

**B. SC. BIOCHEMISTRY**  
**Second Semester**  
**Microbiology-II**  
**(BBC- 07)**

**Duration: 3Hrs.**

**Full Marks: 70**

**(PART-B: Descriptive)**

**Duration: 2 hrs. 40 mins.**

**Marks: 50**

**1. Write scientific definition of the following terms:**

**2x5= 10**

- a) Pedogenesis
- b) Rhizosphere effect
- c) Food preservatives
- d) Eutrophication
- e) Food spoilage

**2. Answer any two questions from the following**

- a) Define phyllospheric microbes. Add a brief note on the importance of phyllosphere and phylloplane microbes in plant life. **2+4=6**
- b) Discuss the various phases of bacteriological analysis of water for determination of fecal contamination. **6**
- c) What is tinea? Add a brief note on such dermatological infection occurring in man. **2+4=6**

**3. Answer any two questions from from the following**

- a) Discuss the industrial production process of Penicillin mentioning the important factors involved in the process. **5+5=10**
- b) What important purpose a successful preservation method should fulfill? Discuss briefly the various methods employed for preservation of food materials. **2+8=10**

- c) Discuss the major symptoms of Hepatitis in men. What are the important method diagnosis for detection of this disease. Give a brief note on the preventive measures for Dengu.

**3+4+3=10**

**4. Write brief notes on the following (any two):**

**2x4=8**

- a) Soil Horizon (with diagram)
- b) Dermatophytes
- c) Cesspools (with diagram)
- d) Physical properties of soil
- e) Factors affecting aero-microbial distribution
- f) Milk-borne diseases in man
- g) Structure of HIV (with diagram)

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vi. Ramp-variation is a method of \_\_\_\_\_.

- a) Composting
- b) Bioremediation
- c) Liquid waste treatment
- d) Sanitary landfill

vii. When a food material has been altered from the expected normal form, it is known as \_\_\_\_\_ of food.

- a) Fermentation
- b) Spoilage
- c) Pasteurization
- d) none of the above

viii. Microbe surviving heat of pasteurization are capable of milk spoilage and are known as \_\_\_\_\_.

- a) thermophilic
- b) thermoduric
- c) heat tolerant
- d) all of the above

ix. \_\_\_\_\_, a form of ring worm in nails is also known as onychomycosis.

- a) Tinea pedis
- b) Tinea unguium
- c) Tinea facie
- d) Tinea cruris

x. Self-decomposition of food is prevented by inactivating the enzymes in food by a process called \_\_\_\_\_.

- a) asepsis
- b) blanching
- c) radiation
- d) lyophilization

xi. Some food materials are preserved by adding salt or sugar to them. This method applies the principle of \_\_\_\_\_.

- a) Osmosis
- b) Filtration
- c) Radiation
- d) Lyophilization

xii. Cereal is an example of \_\_\_\_\_ food product.

- a) semi-perishable
- b) highly-perishable
- c) none-perishable
- d) none of the above

xiii. *Black-rot* of egg is caused by \_\_\_\_\_.

- a) *Pseudomonas* spp.
- b) *Salmonella* spp.
- c) *Proteus* spp.
- d) *Serratia* spp.

xiv. Chemical used in *reductase test* of dairy product is \_\_\_\_\_.

- a) resazurin
- b) disodium-phenyl phosphate
- c) methyl red
- d) none of the above

xv. Granite is an example of \_\_\_\_\_ rock.

- a) Ingenous
- b) Sedimentary
- c) Metamorphic
- d) none of the above

xvi. \_\_\_\_\_ is known as Hansen's bacillus.

- a) *Mycobacterium Laparae*
- b) *Mycobacterium bovis*
- c) *Mycobacterium kansassii*
- d) *Mycobacterium tuberculae*

xvii. Increase in nutrients like nitrates and phosphates leads to the problem of eutrophication. It is an example of \_\_\_\_\_ pollution.

- a) physical
- b) chemical
- c) biological
- d) none of the above

xviii. *Uncaria tomentos* (cat's claw) extract is claimed to be an elusive cure for \_\_\_\_\_.

- a) Hepatitis
- b) Dengu
- c) Aids
- d) Bird flu

xix. Floating materials in sewage are removed during \_\_\_\_\_.

- a) primary treatment
- b) secondary treatment
- c) tertiary treatment
- d) preliminary treatment

xx. Some food materials are preserved by adding salt or sugar to them. This method applies the principle of \_\_\_\_\_.

- a) Type A
- b) Type B
- c) Type C
- d) Type D

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