14–Operation Theater Technician

Time Allowed: 3 Hours **Total Marks: 100**

Objective - Section A (25 Min.)

1. Operation theater did not exist till:
A. 60 AD
B. 65 AD
C. 110 AD
D. 180 AD

2. Which microorganism is responsible for causing dental cavities?
A. Streptococcus mutans
B. Escherichia coli
C. Staphylococcus aureus
D. *Bacillus subtilis*

3. What is the function of the enzyme DNA polymerase in DNA replication?
A. Unzipping DNA strands
B. Synthesizing new DNA strands
C. Repairing damaged DNA
D. Breaking down DNA

4. The cells which originate in the bone marrow and develop in the thymus are:
A. B-cells
B. Plasma cells
C. T-cells
D. Platelets

5. An example of autoimmune disease is:
A. Type I diabetes
B. Type II diabetes
C. Gestational diabetes
D. Diabetes insipidus

6. Keeping the objects and areas 'sterile'/free from all organisms is called:
A. Sterilization
B. Disinfection
C. Surgical asepsis
D. Autoclaving

7. Thermometers should be washed in warm water, dried and wiped with a swab soaked in:
A. 30% isopropyl alcohol
B. 70% isopropyl alcohol
C. Concentrated alcohol
D. Concentrated bleach

8. Which of the following is a characteristic feature of prokaryotic cells?
A. Nucleus
B. Membrane-bound organelles
C. DNA in a circular form
D. Cellulose cell wall

9. Formaldehyde gas for sterilization is produced by heating formalin to a temperature of:
A. 70-75° F
B. 90-95° F
C. 70-75° C
D. 90-95° C

10. Depth of illumination is the distance under the light emitting area where the illumination reaches _____ of central illuminance.
A. 20%
B. 30%
C. 40%
D. 50%

11. LED lighting can have a long life of up to _____ hours.
A. 50,000
B. 60,000
C. 70,000
D. 80,000

12. Which of the following is a fungal infection?
A. Tuberculosis
B. Gonorrhea
C. Candidiasis
D. Tetanus

13. What is the purpose of using a biological indicator in sterilization processes?
A. Monitor temperature
B. Confirm sterility
C. Measure humidity
D. Ensure proper packaging

14. What is the recommended storage condition for sterile supplies in O.T.?
A. Refrigeration
B. Room temperature
C. Direct sunlight
D. High humidity

15. What is the purpose of a laminar airflow system in the operating room?
A. Maintain humidity
B. Enhance lighting
C. Control airborne contaminants
D. Monitor temperature

16. Which of the following is a critical item in the operating room that requires sterilization?
A. Bed linens
B. Surgical gowns
C. Patient charts
D. Stethoscope

17. Packaging commonly used for sterilizing surgical instruments in autoclave:
A. Plastic bags
B. Glass containers
C. Paper wraps
D. Aluminum foil

18. Due to high degree of integration between gas delivery system, ventilator and monitor, it is possible to deliver _____ accurately.
A. Oxygen flush
B. Tidal volume
C. Exact dose
D. Gas flow

19. Source of direct lighting would be:
A. Double, scattered light
B. Double, concentrated light
C. Single, concentrated light
D. Single, scattered light

20. What is the purpose of a sterile indicator tape in the autoclave?
A. Measure temperature
B. Indicate exposure to ethylene oxide
C. Confirm proper sealing of packages
D. Assess humidity levels

Short Questions - Section B

Each question carries 2 marks. Attempt any 25 questions.

Q1. What is immunity? Name its types.
Q2. What is sterilization?
Q3. Write 4 general instructions for autoclaving.
Q4. Enlist important medical microorganisms.
Q5. Write down 2 methods of chemical sterilization.
Q6. Write down requirements of surgical lights.
Q7. What is shadow less lighting?
Q8. What should be the general equipment maintenance requirements?
Q9. What is a defibrillator?
Q10. Name modes of reproduction in bacteria.
Q11. What is *Rickettsia*? Describe its importance.
Q12. Name diseases caused by *Chlamydiae*.
Q13. Enumerate characteristics of Spirochetes.
Q14. Is virus a living organism?
Q15. What type of common diseases do Protozoa cause?
Q16. What are the characteristics of fungi?
Q17. Why chemotherapy is done?
Q18. List down 5 potent chemotherapeutic agents.
Q19. What is immunology?
Q20. What are resistance factors with reference to immunity?
Q21. How environmental cleanliness is ensured in O.T.?
Q22. What is the importance of radiation in sterilization?
Q23. Name detergents used in sterilization.
Q24. What is scrubbing with reference to O.T.?
Q25. What are the methods of draping?
Q26. How infusion is administered?
Q27. What type of lamps are used in O.T.?
Q28. Briefly explain indirect lighting.
Q29. What is direct lighting?
Q30. Name any 2 important electro-medical equipment used in O.T.
Q31. What types of sterilizers are used in O.T.?

Long Questions - Section C

Each question carries 15 marks. Attempt any 2 questions.

Q1. a. What is an anesthesia machine? Describe its key components/parts. (10)

b. What is a cardiac monitor? Discuss its components. (5)

Q2. a. What are the differences between sterilization and disinfection? Discuss in detail. (10)

b. Discuss any 2 blood groups and their importance in transfusion. (5)

Q3. a. Enlist 2 common diseases caused by viruses. How these can be prevented and controlled? (10)

b. Diseases caused by Fungi with reference to O.T.(5)