



BRAINWARE UNIVERSITY

Term End Examination 2024-2025

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

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 from the following - the recommended heat temperature and time period for the moist heat sterilization method used in an autoclave.
 - a) 180 c for 5 minutes.
 - b) 126 c for 3 minutes.
 - c) 121 c for 15-20 minutes.
 - d) 160 c for 45 minutes.
- (ii) Select the sterilization agent that is most frequently used in hospitals and clinical laboratories for the heat-labile liquid substances or antibiotics.
 - a) Filtration
 - b) Radiation
 - c) Dry heat
 - d) Formaldehyde
- (iii) Represent the major class of immunoglobulins present in the serum.
 - a) IgA
 - b) IgE
 - c) IgG
 - d) IgM
- (iv) Indicate the type of cells that are the first to respond to inflammation.
 - a) Mast cells
 - b) Neutrophils
 - c) Macrophages
 - d) T cells
- (v) Relate the term chemokine to inflammation.
 - a) A type of protein that mediates the migration of immune cells to the site of inflammation
 - b) An autoimmune disease that affects the skin
 - c) An abnormal increase in platelets in the blood
 - d) A condition in which the body's immune system attacks its own tissues
- (vi) What is the most common route of transmission for tuberculosis?

- a) Foodborne
c) Waterborne
- b) Bloodborne
d) Airborne
- (vii) Recognize the most common drug used to treat tuberculosis?
- a) Penicillin
c) Rifampin
- b) Ampicillin
d) None of these
- (viii) Select the correct statement regarding Transudation.
- a) It occurs during inflammation
c) It contains WBC, RBC
- b) coagulation does not occur
d) transudated fluid accumulates in tissues outside the blood vessels and can cause inflammation
- (ix) Identify a common method for diagnosing typhoid fever.
- a) Urine test.
c) MRI scan.
- b) Stool culture.
d) Echocardiogram.
- (x) Recognize a common type of embolism:
- a) Hepatic embolism
c) Pulmonary embolism
- b) Renal embolism
d) Splenic embolism
- (xi) List a common risk factor for developing stroke:
- a) Regular exercise
c) Eating a high-fat diet
- b) Hypertension
d) Drinking alcohol in moderation
- (xii) Recognize a common type of brain tumor:
- a) Renal tumor
c) Glioma
- b) Melanoma
d) Lung tumor
- (xiii) Identify a common symptom of stroke:
- a) Chest pain
c) Joint pain
- b) horthness of breath
d) Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body
- (xiv) Select the type of tissue necrosis.
- a) Liquefaction.
c) Fatty change.
- b) Intracellular edema.
d) Hyaline change.
- (xv) Choose one Oxidase positive and Oxidase negative bacteria.
- a) Moraxella catarrhalis—Oxidase positive
Acinteobacter sp. - Oxidase negative
- b) Acinteobacter sp. - Oxidase positive
Moraxella catarrhalis— Oxidase negative
- c) Staphylococcus aureus- Oxidase positive
Staphylococcus haemolyticus- Oxidase negative
- d) None of these

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Compare exudation and transudation. (3)
3. Identify the normal microbial flora of the human body. (3)
4. Express the importance of proper antibiotic use in preventing resistance. (3)
5. Name the most common types of hospital-acquired infections. (3)
6. Classify and give examples of antibiotics in terms of mechanism of actions- cell wall synthesis and cell membrane synthesis. (3)

OR

- Differentiate between broad and narrow spectrum antibiotics with examples. (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Illustrate the process of Innate Immunity. (5)
8. Describe the types of cellular adaptation. (5)
9. Describe the mechanism of action of beta-lactam antibiotics. (5)
10. Explain the principle of the tuberculin skin test with application. (5)
11. Differentiate between narrow-spectrum and broad-spectrum antibiotics. (5)
12. Explain the steps of cellular events for the acute inflammation process with a diagram. (5)

OR

Explain neoplasia with examples. (5)

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