

Source: Basic B.Sc. Nursing

Semester: Third

Subject: Applied Microbiology and Infection Control Including Safety

Course Code: MICR 201

Time Allowed: 03.00 Hrs.

Maximum Marks: 75

Paper ID: 2007

Note: Attempt all Questions. Draw well labelled diagrams wherever necessary. Mention question number properly before attempting any question. Do not separate answer copies for section A and section B.

**Section - A (45 Marks)**

**(Applied Microbiology)**

Q1 Multiple choice questions:

(a) Who has described the germ theory of life?

(i) Antoine van Leeuwenhoek

(ii) Robert Koch

(iii) Louis Pasteur

(iv) Paul Ehrlich

(b) The bacterial structure involved in motility is

(i) Ribosome

(ii) Mesosome

(iii) Pili

(iv) Flagella

(c) Diploidium form is transferred between bacteria by which of the following method?

- (i) Transformation
  - (ii) Transduction
  - (iii) Lysogenic conversion
  - (iv) Conjugation
- (d) The chemical nature of endotoxin is
- (i) Protein
  - (ii) Lipid
  - (iii) Carbohydrate
  - (iv) None
- (e) The smallest virus in size is
- (i) Poxvirus
  - (ii) Parvovirus
  - (iii) Herpesvirus
  - (iv) Adenovirus
- (f) All are non-bile stained eggs, except
- (i) Enterobius
  - (ii) Ancylostoma
  - (iii) Hookworm
  - (iv) Hymenolepis

Q2 Describe in detail the structure and function of the cell wall and cell membrane of gram-negative bacilli with the help of a diagram. (10 marks)

Q3 Write short notes on any three of the following: (3x5=15 marks)

- (a) Antibody Structure
- (b) Difference between Active and Passive Immunity
- (c) Difference between Endotoxin and Exotoxin
- (d) ELISA

Q4 Write very short notes on the following: (3x2=6 marks)

- (a) Use of Electron Microscope
- (b) Bacterial Cultivation
- (c) Acid fast staining

**Section - B (30 Marks)**

**(Infection Control Including Safety)**

Q5 Multiple choice questions:

- (a) Hand rub should not be used in which condition?
  - (i) Before touching patient
  - (ii) After touching patient's surrounding
  - (iii) After touching patient
  - (iv) Hands are visibly soiled
- (b) Which of the following is not a component of standard precautions?
  - (i) N95 respirator for TB patient
  - (ii) Hand Hygiene
  - (iii) Gloves during surgery
  - (iv) Wearing gloves during phlebotomy

(c) What are the PPE recommended for contact precautions?

- (i) Gloves and mask
- (ii) Gloves and gown
- (iii) Gown and mask
- (iv) Gown and goggles

(d) The most common organism responsible for catheter-associated urinary tract infection (CAUTI) is

- (i) Escherichia coli
- (ii) Klebsiella pneumoniae
- (iii) Enterococcus species
- (iv) Acinetobacter species

(e) Endoscope is sterilized by

- (i) Glutaraldehyde
- (ii) Autoclaving
- (iii) Formaldehyde
- (iv) Hot air oven

(f) Anatomical waste should be segregated in which color bags?

- (i) Yellow
- (ii) Green
- (iii) Red
- (iv) Black

(g) All are potentially highly infectious specimen for occupational injury, except

- (i) Blood

- (ii) CSF
- (iii) Semen
- (iv) Saliva

Q6 Define sterilization, describe all methods of sterilization in details.

Q7 Write short notes on any three of the following:

- (a) Torch infection
- (b) BMW
- (c) Nosocomial infection and its prevention
- (d) Autoclave

Q8 Write very short answers:

- (a) Hand hygiene
- (b) Donning and Doffing of PPE
- (c) CSSD

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