



BRAINWARE UNIVERSITY

Library

Term End Examination 2024-2025 Programme – B.Sc.(FND)-Hons-2024 Course Name – General Microbiology

Brainwa. S. Worsity 398, Ramkrishnapur Road, Barasal Kolkata, West Bengal-700125

Course Code - BFD20001 (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) Name the person who first discovered the small pox vaccine.
 - a) Robert Koch

b) Louis Pasteur

c) Lister

- d) Edward Jenner
- (ii) Identify the scientist who developed gram staining technique.
 - a) Hans Christian Gram

b) Lister

c) Pasteur

- d) Koch
- (iii) Identify which of the following organisms have thick peptidoglycan in their cell wall?
 - a) Gram-negative bacteria

b) Gram-positive bacteria

c) Yeast

- d) Molds
- (iv) Cite the Baterium that is most commonly used for genetic engineering.
 - a) Escherichia

b) Klebsiella

c) Proteius

- d) Serratia
- (v) Identify from the following the phase of rapid bacterial growth
 - a) Lag Phase

b) Logarithmic Phase

c) Stationary Phase

- d) Decline Phase
- (vi) Name the quickest sterilization process not involving heat
 - a) Chemical method of sterilization
- b) Filtration

c) Steam sterilization

- d) Chlorine dioxide
- (vii) Recall the name person that first gave the small pox vaccine
 - a) Robert Koch

b) Louis Pasteur

c) Lister

d) Edward Jenner

Brainwa: University 398, Ramkrishnapur Road, Barasal Kolkata, West Bengal-700125

	Kolkala, West Derigal 100	Little used for starilizing the medi	2
(viii)	Select correct name from the following instrument which is used for sterilizing the media after it has been prepared		
	a) Laminar Air Flow Chamber	b) Incubator	
	c) Boiling	d) Autoclave	
(ix)	Select the purpose of a culture medium in microbiology?		
	a) To transport microorganisms	b) To store antibiotics	
	c) To sterilize equipment	d) To provide nutrients for microbial g	growth
(x)	Choose the reason for gram-positive bacteria appear purple under the microscope during		ng
	staining		
	a) Due to a thick peptidoglycan layer	b) Due to a thin cell wall	
	c) Due to a lack of cell wall	d) Due to a lipid-rich membrane	
(xi)	Identify the correct name regarding Gram positive		
	a) Peptidoglycan	b) Teichoic acids	
	c) Polysaccharide O Antigen	d) Both option 1 and 2	
(xii)	In which of the following phase secondary metab		
	a) Lag phase	b) Log/Exponential phase	
	c) Stationary phase	d) Death phase	
(xiii)	Identify the objectives that should be used to firs	•	
, ,	a) 100X	b) 1000X	
	c) 40X	d) 10X	
(xiv)	Select the phase in bacterial growth curve where		
(,	a) Lag phase	b) Log phase	
	c) Stationary phase	d) Death phase	
(xv)	Identify the special characteristics of Acid fast org	•	
(· · · · /	a) Presence of teichoic acid	b) Presence of Mycolic acid	
	c) Presence of teichoic acid	d) Presence of LPS	
	of thesense of telenole dela	dy i reserve or Er s	
	Grou	о-В	
	(Short Answer Ty		3 x 5=15
2. Ho	w would you differentiate the magnification and r	esolution power of an microscope?	(3)
	3. Explain what is a biofertilizer with examples.		
1. Illustrate and explain the structure of virus with a labelled diagram.			(3) (3)
5. Explain in brief Pasteur's work on microbial fermentations.			(3)
5. Differentiate between a genus and a species in binomial nomenclature.			(3)
_	OR		
Co	mpare and contrast transmission electron microsc	copy (TEM) and scanning electron	(3)
mi	croscopy (SEM) in terms of their working principle	s, applications, and advantages.	
	Craw		
	Group (Long Answer Typ		
	(Long Answer Typ	De Questions)	5 x 6=30
, ц	ow do you classify Gram positive and Gram accept	vo hactoria	(5)
	How do you classify Gram positive and Gram negative bacteria Write the characteristics of differential media.		
	Conclude two characteristics each of Protozoa, fungi and algae with examples.		
.0. E	O. Explain the Koch's postulates and highlight its significance in the medical field.		
1. E	kamine Whittaker's five kingdom classification and	explain each group with suitable	(5)
e	camples.	2-20. Broad with Salfable	(5)

12. Predict the names of two viral, two protozoan and two fungal diseases along with their causative agents.

OR

Summarize the structure and function of ribosomes in protein synthesis, including their classification based on sedimentation coefficient.

(5)

Library
Brainware University
398, Ramkrishnapur Road, Barasat
Kobora West Bengal-700125