



BRAINWARE UNIVERSITY

Term End Examination 2023-2024 Programme – B.Optometry-2021/B.Optometry-2022 Course Name – Ocular Microbiology and Pathology Course Code - BOPTOE305A (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

- Choose the correct alternative from the following :
- (i) Which Stain is related to diagnosis of fungal Infection
 - a) India Ink Preparation

- b) Nigrosin Preparation
- c) Lactophenol cotton blue Staining
- d) All of these
- (ii) Acid-fast bacteria resist decolorization during staining due to the presence of:
 - a) Thick peptidoglycan layers
- b) Thin lipid membranes
- c) Mycolic acids in their cell walls
- d) High motility
- (iii) A Patient may be interpreted as "Oliguria" when there is
 - a) Decrease in urine volume < 2500 ml/24 hrs
- b) Complete suppression of urine formation as in renal failure
- c) Decrease in urine volume < 500 ml/24 hrs
- d) Abnormal increase in urine volume > 2.500 ml/24 hrs
- (iv) In tuberculosis, the Mantoux tuberculin skin test measures a person's:
 - a) Antibody levels against the tuberculosis bacterium.
- b) Cellular immune response to tuberculosis infection.
- c) Viral load of tuberculosis in the blood.
- d) Risk of developing leprosy.
- (v) The presence of which type of cells in urine sediment is suggestive of a urinary tract infection (UTI)
 - a) Epithelial Cells

b) Pus Cell

c) Squamous cells

- d) Red Blood Cells
- (vi) Introducing small dose of Tuberculin can develop
 - a) Type I Hypersensitivity

b) Type II Hypersensitivity

c) Type III Hypersensitivity

- d) Type IV Hypersensitivity
- (vii) Which of the following is not a type of white blood cell?
 - a) Neutrophil

b) Erythrocyte

c) Lymphocyte

- d) Monocyte
- (viii) Presence of Bile Salt in Urine can be determined by

(ix)	 a) Fouchet Test c) Heat Acetic Acid Test A bacterial infection that often leads to the form caused by: 	b) Hey Sulphur Test d) Benedict Test nation of a corneal ulcer is basically	
(x)	a) Streptococcus pneumoniaec) Staphylococcus aureusWhich of the following is not a function of inflar	b) Pseudomonas aeruginosa d) Mycobacterium tuberculosis nmation?	
(xi)	a) Delivery of leucocytesc) Initiate repair processesGram staining is related to	b) Concentration of toxinsd) Vasodilation	
(xii)	a) Simple Staining c) Negative staining Choose the secretory Immunoglobulin	b) Diifferential Staining d) Vital Staining	
(xiii	a) IgD c) IgA) Which of the following is a commonly used met and glassware?	b) IgM d) IgG hod for sterilizing laboratory equipment	
(xiv	a) Autoclaving b) Handwashing c) Disinfectant sprays d) UV radiation (xiv) A common parasitic infection of the eye that can lead to blindness and is transmitted by black flies is:		
(xv)	a) Trachoma b) Chagas disease c) Toxoplasmosis d) Onchocerciasis (xv) A patient presents with a painless sore on their genitals. What diagnostic test should be performed?		
	a) Blood test for syphilis antibodiesc) Throat swab	b) Urine culture for Bacterial presence d) Skin Biopsy	
Group-B (Short Answer Type Questions) 3 x			
2. Compare and contrast between Gram Positive cell wall and Gram Negative cell wall structure.			(3)
3. Mention the morphological features of Mycobacterium tuberculosis.4. Name the causative agent of Leprosy. How is the infection transmitted?5. Correlate disease condition with different colour of Urine.6. What is the primary purpose of examining a blood smear, and what kind of information can be obtained from it?			(3) (3) (3) (3)
OR			(3)
Group-C			
	(Long Answer Ty	pe Questions)	5 x 6=30
	List different inflammatory diseases related to Eye. What are the important features of inflammations of the eye?		(5)
	Explain Precipitation Reaction with Clinical applications. Comment on the Mechanism behind Precipitation Reaction.		
9. 1	What is viral conjunctivitis, and which viruses are commonly responsible for causing this eye condition? How is it diagnosed?		(5)
	Describe in detail the Laboratory diagnosis of My	coses.	(5)

- 11. Describe the procedures followed and examinations conducted in the Laboratory diagnosis (5) of Syphilis.
- 12. Explain the key differences between sterilization and disinfection, and provide an example of a situation where each method would be most appropriate for microbial control. Justify your choices.

OR

Microbiological staining techniques, play a vital role in classifying bacteria. Discuss the specific steps involved in the Gram staining procedure and explain how it categorizes bacteria into Gram-positive and Gram-negative groups. Give examples of important pathogens belonging to each category.
