

**The West Bengal University of Health Sciences**  
**B.Sc Nursing 3rd Semester March Examination, 2024**

**Subject: Applied Microbiology & Infection Control including Safety**

**Time: 3 Hours.**

**Full Marks: 75**

*Attempt all questions*

1. Pick up the right answer from the options given : 6 x 1
  - a) Who is called the "Father" of Modern microbiology?
    - i) Edward Jenner.    ii) Alexander Fleming.    iii) Robert Hooke.    iv) Louis Pasteur.
  - b) Which vaccine should be given at birth?
    - i) BCG Vaccine.    ii) MMR Vaccine.    iii) DT Vaccine.    iv) JE Vaccine.
  - c) Who is called the "Father of antiseptic Surgery"?
    - i) Louis Pasteur.    ii) Robert Koch.    iii) Joseph Lister.    iv) Edward Jenner.
  - d) Which of the following is not a live attenuated vaccine?
    - i) B.C.G Vaccine.    ii) MMR Vaccine.    iii) Measles Vaccine.    iv) DT Vaccine.
  - e) Which immunoglobulin is responsible for type I hypersensitivity?
    - i) IgA.    ii) IgM.    iii) IgE.    iv) IgG.
  - f) Reaction between a particulate antigen with its antibody is called :
    - i) Diffusion.    ii) Agglutination.    iii) Precipitation.    iv) Complement fixation.
  
2. Define Immunity. Write down the types of Immunity. Write down National Immunization Schedule. 2+2+6
  
3. Write short notes of **any three** of the following : 3 x 5
  - a) Size and form of bacteria.
  - b) Types of culture media.
  - c) Robert Koch.
  - d) Classification of Microbes.
  - e) Serological tests.
  
4. Write very short notes of **any three** of the following : 3 x 2
  - a) Hypersensitivity Reaction.
  - b) Cold chain.
  - c) Parasite.
  - d) Types of Vaccines.
  - e) Acquired Immunity.
  
5. Encircle the most suitable answer of the following questions : 7 x 1
  - a) Which of the following is a method of sterilization using dry heat?
    - i) Autoclave.    ii) Hot air oven.    iii) Insipissations.    iv) Pasteurisation.
  - b) Recommended Parameters for autoclave are :
    - i) 100°C, 10Psi, 10 minutes.    ii) 150°C, 15 psi, 15 minutes.
    - iii) 180°C, 10 Psi, 30 minutes.    iv) 121°C, 15 psi, 15 minutes.

**P. T. O.**

- c) Zoonosis means a disease spread by :
- i) Animal to Man.
  - ii) To and from man and animal.
  - iii) Man to Animal.
  - iv) None of the above.
- d) Mode of Transmission of Diseases :
- ii) Inhalation.
  - iii) Inoculation.
  - iii) Ingestion.
  - iv) All of the above.
- e) Standard precautions include :
- i) Appropriate use of PPE.
  - ii) Appropriate use of sharp instruments.
  - iii) Hand Hygiene.
  - iv) All of the above.
- f) Hospital acquired infection is also called :
- i) Iatrogenic Infection.
  - ii) Idiopathic Infection.
  - iii) Nosocomial Infection.
  - iv) Non pathogenic Infection.
- g) What is the commonest cause of urinary tract infection?
- i) Escherichia coli.
  - ii) Pseudomonas aeruginosa.
  - iii) Proteus mirabilis.
  - iv) Serratia species.

6. Define Sterilization. What are the difference between Disinfection and Sterilization? Write down on how to sterilize instruments, linens and rubber-goods after operation. 2+2+6
7. Write short notes of **any three** of the following : 3 x 5
- a) Principles of specimen collection.
  - b) Different modes of transmission of infection.
  - c) Universal precautions.
  - d) Prevention of urinary tract infection.
  - e) Importance of documentation.
8. Write very short notes of **any three** of the following : 3 x 2
- a) Color coded waste containers.
  - b) Importance of hand hygiene.
  - c) Transportation of sample.
  - d) Employee safety indicators.
  - e) Hospital Acquired Infection.