

APPLIED MICROBIOLOGY AND INFECTION CONTROL INCLUDING SAFETY

Instructions to the candidates:

1. Do not write anything on question paper except Roll Number, otherwise it shall be deemed as an act of indulging in unfair means and action shall be taken as per rules.
2. Use separate answer book for each section.

Duration: 3 Hours

Total Marks:=75

Section-A (Applied Microbiology)

Q. 1. Long/Essay type questions (Attempt any one): 1 x 10=10

1. Classify the bacteria with examples. Describe various methods of identification of bacteria.
2. Describe types of immunity. Explain various types of serological test.

Q. 2. Short notes (Attempt any three): 3x5=15

1. Relevance of microbiology to nursing.
2. Amoeba.
3. Culture media.
4. DNA viruses.

Q. 3. Very short questions (Attempt any three):

1. Cold chain.
2. Opportunistic mycotic infection.
3. Laboratory diagnosis of UTI
4. Vector born disease.

Q. 4. Answer the following MCQ:

1. The small pox vaccine was discovered by:

- a) Edward Jenner
- b) Joseph Lister
- c) Niels Jerne
- d) Paul Ehrlich

2. Active immunity is not acquired by:

- a) Vaccination
- b) Immunoglobulin transfer
- c) Infection
- d) Sub clinical infection

Q.3 Widal test is a type of:

- a) Precipitation reaction

- b) Agglutination reaction
- c) Neutralisation test
- d) Complement fixation test

Q.4 Tuberculin test is which type of hypersensitivity reaction?

- a) IgE type
- b) Cytolytic and cytotoxic type
- c) Immune complex
- d) Delayed type

Q.5 All of the following are oncogenic viruses except:

- a) Hepatitis A
- b) Papilloma
- c) Epstein-Barr
- d) HTLV-1

Q. 6 Which of the following enteric bacilli is non-motile:

- a) Salmonella
- b) E. Coll
- c) Klebsiella
- d) Proteus

Section-B (Infection Co Including Safety)

Q. 1. Long/Essay type questions (Attempt any one):

1. What is hospital acquired infection? Discuss measures to use for prevention of UTI and surgical site infection. <https://www.ruhsonline.com>
2. Describe methods of disinfection and sterilization in detail.

Q. 2. Short notes (Attempt any three):

1. Standard precaution for droplet infection.
2. Principles of specimen collection.
3. Colour coded waste containers.
4. Prevention of IV complications.

Q. 3. Very short questions (Attempt any three):

1. Personal Protective Equipment (PPE).
2. Steps of hand washing.
3. Post exposure prophylaxis for needle stick injury.
4. Prevention of multi drug resistant organism (MDRO).

Q. 4. Answer the following MCQ

1. Endoscopes are sterilised by:
 - a) Hot air oven
 - b) Autoclaving

- c) Glutaraldehyde
- d) Lysol

Q. 2 The sterilisation conditions required for autoclave are:

- a) 121 C temp. for 15 minutes
- b) 120 C temp. for 40 minutes
- c) 150 C temp, for 1 hour
- d) 100 C temp. for 2 hour

Q.3 Reasons for emergence of drug resistance in microorganisms include all the following except:

- a) Overuse and misuse of antibiotics
- b) Single antibiotic use for a long time
- c) Antibiotic cycling
- d) Over the counter supply

Q.4 Which of the following is not a standard precaution for infection control?

- a) Hand washing
- b) Proper disposal of hospital waste
- c) Cleaning and sterilization
- d) Immunization

Q.5 The colour code of plastic bag for disposing of microbial laboratory culture waste:

- a) Black
- b) Red
- c) Blue
- d) White

Q. 6. Which of the following is a high risk area that need supervision by infection control team?

- a) Emergency room
- b) Dental clinics
- c) ICU
- d) All of the above

Q.7 Gamma rays are used for sterilising all of the following except:

- a) Plastic syringes
- b) N 95 masks
- c) Infusion sets
- d) Metal instruments