Library
Institute of Nursing
Brainware University
Barasat, Kolkata

BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc. Nursing-2023
Course Name – Applied Microbiology and Infection Control including Safety
Course Code - MICR201
(Semester III)

Full Marks : 75 **Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable. Write answer of Section – A and Section –B in separate Answer booklet.]

Section : A **Marks : 37**

Group-A
(Multiple Choice Type Question) 6 x 1=6

1. Choose the correct alternative from the following :

(i) Select the causative agent of tuberculosis.
a) Streptococcus pneumoniae b) Mycobacterium tuberculosis
c) Escherichia coli d) Staphylococcus aureus

(ii) Select in which domain do animals, plants, and fungi belong?
a) Bacteria b) Archaea
c) Eukarya d) Protista

(iii) Choose the phase of the microbial growth curve is characterized by a horizontal, flat line.
a) Lag phase b) Exponential phase
c) Stationary phase d) Death phase

(iv) Recall which of the following is a primary characteristic of dermatophytes.
a) Ability to grow on carbohydrates b) Ability to digest keratin
c) Ability to grow in high temperatures d) Ability to infect deep tissues

(v) Select which of the following is NOT a vaccine included in the Universal Immunization Programme.
a) BCG b) Polio Vaccine
c) Measles-Rubella (MR) Vaccine d) Yellow Fever Vaccine

(vi) Select which bacterial pH range is preferred by acidophiles for optimal growth.
a) pH 0-5.5 b) pH 5.5-8.0
c) pH 8.0-11.5 d) pH 12-14

Group-B
(Long Answer Type Questions) 1 x 10=10

2. Differentiate peniciliosis with mucoycosis. (10)

OR

Explain the VDRL test , focusing on its role in the detection and surveillance of viral diseases. Additionally, discuss the key applications of VRDL and the limitations it faces, as well as its contribution to public health initiatives. (10)

Group-C
(Short Answer Type Questions) 3 x 5=15

3. Describe antigen-antibody interactions. What are the factors that effects antigen-antibody interactions. (5)
4. Predict the major differences between procaryotes and eucaryotes. (5)
5. Explain the importance of pH in bacterial growth. Explain the pH preferences of acidophiles, neutrophiles, and alkalophiles, with examples. (5)

OR

Explain the meaning of pure culture method and describe one method use for the isolation of pure culture bacteria. (5)

Group-D
(Very Short Answer Type Questions) 3 x 2=6

6. Explain the contribution of Louis Pasteur in the field of microbiology. (2)
7. Explain is basic dyes and acidic dyes with examples. (2)
8. Explain Type III hypersensitivity. Name two diseases associated with Type III hypersensitivity reactions. (2)

Library
Institute of Nursing
Brainware Univer
Barasat, Kolkata

Section : B

Marks : 8

Group-A

(Multiple Choice Type Question) 7 x 1=7

9. **Choose the correct alternative from the following :**

(i) Choose the site of skin preparation for collection of CSF specimen-

a) area of L5-S1
b) entire lumbar region
c) area of L4-L5
d) all the above

(ii) Interpret the meaning of Phlebitis

a) Vein inflammation
b) Bone inflammation
c) Gum inflammation
d) None of the above

(iii) Which of the following reduce the stasis by enhancing the venous outflow

a) Venous foot pump
b) Compression stocking
c) Intermittent pneumatic expression
d) None of the above

(iv) Analyze the meaning of LASA

a) Label Alike sound alike
b) Sedative agents sound alike
c) Look alike and Sound alike
d) None of these

(v) Recall the spills that are >10ml are considered as

a) large volume spill
b) Small Volume spill
c) Medium Spill
d) None of the above

(vi) Which of the following is the first priority in preventing infections when providing care for a client

a) wearing Gloves
b) Wearing gowns
c) Hand washing
d) All of the above

(vii) Needle stick injury can result in all of following except

a) HIV
b) HBV
c) Malaria
d) HCV

Group-B

(Long Answer Type Questions) 1 x 10=10

10. Discuss collection techniques and special considerations for collection of non-respiratory specimens. (10)

OR

Discuss in details about the management of special chemical HAZMAT spill. (10)

Group-C

(Short Answer Type Questions) 3 x 5=15

11. Explain details about classification of disinfectants (5)
12. Explain in details about the colour coding of Biomedical waste management according to country ordinance act. (5)
13. Define Antibiotic Stewardship program.Elaborate the purpose and core elements of Antibiotic Stewardship program. 2+3 (5)

OR

Classify MRSA. Discuss about prevention of MRSA infection in a health care setting. 2+3 (5)

Group-D

(Very Short Answer Type Questions) 3 x 2=6

14. Estimate the examples of Multi drug resistant organisms. (2)
15. List the measures taken for prevention of patient fall (2)
16. Explain the importance of IPSG-7 (2)

****