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Department of Allied Health Sciences
Brainware University
Barasat, Kolkata- 700125

BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Sc.(PA)-2022/B.Sc.(PA)-2023/B.Sc.(PA)-2024/B.Sc.(PA)-2025

Course Name – Pathology & Clinical Microbiology

Course Code - BPAC204

(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the following is an example of a sterilization method.
 - a) Handwashing
 - b) Cleaning with soap and water
 - c) Boiling
 - d) Autoclaving
- (ii) Select which of the following is a chemical disinfectant commonly used in healthcare settings.
 - a) Bleach
 - b) Vinegar
 - c) Baking soda
 - d) Soap
- (iii) Indicate which of the following is a factor that affects the efficiency of sterilization.
 - a) Time.
 - b) pH.
 - c) Ultraviolet radiation.
 - d) Alcohol concentration.
- (iv) Name which of the following is a factor that affects the effectiveness of disinfection by UV radiation?
 - a) Time
 - b) Temperature
 - c) pH
 - d) all of these
- (v) Represent the major class of immunoglobulins present in the serum.
 - a) IgA
 - b) IgE
 - c) IgG
 - d) IgM
- (vi) Select the correct meaning of the term known as the terminal sterilization process?
 - a) The initial sterilization of the raw materials for the product
 - b) The final sterilization of the healthcare products and medical devices
 - c) The decontamination of the environmental bioburden
 - d) The aseptic technique used during the manufacturing process of the product
- (vii) Compare the term immunodeficiency to the immune system.
 - a) A condition in which the immune system is unable to mount an effective response
 - b) A type of immune cell that produces antibodies

- c) A protein that inhibits the immune response
- d) A hormone that regulates the immune system
- (viii) Connect the term granuloma to inflammation.
- a) A collection of immune cells that forms in response to chronic inflammation
- b) An autoimmune disease that affects the lungs
- c) An abnormal increase in red blood cells in the blood
- d) A condition in which the body's immune system attacks its own tissues
- (ix) Identify a common symptom of vesicular mole.
- a) Vaginal bleeding.
- b) Chest pain.
- c) Joint stiffness.
- d) Insomnia.
- (x) Identify a common symptom of thrombosis:
- a) Blurred vision
- b) Nausea
- c) Chest pain
- d) Swelling in the affected area
- (xi) Identify a common symptom of quadriplegia:
- a) Blindness
- b) Deafness
- c) Paralysis in all four limbs
- d) Seizures
- (xii) Illustrate a potential complication of arthritis.
- a) Cardiovascular disease.
- b) Kidney disease.
- c) Lung disease.
- d) Liver disease.
- (xiii) Select the type of reversible cell injury.
- a) Apoptosis.
- b) Necrosis.
- c) Intracellular edema.
- d) Fibrous change.
- (xiv) Select the condition for gas gangrene.
- a) Abnormal deposits of calcium salts occur in any tissue.
- b) Abnormal deposits of calcium salts occur in any tissues except tooth and bone.
- c) Abnormal deposits of calcium salts occur in skin only.
- d) None of these.
- (xv) Choose the name of one Coagulase positive and Coagulase negative bacteria.
- a) Staphylococcus pneumoniae— Coagulase positive Streptococcus pyogenes— Coagulase negative
- b) Staphylococcus sp.— Coagulase positive Staphylococcus sp.— Coagulase negative
- c) Staphylococcus aureus— Coagulase positive Staphylococcus haemolyticus— Coagulase negative
- d) Staphylococcus pneumoniae— Coagulase negative Streptococcus pyogenes— Coagulase positive

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Identify the groups of people who are most vulnerable to hospital infections. (3)
3. Explain the principle of Autoclave process. (3)
4. Indicate the factors that can disrupt the normal microbial flora of the human body. (3)
5. Define antibiotic resistance. (3)
6. Evaluate the strategies for educating healthcare workers on infection prevention. (3)

OR

Explain the difference between innate and adaptive immunity. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the steps of cellular events for the acute inflammation process with a diagram. (5)
8. Compare exudation and transudation. (5)
9. Write a short note on Liver abscess. (5)
10. Illustrate the pathogenesis of Myocardial infarction. (5)

11. Differentiate between narrow-spectrum and broad-spectrum antibiotics. (5)
12. Illustrate B cell immunity response. (5)

OR

Analyse the pathogenesis of M. tuberculosis in generation of TB. (5)

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