N.A





## **BRAINWARE UNIVERSITY**

## Term End Examination 2023 Programme – DMLT-2022 Course Name – Systemic & Clinical Bacteriology Course Code - DMLT204 ( 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 organism that is catalase negative
  - a) S.flexneri

b) S.boydii

c) S.dysenteriae

- d) S.sonnei
- (ii) Select the option which defines the etiologic agent of botulism
  - a) Neurotoxin

b) Endotoxin

c) Enterotoxin

- d) All options are applicable
- (iii) Select the option that correctly predicts the function of bacterial capsule
  - a) Protection from phagocytosis
- b) Helps in adherence to surface

c) Both 1 & 2

- d) No options are applicable
- (iv) Select the capsulated organism from the following list
  - a) Escherichia-coli

b) Bacillus anthracis

c) Corynebacterium

- d) Brucella
- (v) Predict the correct use of Hanging drop method
  - a) coagulase test

b) Motility test

c) AST test

- d) None of these
- (vi) Predict the appearance of Gram postive bacteria under microscope
  - a) Violet

b) pink

c) red

- d) no option are applicable
- (vii) Select the appropriate reason for gram negative bacteria appearing pink in colour
  - a) Thin peptidoglycan layer

b) Presence of LPS

c) Presence of cilia

d) Presence of flagella

(\	ziii) 1	dentify the media that is most suitably used for AS	т	
	(ix)	<ul><li>a) MHA plates</li><li>c) MacConkey agar plates</li><li>Choose the process for biological calibration of ac</li></ul>	b) Blood Agar plates d) None of these utoclave	
		<ul><li>a) Colour changing strip</li><li>c) Geobacillus spore strip</li><li>Select the method for sterilization of Glassware</li></ul>	b) Sterilized sticker d) All are applicable	
	(xi)	<ul><li>a) Hot air over</li><li>c) Autoclaving</li><li>Choose the correct option with respect to pasteu</li></ul>	b) Incineration d) All are applicable rization	
	(xii)	a) All the microorganisms can be removed c) Only non-pathogenic forms can be removed Choose the correct option with respect to Tydallization		
	(xiii	a) John Tyndall c) Jenner ) Temperature used for hot air oven is	b) Louis Pasteur d) Robert Koch	
		a) 100°C for 1 hour b) 120°C for 1 hour c) 160°C for 1 hour d) 60°C for 1 hour (xiv) Select the medical application of autoclave from the following		
	(xv	<ul><li>a) Vulcanization</li><li>c) Sterilization</li><li>) Select the correct pathogen with respect to food</li></ul>	b) Heating d) Cleaning poisioning with contaminated food	
		a) S.aureus c) C.perfringens	b) B.cereus d) V.cholarae	
	Group-B (Short Answer Type Questions)			3 x 5=15
	<ol> <li>Describe the procedure of Endospore staining</li> <li>Describe the common symptoms and risk factors involved in meningitis</li> <li>Illustrate the pathophysiology of Lower respiratory tract infection</li> <li>Explain the working principle of a phase contrast microscope</li> <li>Justify why Escherichia coli shows a positive MR test but a negative VP test         <ul> <li>OR</li> <li>Design an experiment to detect the antimicrobial susceptibilty of an antibiotic "A" again particular bacterial culture</li> </ul> </li> </ol>		cract infection croscope t but a negative VP test	(3) (3) (3) (3) (3)
	·	Group-C		
		(Long Answer Type Questions)		5 x 6=30
	8. 9. 10. 11.	8. Illustrate different types of bacteria based on morphology with suitable diagram		
	OR  Justify why faecal coliforms appear red in colour while E.coli appear blue in chromoclt coliform agar			(5) (5)