
- (iii) DICER
- (iv) Anticoagulant agent
- (v) Transgene
- (vi) Sanger Sequencing.