

M.Sc.(Microbiology) (NEP Pattern) Semester-I  
**NEP-73 / 01MSCMB03 - Paper-III : Commercial Microbiology**

P. Pages : 1

Time : Three Hours



**GUG/W/24/15127**

Max. Marks : 80

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- Notes : 1. All questions are compulsory.  
2. Draw diagrams wherever necessary.

- 1.** Give detail account on various geomicrobiological methods of ore and petroleum products. **16**

**OR**

- a) Describe oil recovery process using aqueous microbiological drive fluids. **8**  
b) Discuss about an apparatus for the detection of living microbial contaminants in petroleum products. **8**

- 2.** Discuss in detail about the microbial production of alpha Arbutin and Hyaluronic Acid and their use in cosmetics preparations. **16**

**OR**

- a) Give an account on the preparations of skin whitening from various microbes. **8**  
b) How the monitoring of astronaut's microbial flora is done? **8**

- 3.** Discuss in detail about antimicrobial fabrics and antimicrobial garment. **16**

**OR**

- a) Explain about antimicrobial currency in detail. **8**  
b) Describe about antimicrobial papers in detail. **8**

- 4.** Explain about microbiology of rubber. **16**

**OR**

- a) Discuss about the production of antiseptic plastics. **8**  
b) Describe the production of plastic materials from microorganisms. **8**

- 5.** Describe the following:

- a) Microbiological oil prospecting. **4**  
b) ESA STONE experiment. **4**  
c) Antimicrobial colorants. **4**  
d) Antimicrobial rubbers. **4**

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