

**Reg. No:** .....

**Third Semester B.Sc Nursing Degree Regular/Supplementary  
Examinations April 2025**

## Paper I – Applied Microbiology and Infection Control including Safety

**Time: 3 Hrs**

**Total Marks: 75**

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space • Answer all parts of a single question together
- Leave sufficient space between answers • Draw table/diagrams/flow charts wherever necessary
- Write section A and section B in separate answer books (32 Pages). Do not mix up questions from section A and section B.

## Section A – Applied Microbiology

**Q.P. CODE: 321010**

Max. Marks: 37

## 1. Multiple Choice Questions

**(6x1=6)**

**(Choose the most appropriate answer from the options given)**

**The Answers to MCQ questions (Q.No. i to Q.No. vi) shall be written continuously on the first writing sheet (ie Page No.3) only**

- i. Who is known as the "father of antiseptic surgery"  
a) Robert Koch                  b) Edward Jenner                  c) Louis Pasteur                  d) Joseph Lister
- ii. The cell wall of gram negative bacilli has  
a) Teichoic acid    b) Thick Peptidoglycan  
c) Lipopolysaccharide.                                      d) Mycolic acids
- iii. Which of the following is used in negative staining  
a) India ink                          b) Carbol fuchsin                  c) Crystal violet                  d) Sulphuric acid
- iv. What is the mode of transmission of hookworm  
a) Bite of mosquito  
b) Penetration of skin by larva  
c) Inhalation of spores  
d) Ingestion of contaminated food and water
- v. Which of the following is a yeast-like fungi  
a) Cryptococcus                  b) Candida                                  c) Rhizopus                          d) Aspergillus
- vi. Contact dermatitis is an example for which type of hypersensitivity  
a) Type I                                  b) Type II                                  c) Type III                              d) Type IV

## Essay

**(1x10=10)**

2. Discuss the morphology, modes of transmission and laboratory diagnosis of Human immunodeficiency virus. (2+)

## Short Notes

**(3x5=15)**

3. Describe the structure, properties and functions of IgM antibody.
4. Discuss the laboratory diagnosis of pulmonary tuberculosis.
5. Discuss Gram staining.

### Difference between the following

**(3x2=6)**

6. Amoebic Dysentery and Bacillary dysentery.
7. Active immunity and Passive immunity.
8. OPV and IPV (Oral polio vaccine and Injectable polio vaccine).

**(PTO)**

**Section B – Infection Control Including Safety**

**Q.P. CODE: 322010**

**Max. Marks: 38**

**1. Multiple Choice Questions**

**(7x1=7)**

**(choose the most appropriate answer from the options given)**

**The Answers to MCQ questions (Q.No. i to Q.No. vii) shall be written continuously on the first writing sheet (ie Page No.3) only**

- i. Which of the following is NOT a moist heat sterilization method
  - a) Incineration
  - b) Inspissation.
  - c) Autoclaving
  - d) Tyndallisation
- ii. Which of the following is NOT present in care bundle for Ventilator Associated Pneumonia (VAP)
  - a) Daily assessment of readiness to extubate
  - b) Daily oral care with chlorhexidine
  - c) Elevate the foot end of the bed between 30 to 45 degrees
  - d) Prophylaxis of peptic ulcer disease
- iii. Post exposure prophylaxis for HIV should be started within
  - a) 72 hours
  - b) 96 hours
  - c) 5 days
  - d) 1 week
- iv. The emergency code for bomb/suspicious bag is
  - a) Code black
  - b) Code purple
  - c) Code blue
  - d) Code red
- v. Yellow colored biohazard bag is used to segregate
  - a) Food waste
  - b) Anatomical waste
  - c) Sharps
  - d) Catheter tubings.
- vi. The protective anti-HBs antibody titre is more than or equal to
  - a) 0.1 mIU/mL
  - b) 1 mIU/mL
  - c) 5 mIU/mL
  - d) 10 mIU/mL
- vii. What is MRSA
  - a) Methicillin resistant Staphylococcus aureus
  - b) Most resistant Staphylococcus aureus
  - c) Methicillin requiring Staphylococcus aureus
  - d) Multidrug resistant Staphylococcus aureus

**Essay**

**(1x10=10)**

2. Define disinfection. Classify disinfectants with examples. Discuss any three classes of disinfectants.

**(1+3+6)**

**Short notes**

**(3x5=15)**

3. Discuss hand hygiene in detail
4. Describe the importance of antibiotic stewardship
5. Enumerate the international patient safety goals. Discuss any one of them.

**List the following**

**(3x2=6)**

6. Three best ways to protect oneself from radiation exposure
7. Two articles sterilized in hot air oven
8. Two measures to prevent DVT (Deep Vein Thrombosis)

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