

[This question paper contains 2 printed pages.]

**Your Roll No.....**

**Sr. No. of Question Paper : 6559**

**L**

Unique Paper Code : 2534001205

Name of the Paper : Microbial Products in Therapeutics (GE)

Name of the Course : **B.Sc. (Hons.) Microbiology**

Semester/Part : UGCF-NEP, -II/I

Duration : 2 Hours

Maximum Marks : 60

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **5** questions.
3. **All** questions carry equal marks.

Q1. a) Describe the different sources of industrially important microorganisms. Name two industrially important microorganisms. 4+2=6

b) What is bacteriotherapy through microbiota transplantation? Explain its importance and applications. 6

Q2. Name the producer organisms and mode of action the following antibiotics (Any four):

- a. Penicillin
- b. Griseofulvin
- c. Erythromycin
- d. Vancomycin
- e. Cephalosporin 3x4=12

Q3. a.) Differentiate between the following: 4x2=8

- i.) Primary screening and secondary screening
- ii.) Batch and fed-batch fermentation

b.) What is Antimicrobial Resistance (AMR)? Explain its causes and significance. 4

*P.T.O.*

Q4. Write short notes on the following (**Any three**):

4x3=12

- i.) Solid state fermentation
- ii.) Tissue plasminogen activator
- iii.) Biopharmaceuticals
- iv.) Probiotics

Q5. Name the producer microorganisms and uses of the following (**Any four**):

3x4=12

- i. Amylase
- ii. Nattokinase
- iii. Collagenase
- iv. Asparaginase
- v. Lysozyme

Q6: a.) Describe the microbial transformation of a steroid by dehydrogenation. Discuss its advantage over chemical methods.

6

b.) Diagrammatically explain the working and principle of Continuously Stirred Tank Reactor (CSTR).

6

**OR**

Explain enzybiotics in detail. Discuss the mode of action, applications, and producer microorganisms of bacteriocins.

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