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NB—11—2023

FACULTY OF SCIENCE

B.Sc. (Second Year) (Fourth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New Pattern)

BIOTECHNOLOGY

(Applied and Medical Microbiology)

(Saturday, 02-12-2023)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.L. :- (i) All questions are compulsory.

(ii) Draw neat and well labelled diagrams if necessary.

1. Describe in detail different types and importance of microorganisms present in soil. 15

Or

(a) Describe procedure and applications of MPN test. 8

(b) Explain IMViC test and comment on its significance. 7

2. Explain in detail symbiotic and non-symbiotic nitrogen fixation. 15

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(2)

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Or

- (a) What are the main parts and functions of phosphorus cycle ? 8
- (b) What are the *five* main processes of the carbon cycle ? 7
3. Define epidemiology and describe in detail sporadic, endemic and pandemic diseases. 15
- Or*
- (a) What are the characteristics of opportunistic pathogens ? 8
- (b) Describe types and symptoms of nosocomial infections. 7
4. Describe in detail pathogenesis, symptoms, diagnosis, preventive measures and chemotherapy for Tuberculosis. 15
- Or*
- (a) Write symptoms and chemotherapy for Typhoid. 8
- (b) Write pathogenesis and preventive measures of Malaria. 7
5. Write short notes on (any *three*) : 15
- (i) Diagnosis and chemotherapy for cholera
- (ii) Virulence factors
- (iii) Food preservation techniques
- (iv) Sulphur cycle
- (v) Swine flu : Causes and symptoms.

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