

**B.Sc. MICROBIOLOGY
FIFTH SEMESTER
MEDICAL MICROBIOLOGY
BMB-501
[USE OMR FOR OBJECTIVE PART]**

**SET
B**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. If an organism persists but remain inactive for long period of time usually for years is known as:
 - a. Intermittent latency
 - b. Quiscent latency
 - c. Reservoir
 - d. None
2. In toxigenicity AB represents as:
 - a. A -Binding subunit, B- Toxic
 - b. AB toxic effect
 - c. A- Toxic, B- Binding subunit
 - d. AB- Binding subunit
3. Infection disease cycle represents as:
 - a. Source of the pathogen-Susceptibility of the host-Transmission to the host-source of the pathogen-Exit
 - b. Susceptibility of the host-Transmission to the host-Source of the pathogen-the pathogen-Exit
 - c. Transmission to the host-source of the pathogen-Susceptibility-pathogen-Exit
 - d. The Pathogen-Source of the pathogen-Transmission to the host-Susceptibility of the host-Exit
4. HIV, RUBELLA,TORCH diseases can be diagnosed by:
 - a. RIA
 - b. Complement Fixation
 - c. ELISA
 - d. Immunodiffusion
5. Antigens are separated based on their electrical charge:
 - a. Immunoelectrophoresis
 - b. Immunofluorescence
 - c. Immunodiffusion
 - d. ELISA
6. Methicillin-resistant Staphylococcus aureus (MRSA):
 - a. Is usually sensitive to vancomycin
 - b. Is more likely to cause deep-seated infection
 - c. Is often resistant to many antistaphylococcal antibiotics
 - d. May cause asymptomatic colonisation
7. The first ever instance of AIDS was reported in:
 - a. France
 - b. USA
 - c. Russia
 - d. None of the above
8. The infective stage of malaria parasite, Plasmodium that enters human body is.....
 - a. Merozoite
 - b. Trophozoite
 - c. Sporozoite
 - d. Minuta form
9. The mode of action of Quinolone is to:
 - a. Disrupt the cell wall
 - b. The protein synthesis
 - c. Replication
 - d. Folic acid synthesis

10. Find out the Beta Lactam antibiotics from the following.
 - a. Penicillin
 - b. Methicillin
 - c. Carbencillin
 - d. All
11. Complement Fixation was once used in the detection of:
 - a. Tuberculosis
 - b. Jaundice
 - c. Hepatitis
 - d. Syphilis
12. A hosts microbiota can cause disease due to drop in resistance is known as:
 - a. Toxigenicity
 - b. Endogenous Disease
 - c. Ectogenous Disease
 - d. Infection
13. Fever Blisters is an example of:
 - a. Endogenous disease
 - b. Quiescent latency
 - c. Intermittent latency
 - d. Toxigenicity
14. A positive pregnancy test indicates the following:
 - a. HCG mixed with a solution of antibody and agglutination takes place
 - b. Latex microsphere binds to the HCG antibody thereby inhibits agglutination
 - c. Latex microsphere agglutinated by HCG antibody
 - d. All
15. Which of the following technique is known as Mancini Technique?
 - a. ELISA
 - b. Complement Fixation
 - c. RID
 - d. Immunofluorescence
16. Which of the following properties is a characteristic of tetanospasmin?
 - a. It is a botulinum toxin
 - b. It is an enzyme
 - c. It is a neurotoxin
 - d. It is a diphtheria toxin
17. Which organ is majorly affected by hepatitis?
 - a. Heart
 - b. Kidneys
 - c. Liver
 - d. Brain
18. Which one of the following is not the characteristic of histoplasmosis?
 - a. Specific geographic distribution
 - b. Mycelial phase in the soil
 - c. Yeasts in tissue
 - d. Person to person transmission
19. Malignant tertian malaria parasite, belongs to class:
 - a. *Plasmodium vivax*
 - b. *P. falciparum*
 - c. *P. malariae*.
 - d. *P. ovale*
20. The causative agent of Tuberculosis:
 - a. Salmonella
 - b. Mycobacterium
 - c. Shigella
 - d. Proteus

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Explain the mechanism of Diphtheria toxin with a neat diagram. 10
2. a) Define Toxigenicity. 10
b) Find out the rate of infectious disease if the number of organism present is 200 with virulence rate 80 and host resistance rate is 20.
c) Explain the mode of antigenicity and Binding toxins with a neat diagram.
3. Define chemotherapy. Explain the mode of infection of drugs which inhibits the replication on microorganisms. 10
4. Define Agglutination. Explain the mechanism of Viral Hemagglutination with a neat diagram. 10
5. a) What is hepatitis explain in brief? How does a person know if he or she is infected with hepatitis A virus? 2+2+6=10
b) Briefly explain the clinical manifestations, mode of transmission, diagnosis, prophylaxis and control of Hepatitis A.
6. Describe the causative agent and pathogenesis Dengue with reference to current data. 10
7. What are the two types of ELISA methods and how do they work? What is a chromogen? 5+5=10
8. Three standard solutions of different antigen concentrations (Ag1: 10mg/dl, Ag2: 50mg/dl and Ag3: 200mg/dl) are plate on the agar and an unknown (AgX) are placed on the agar. Find out the diameter of the unknown antigen with a neat diagram. 2+8=10

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