BACHELOR OF SCIENCE (NURSING) (CBCS-2022)
B.SC. (NURSING) SEM-III : WINTER : 2023
SUBJECT : APPLIED MICROBIOLOGY & INFECTION CONTROL INCLUDING SAFETY

Day : Thursday | Time : 10:00 AM-01:00 PM
Date 25-01-2024 | **W-25871-2023** | Max. Marks : 75

N.B.:
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-A (37 Marks)

Q. 1 MCQ:

1. Which term refers to the minimum temperature at which a microbe can grow and reproduce?
a) Optimum temperature **b)** Maximum temperature
c) Minimum temperature **d)** Mesophilic temperature

2. How many daughter cells are produced at the end of mitosis?
a) Two **b)** Three
c) Four **d)** One

3. What is one of the most effective measures to prevent surgical site infections?
a) Administering prophylactic antibiotics
b) Increasing surgical time
c) Delaying wound closure
d) Using non-sterile instruments

4. What is the recommended duration for surgical hand scrubbing to reduce the risk of surgical site infections (SSIs)?
a) 5 seconds **b)** 15 seconds
c) 1 minute **d)** 5 minutes

5. Which microorganism is responsible for causing tuberculosis?
a) Mycobacterium tuberculosis **b)** Staphylococcus aureus
c) Streptococcus pyogenes **d)** Escherichia coil

6. Which of the following practices is essential for preventing catheter-associated urinary tract infection? (CAUTIs)
a) Using the same catheter for multiple patients
b) Ensuring the catheter is secured properly
c) Leaving the catheter in place indefinitely
d) Avoiding hand hygiene before catheter insertion

Q.2 LAQ: (ONE out of TWO) (10 Marks)

a) Write in detail about Hospital Acquired infection. **(04)**
b) Enlist preventive aspects of urinary tract infection. **(03)**
c) Describe methods to prevent Central line Associated Blood Stream Infection (CLABSI) **(03)**

OR

a) Classify active immunity and passive immunity. **(04)**
b) Why is maintaining the cold chain crucial for the storage and transport of certain products, especially in healthcare. **(03)**
c) Describe antigen and antibody reaction. **(03)**

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Q.2 LAQ: (ONE out of TWO) (10 Marks)

a) Define nosocomial infection. **(02)**
b) Write down six goals of international patient safety? **(03)**
c) Describe Spaulding's principle. **(05)**

OR

a) Define Occupational health. **(02)**
b) List down the patient safety indicators. **(03)**
c) Write in detail about prevention of IV complication. **(05)**

Q.3 Short Answer Questions: (THREE out of FIVE) **(15)**

a) Explain the importance of Equipment Cleaning.
b) What is the role of epidemiology in healthcare?
c) Explain the types of isolation.
d) Explain how nurse can contribute to reducing healthcare-associated infections (HAIs).
e) Write down importance of Antibiotic Stewardship.

Q.4 Very Short Questions: (THREE out of FIVE) **(06)**

a) List down three examples of when hand hygiene should be performed in a healthcare setting.
b) Describe the steps involved in donning (putting on) personal protective equipment.
c) Write down staff precautions in handling specimens.
d) Explain Environment cleaning in hospital.
e) Explain about the steam sterilization.

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Q.3 Short Answer Questions: (THREE out of FIVE) **(15)**

a) Describe Principles of Microbiology.
b) Explain Antimicrobial Resistance.
c) Describe different methods to identify Micro-organisms.
d) Describe hypersensitivity reaction.
e) Describe the protocol after needle stick injury in the hospital.

Q.4 Very Short Questions: (THREE out of FIVE) **(06)**

a) Enlist steps to improve effective communication.
b) Enlist preventive measures of fall of critically ill patient admitted in the Hospital.
c) Enlist types of specimens collected in the hospital.
d) Enlist disinfectants used in the hospitals.
e) Define Medical hand washing.

SECTION-B (38 Marks)

Q. 1 MCQ:

1. Factors influencing the nosocomial infection are
a) Patient susceptibility b) Microbial agent
c) Environment factors d) All the above

2. How many steps are there in effective hand washing?
a) 10 steps b) 7 steps
c) 8 steps d) 6 steps

3. In Ventilator Associated Pneumonia patient what is a standard angle of degree to which head end of the bed should be elevated?
a) 30 to 45 degree b) 40 to 50 degree
c) 60 to 90 degree d) 120 degree

4. A client is being admitted to a medical unit with a diagnosis of tuberculosis. Which type of room should be client assigned is by the nurse?
a) Private room b) Semiprivate room
c) Room with windows that can be opened d) Negative airflow room

5. A surgical client develops a wound infection during hospitalization. How is this type of infection classified?
a) Primary b) Secondary
c) Superimposed d) Nosocomial

6. A client has an infection that is spread through droplets. Which of the following is essential for the nurse to use when taking this client's temperature?
a) A mask b) Goggles
c) A gown d) Gloves

7. What is the most effective way to help prevent the spread of organisms?
a) Sterile techniques b) Medical asepsis
c) Use of ultraviolet properties d) Hand hygiene

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