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Barasat, Kolkata -700127

Term End Examination 2025-2026

Programme – B.Physiotherapy-2021/B.Physiotherapy-2022/B.Physiotherapy-2023/B.Physiotherapy-2024

Course Name – Medical Pathology and Microbiology

Course Code - BPTC301

(Semester III)

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) Which of the following method of sterilization has no effect on spores?
- a) Drying
b) Hot air oven
c) Autoclave
d) None of these
- (ii) Identify the B and T cells which are produced by stem cells that are formed
- a) Bone marrow
b) The liver
c) The spleen
d) The lymph nodes
- (iii) Identify the incomplete antigens
- a) Haptens
b) Immunogens
c) Antibodies
d) All of these
- (iv) Select the correct option for hypertrophy
- a) occurs after partial hepatectomy
b) increases function of an organ exponentially
c) is usually pathological
d) all of these
- (v) Select the correct option for the chemical mediator in inflammation
- a) IL-187
b) Prostaglandin
c) histomine
d) Sulphur-based free radicals
- (vi) After initiaion of an acute inflammatory process third in a sequence of changes in vascular flow is _____. Choose the correct option
- a) Vasoconstriction
b) Redness
c) Leukocytic migration
d) Vasodilation
- (vii) What is the typical incubation period for chickenpox after exposure to the virus?
- a) 1-2 days
b) 7-21 days
c) 2-4 weeks
d) 6-12 months

- (viii) Who is father of microbiology ?
a) Alexander Fleming
c) Louis Pasteur
- (ix) Name of the acid fast bacteria is
a) E.coli
c) Mycobacterium tuberculosis
- (x) Identify the correct morphological name of oval shaped bacteria with grapes bunch like arrangements
a) Streptococci
c) Sarcinae
- (xi) If a bacterial species forms a chain of cells with a straight rod shape, what term is used to describe its arrangement?
a) Streptobacillus
c) Staphylococcus
- (xii) What is the inner surface of autoclaves made of?
a) Mild steel
c) Copper
- (xiii) Identify the main action of an antiseptic regarding infection cure
a) Weakening
c) Preventing
- (xiv) The interval between infection and appearance of symptoms is called__ (Select the correct option).
a) Infective period
c) Prodromal period
- (xv) The organisms that cause disease only in immunocompromised persons are termed as__, identify suitable term.
a) Primary pathogens
c) Commensals
- b) Leeuwenhoek
d) Robert Koch
- b) Staphylococcus aureus
d) Candida albicans
- b) Pleomorphic
d) Staphylococcus
- b) Streptococcus
d) Diplobacillus
- b) Stainless steel
d) Aluminum
- b) Enhancing
d) Irritating
- b) Incubation period
d) Convalescence
- b) Opportunistic pathogens
d) Parasites

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Discuss the term Cholera gravis. (3)
3. What is cell injury? Classify cell injury according to the depth of injury (3)
4. Discuss the streptococcus and staphylococcus terms in terms of bacterial morphology. (3)
5. Moist heat is more useful than dry heat for sterilization purposes- interpret the statement by mentioning the mode of action of both types of sterilization. (3)
6. Bacterial infection within the urinary bladder as many bacteria that typically live harmlessly on the skin or in the bowel enter the urethra and bladder. Now analyze and predict the disease. (3)

OR

- Women are more prone to UTI than men- analyze and explain the statement (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain diagrammatically about the mechanism of membrane damage in ischemia (5)
8. A 48-year-old woman has a malignant lymphoma involving lymph nodes in the para-aortic region. She is treated with a chemotherapeutic agent which results in the loss of neoplastic cells through fragmentation of individual cell nuclei and cytoplasm. Over the next 2 months, the lymphoma decreases in size, as documented on abdominal CT scans. By which of the following mechanisms has her neoplasm primarily responded to therapy? (5)

9. If you can change all pyrimidine to purine bases in a DNA, UV rays are unable to act. What conclusion can you draw from the statement. (5)
10. Illustrate phagocytosis as an innate immunity parameter with a suitable diagram. (5)
11. Discuss different innate immunity systems of human body with suitable example of each (5)
12. Compare and contrast between HSV1 and HSV2 mentioning treatment and clinical significance. (5)

OR

Antigen 1 with 25000D molecular weight with tyrosine as a component of the antigen protein structure. Antigen 2 with 5000D molecular weight with lipid molecules in structure. Analyze the immunological power of the two antigens with proper explanation. (5)

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