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[27/A-15]

SEAT No. \_\_\_\_\_

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY  
B.Sc. MICROBIOLOGY  
Semester -IV  
USO4CMIC01 General Microbiology

Date 08/04/19 *Monday*  
Time: 10:00a.m. to 1:00 p.m.

Total Marks :70

**Q:1 Multiple choice Questions:** 10

1. ....filter is used for sterilization of air  
a) Candle                      b) Membrane                      c) HEPA                      d) Seitz
2. .... is used as chemical vapour to sterilize air at a room temperature.  
a) Propylene glycol      b) Alcohol      c) HgCl<sub>2</sub>      d) none of this
3. Bacteria multiply in bloodstream and produce toxic products is a condition known as.....  
a) bacilluria      b) bacteremia      c) septicemia      d) all of these
4. Large intestine has .....microbial population.  
a) less than 100      b) less than 1000      c) nil      d) large number of
5. Fractional sterilization means .....  
a) incomplete sterilization      b) sterilization of fraction of the material  
c) sterilization on 3 successive days with incubation period in between  
d) sterilization of the material using more than one mechanism.
6. Use of ionizing radiation to sterilize biological materials is known as.....  
a) incineration      b) desiccation      c) cold sterilization      d) Tyndallisation.
7. Cationic detergent has detergent property in..... portion of the molecule.  
a) Negatively charged      b) positively charged      c) uncharged      d) aqueous
8. Formaldehyde gas polymerises to form colorless solid substance at .....  
a) low temperature      b) 37°C      c) above 55°C      d) high concentration
9. .... has been used in space programme by American and Soviet scientists for decontaminating spacecraft components.  
a) B-propiolactone      b) Ethylene oxide      c) formaldehyde      d) Gluteraldehyde
10. Macrophages are.....  
a) Animal viruses      b) plant viruses      c) bacterial viruses      d) Phagocytic WBC

**Q:2 Answer in brief ( any ten):** 20

1. Define LD 50.
2. List two components of micro organisms that are responsible for adherence to host tissue.
3. Define secondary infection.
4. What is Lyophilization?
5. Mention principle of hot air oven and write its application.
6. Write two characteristics of industrially important organisms
7. Define droplet nuclei.
8. Give two examples of air borne disease with its causative agent.
9. Explain in brief: mechanism of action of heavy metals as antimicrobial agent.
10. Define: bactericidal and bacteriostatic agent.

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11. Mention limitations and advantages of B-propiolactone as an antimicrobial agent.
12. Enlist major physical agents/ processes used for the control of micro organisms.
- Q:3 a) Explain enumeration of air micro organisms . 06  
b) Draw a labeled figure of "typical fermentor". 04  
**OR**
- Q:3 a) Write a note on: control of air borne micro organisms. 06  
b) Explain role of micro organisms at industrial level. 04
- Q:4 a) Explain normal flora distribution of intestinal tract of human body 06  
b) Compare characteristics of exotoxin and endotoxin 04  
**OR**
- Q:4 Explain mechanism of action of Exotoxins 10
- Q:5 a) Explain use of high temperature under pressure as antimicrobial technique 06  
b) Explain briefly: use of incineration for control of growth of micro organisms. 04  
**OR**
- Q:5 a) Explain sterilization using radiations 06  
b) Write a note on bacteriological filters 04
- Q:6 Explain characteristics of an ideal antimicrobial chemical agent. 10  
**OR**
- Q:6 Describe phenol coefficient method and mention its importance. 10

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