



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Sc.(MLT)-2022
Course Name – Clinical Pathology
Course Code - BMLTC301
(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

- ${\bf 1.} \quad \textit{Choose the correct alternative from the following:} \\$
- (i) Which among the following is a urine preservative?
 - a) Thymol

b) Citrate

c) Heparin

- d) EDTA
- (ii) Show how a lumbar puncture (spinal tap) is performed and explain its clinical significance
 - a) A lumbar puncture is used to measure blood glucose levels
- b) It involves inserting a needle into the spinal canal to collect CSF for diagnostic purposes
- c) This procedure is mainly used for cosmetic reasons
- d) None of these
- (iii) In comparison to normal CSF, what would be the physical appearance of CSF in a patient with bacterial meningitis?
 - a) Clear

b) Cloudy

c) Yellow

- d) Pink
- (iv) What is the primary purpose of Fine Needle Aspiration Cytology (FNAC) in medical diagnostics?
 - a) To collect a tissue biopsy for examination under a microscope
- b) To remove foreign objects or debris from body cavities
- c) To assess the blood count and differential
- d) To obtain cellular material from a lesion or mass for cytological examination
- (v) What is the significance of analyzing fructose in semen?
 - a) To determine the sperm count
- b) To assess sperm motility
- c) To evaluate the quality of seminal vesicle
- d) To detect the presence of sexually transmitted infections
- (vi) Elevated white blood cell (WBC) count in synovial fluid is often indicative of which condition?
 - a) Osteoporosis

b) Osteoarthritis

c) Rheumatoid arthritis

d) Hypertension

(vii)	Which sperm abnormality is characterized by th	e complete absence of sperm in the	
	ejaculate? Choose the correct answer	b) Asthenospermia	
	a) Oligospermia c) Azoospermia	d) Teratospermia	
(viii)	How does oligospermia differ from azoospermia	1?	
	 a) Oligospermia is the presence of a low sperm count, while azoospermia is the complete absence of sperm in the ejaculate c) Oligospermia and azoospermia are two terms for the same condition Select Which part of a sperm cell plays a crucial of the egg during fertilization? 	b) Oligospermia is the complete absence of sperm in the ejaculate, while azoospermia is the presence of a low sperm count d) Oligospermia and azoospermia both involve abnormal sperm morphology	
	a) Nucleus	b) Tail (flagellum)	
	c) Acrosome	d) Mitochondria	
(x)	Isosthenuria is a condition in which urine specifichoose common underlying cause of isosthenur	ic gravity remains relatively constant.	
	a) Dehydration	b) Overhydration	
	c) Kidney dysfunction	d) Urinary tract infection	
(xi)	Relate the following is NOT a typical component	of urine?	
	a) Glucose	b) Urea	
	c) Creatinine	d) Hemoglobin	
(xii)	Which of the following is NOT typically assessed		
	a) Red blood cells	b) White blood cells	
/v:::\	c) Bacteria Why is AFB staining used in sputum testing?	d) Glucose	
(^!!!)	a) To check for the presence of viral infections	b) To identify fungal spores in sputum	
	c) To detect bacteria that resist decolorization by acid during staining	d) To measure the pH of sputum samp	les
(xiv)	Which of the following components is NOT typic	cally found in a healthy stool?	
	a) Water	b) Fiber	
	c) Red blood cells	d) Bacteria	
(xv)	What might cause pale or clay-colored stool in a		
	a) High fiber diet	b) Dehydration	
	c) Liver or bile duct issues	d) Spicy foods	
	Group	р-В	
	(Short Answer Ty	pe Questions)	3 x 5=15
2. D	escribe the composition of benedicts reagent		(2)
	ifferentiate between trophozoite and cyst		(3) (3)
	plain the procedure of saline technique		(3)
5. D	escribe the collection procedure of sputum		(3)
6. Pa	atient having urine specific gravity low. Explain the atus with diabetes insipidus		(3)
Ex	OR splain the significance of specific gravity in urine a	analysis and how it was a	
CC	oncentration of solutes and hydration.	and now it relates to the	(3)
	2 2 2 2 3 3 3 4 5 5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7		
	Grou (Long Answer Ty _l	ne Questions)	
	(acations)	5 x 6=30

7.	List and briefly describe three common pathological conditions that can be diagnosed through urine analysis.	(5)
8.	Discuss the principle and procedure of benzidine test for occult blood test of feces.	(5)
9.	Differentiate between transudates and exudates.	(5)
10.	Discuss the male factors of infertility.	(5)
11.	Analyze the unstained microscopic examination of sputum and their clinical significance.	(5)
12.	A patient came with black tarry stool. Analyze the possible causes and features in routine stool examination.	(5)
	OR	
	Differentiate the CSF findings between bacterial and tubercular meningitis.	(5)
