

**2203000206026005**  
**EXAMINATION FEBRUARY-MARCH 2024**  
**BACHELOR OF SCIENCE (SIXTH SEMESTER)**  
**MICROBIOLOGY-XXI**  
**MB-605-MICROBIAL PRODUCTS-LEVEL 2**

[Time: As Per Schedule]

[Max. Marks: 50]

**Instructions:**

**1. Fill up strictly the following details on your answer book**

- a. Name of the Examination : **BACHELOR OF SCIENCE (SIXTH SEMESTER)**
- b. Name of the Subject : **MICROBIOLOGY-XXI MB-605-MICROBIAL PRODUCTS-LEVEL 2**
- c. Subject Code No : **2203000206026005**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

**Q.1 Give Specific answers**

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- a) Name the ring system present in the basic structure of Vitamin B12.
- b) What are Interferons?
- c) Name any two microorganisms used as biofertilizers.
- d) What are bioinsecticides?
- e) Give the full forms of i) MEOR ii) SCP
- f) State any two algal species which possess hydrogenase enzyme.
- g) Give the advantages of using immobilized enzymes.
- h) What are Whole Cell Biosensors?

**Q.2 Explain/comment on any two of the following**

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- a) Submerged process is widely used for Citric acid production.
- b) Many fungal species are used to control weeds and are advantageous over chemical herbicides.
- c) Bioethanol production can be achieved by using various substrates.

**Q.3 Discuss any two of the following.**

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- a) Give a detailed account on Human Growth Hormone.
- b) Describe in detail with a fine labelled diagram: Anaerobic digestion for biogas production
- c) Discuss various processes involved in large scale enzyme production.

**Q.4 Write short notes on any two of the following.**

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- a) Biosynthesis of L-glutamic acid using glucose as the carbon source
- b) Bacteria as an effective biocontrol agent
- c) Applications of Biosensors

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