



## B.Sc.(Hons) Nursing Second Year Examination, January 2024

Enrollment No. \_\_\_\_\_

Invigilator sign: \_\_\_\_\_

### SECTION C (MICROBIOLOGY)

#### INSTRUCTIONS:

- Section C should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one tick (✓) mark to only one answer that you consider correct for each question.
- Mark your tick (✓) in pen.

#### Multiple Choice Questions (MCQs):

[20×1=20]

1. Who described, for the first time, the importance of hand hygiene by lime and bleach, in preventing healthcare-associated infections?
  - a. Robert Koch
  - b. Ronald Ross
  - c. Louis Pasteur
  - d. Ignaz Semmelweis
2. The appropriate disinfectant for endoscope is –
  - a. 1% Sodium Hypochlorite
  - b. 99% Sulphuric acid
  - c. 2% Glutaraldehyde
  - d. 70% Ethanol
3. Which of the following is **not** a live vaccine?
  - a. MMR vaccine
  - b. Quadrivalent injectable Influenza vaccine
  - c. BCG vaccine
  - d. Chicken Pox vaccine
4. Which of the following is the most common cause of diarrhoea in infants?
  - a. Rotavirus
  - b. Escherichia coli
  - c. Vibrio cholerae
  - d. Entamoeba histolytica
5. Which of the following is **not** sexually transmitted?
  - a. Zikavirus
  - b. Hepatitis B virus
  - c. Hepatitis E virus
  - d. Herpes Simplex 2 virus
6. Which of the following is **not** a contact, droplet or airborne infection?
  - a. Zikavirus
  - b. Nipahvirus
  - c. Ebolavirus
  - d. SARS CoV 2
7. Which of the following cancer can be prevented by vaccination?
  - a. Uterine Cancer
  - b. Cervical Cancer
  - c. Breast Cancer
  - d. Prostate Cancer
8. Which of the pathogens are usually **not** transmitted by transplanted organs or transfused blood?
  - a. Toxoplasma
  - b. Malaria parasite
  - c. Syphilis treponemes
  - d. Free-living amoeba
9. How can you diagnose the presence of latent tuberculosis infection in a healthy, asymptomatic healthcare worker?
  - a. Sputum test for acid-fast bacilli
  - b. Tuberculin skin test
  - c. GeneXpert Cartridge based NAAT
  - d. MGIT rapid TB culture
10. Which of the following vaccines is **not** given by mouth?
  - a. Typhoid vaccine
  - b. Rotavirus vaccine
  - c. Polio Vaccine
  - d. Whooping cough vaccine

11. Which of the following bacteria causes antibiotic-associated diarrhoea?
- Clostridioides difficile
  - Clostridium perfringens
  - Clostridium botulinum
  - Escherichia coli
12. Which fungus is notorious for causing ICU-related infection, and is very difficult to eradicate from an ICU?
- Rhizopus oryzae
  - Sporothrix schenckii
  - Candida auris
  - Cryptococcus neoformans
13. Alcohol based Hand rub should **not** be used in which condition?
- Before touching patient
  - After touching patient
  - After touching patient's surrounding
  - Hands are visibly soiled
14. Choose the correct ones for the decreasing order of resistance to sterilization (Highest to Lowest resistance):
- Prions, Bacterial spores, Bacteria
  - Bacterial spores, Bacteria, Prions
  - Bacteria, Prions, Bacterial spores
  - Bacterial spores, Prions, Bacteria
15. Which of the following infections are **not** found in India?
- Japanese Encephalitis
  - Crimean Congo Haemorrhagic fever
  - Coccidioidosis
  - West Nile Fever
16. What is the window period for HIV infection?
- Infection to appearance of antibodies in blood
17. Infection to appearance of antigens in blood
- Infection to appearance of antigens in blood
  - Infection to appearance of symptoms
  - Infection to significant reduction of immunity
17. Rhino-orbital-cerebral Mucormycosis is caused by all **except** -
- Mucor
  - Rhizopus
  - Aspergillus
  - Rhizomucor
18. Which of the following mechanisms of antimicrobial resistance is **NOT** found in Gram negative bacteria?
- ESBL
  - MRSA
  - Carbapenem Resistance
  - Colistin Resistance
19. An outbreak of Typhoid fever has occurred in a hospital ward. Which of the following route is **not** responsible for transmission?
- Drinking water of the ward
  - Rats in the ward
  - Hand hygiene of the ward attendant
  - Food of the hospital
20. An AIDS patient with severe Cryptosporidium diarrhoea has passed stool in the bedpan of the medicine ward. Where shall you discard the stool from the bedpan?
- Red plastic bag
  - Yellow plastic bag
  - Black Plastic bag
  - Patient Toilet Commode



**All India Institute of Medical Sciences, Kalyani**

**B.Sc. (Hons) Nursing Second Year Examination, January 2024**

**Time: 3 Hrs.**

**MICROBIOLOGY**

**Marks: 75**

**INSTRUCTIONS:**

- Draw diagram wherever necessary

**SECTION-A**

Answer any **THREE** of the following:

**[3×10=30]**

1. (2+4+1+3)
  - a. Define Disinfection and Sterilization.
  - b. Give examples of Physical and chemical methods of disinfection or sterilization.
  - c. What is the preferred method of sterilizing cotton-made linen items and gauge bandages routinely used for surgery?
  - d. Describe the principle of that method.
2. (2+5+3)
  - a. How will you differentiate between upper respiratory tract infections and lower respiratory tract infections?
  - b. What are the different viral and bacterial pathogens that cause respiratory tract infections?
  - c. Enumerate the different vaccines available to prevent different respiratory infections.
3. (5+5)
  - a. Enumerate and describe briefly the possible infectious risks for healthcare workers
  - b. How can you prevent nosocomial infections among the healthcare workers of a hospital?
4. (2+4+2+2)
  - a. What are the common sources of Pseudomonas, Acinetobacter, and rapidly growing non-tubercular Mycobacterium in an operation theatre or intensive care unit?
  - b. What are the common organisms in the intensive care units that are transmissible by the hands of healthcare workers and can be prevented by proper hand hygiene?
  - c. What do you mean by ESKAPE or ESCAPE pathogens?
  - d. Enumerate the most important mechanisms of antimicrobial resistance.

**SECTION-B**

Answer any **FIVE** of the following:

**[5×5=25]**

5. Active and Passive immunization.
  6. Autoimmunity and Hypersensitivity
  7. Biomedical Waste Management
  8. Staphylococcus
  9. COVID-19
  10. Varicella-Zoster Virus
  11. Opportunistic infections in the immunocompromised patients
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