

APPLIED MICROBIOLOGY AND INFECTION CONTROL INCLUDING SAFETY

Time: 3 Hours

Max Marks: 75

Note: Give Diagrammatic representation wherever necessary

PART-A

(Applied Microbiology) 37 Marks

Choose the correct answer for the following MCQs

6 X 1 = 6

1. Who discovered microscope first time
 - a) James paget
 - b) Null and ruska
 - c) Anton Van Leeuwenhoek
 - d) Kircher
2. Presence of pathogenic bacteria in blood is known as
 - a) Toxemia
 - b) Septicemia
 - c) Bacteremia
 - d) All the above
3. Bacteria with helically curved rods are known as
 - a) Cocci
 - b) Bacillus
 - c) Pleomorphic
 - d) Spirilla
4. The protein that makes up hooks and filaments of flagella is called
 - a) Keratin
 - b) Gelatin
 - c) Flagellin
 - d) Casein
5. In ayurveda, which disease is called Vishuchika
 - a) Chicken pox
 - b) Small pox
 - c) Cholera
 - d) Diphtheria
6. Monocytes differentiate into which kind of phagocytic cells
 - a) Neutrophil
 - b) B cell
 - c) Macrophage
 - d) T cell

Write an essay on any ONE of the following:

1 X 10 = 10

7. Discuss in detail the contributions of Louis Pasteur in the field of microbiology.
8. Write about structure and classification of Microbes.

Write a short note on any THREE of the following:

3 X 5 = 15

9. Immunization schedule.
10. Serological tests – explain.
11. Differentiate between prokaryotes and eukaryotes.
12. Scope of microbiology.

Write briefly on the following:

3 X 2 = 6

13. Cocci.
14. Streak plate.
15. Name four genetic diseases.

PART-B

(Infection Control including Safety) 38 Marks

Choose the correct answer for the following MCQ

7 X 1 = 7

16. MRSA Stands for
- | | |
|--|------------------------------------|
| a) Multiple Resistant Organisms | b) Methicillin Resistant S. Aureus |
| c) Multiple Drug Resistant Staphylococci | d) Many drug resistant S. Aureus |
17. Alcohol based hand rub is the preferred method of hand hygiene
- | | |
|-------------------|--------------------|
| a) True | b) False |
| c) Partially true | d) Partially false |
18. What is the time duration for hand rub handwashing
- | | |
|-----------|-----------|
| a) 10 sec | b) 20 sec |
| c) 1 min | d) 2 min |
19. Which containment level is appropriate for handling microorganisms that pose the highest risk to laboratory personnel.
- | | |
|----------|----------|
| a) BSL 1 | b) BSL 2 |
| c) BSL 3 | d) BSL 4 |
20. Which of the following preservative is commonly used to preserve urine specimen.
- | | |
|---------------|----------------------|
| a) Boric acid | b) Ethyl alcohol |
| c) Formalin | d) Hydrogen peroxide |
21. Which of the following is categorized as an integration waste
- | | |
|---------------------|--------------------|
| a) Incineration ash | b) Animal waste |
| c) Solid waste | d) Cytotoxic drugs |
22. The negative consequences of antibiotic overuse and misuse are called-
- | | |
|-----------------------|-------------------------|
| a) Consequent Damage | b) Collateral damage |
| c) Concomitant damage | d) Consequential damage |

Write an essay on any ONE of the following:

1 X 10 = 10

23. Discuss in detail about HAI.

24. Define Disinfection. Types of Disinfection and sterilization.

Write a short note on any THREE of the following:

3 X 5 = 15

25. HAZMAT.

26. Transportation of samples- elaborate.

27. Discuss about waste minimization options.

28. Explain briefly about prevention of MRSA and MRDO.

Write briefly on the following:

3 X 2 = 6

29. What is blood transfusion policy?

30. Expand MSDS.

31. Define needle stick injuries.
