

Roll No _____

[Total No. of Pages : 2

PGIS-039-A-22

M.Sc I Semester Degree Examination

MICROBIOLOGY

Fundamental of Microbiology

Paper : HC 1.1

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

Answer all Sections.

SECTION - A

Write brief notes on any TEN of the following

(10×2=20)

1. a) Antony van leeuwenhoek
- b) Microscopic resolution
- c) Basic stain
- d) HEPA filters
- e) Quadrant streaking
- f) Cedarwood oil
- g) NCL
- h) Types of rotors
- i) Capsule
- j) Disinfectant
- k) Mitochondria
- l) Lyophilization

SECTION - B

Write short notes on any SIX of the following.

(6×5=30)

2. Agarose gel electrophoresis
3. Distribution of microorganisms in soil
4. Spontaneous generation theory
5. Chemical methods of sterilization
6. Working principle of spectrophotometer
7. Fluorescent microscopy
8. Enriched and differential media.
9. ATCC & MTCC culture collections.

SECTION - C

Answer any THREE of the following

(3×10=30)

10. Write in detail methods involved in maintenance and preservation of microbial culture.
 11. Explain in detail working principle, construction and operation of TEM.
 12. Write an account of safety measures and levels of laboratory.
 13. Write a comparative account of prokaryotic and eukaryotic cell.
 14. Write a detailed account on different isolation methods of microorganisms.
-

Roll No _____

[Total No. of Pages : 2

PGIS-040-A-22

M.Sc. I Semester Degree Examination

MICROBIOLOGY

Biochemistry & Microbial Enzymology

Paper : HC 1.2

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

Answer all Sections.

SECTION - A

Write brief notes on any TEN of the following

(10×2=20)

1. a) Covalent bonds
- b) Buffers
- c) Vander waal forces
- d) Glycogen
- e) Tertiary proteins
- f) Oligosaccharides
- g) Km and V max
- h) Sulfur containing amino acid
- i) Cofactors
- j) Acid and bases
- k) Dialysis
- l) LDH

SECTION - B

Write short notes on any SIX of the following.

(6×5=30)

2. Explain Fisher's Lock and key theory of enzymes
3. Competitive and non-competitive inhibition.
4. Write a short note on Michalis Menton equation
5. Significance of enzyme inhibitors.
6. T3, T4 and TSH.
7. Threonine dehydratase.
8. Mechanisms of enzyme action
9. ATPases and significance.

SECTION - C

Answer any THREE of the following

(3×10=30)

10. Describe the structural organization of carbohydrates with example
11. Discuss in detail the liver and kidney function tests.
12. Describe in detail the steps involved in the isolation, purification and application of enzymes.
13. Write the structure, types, properties and biological functions of amino acids.
14. Explain covalently modulated enzymes taking e.g., of glycogen phosphorylase
15. Explain in detail normal and abnormal constituents of blood.

Roll No _____

[Total No. of Pages : 2

PGIS-041-A-22

M.Sc. I Semester Degree Examination

MICROBIOLOGY

Bacteriology

Paper : HC 1.3

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

Answer all Sections.

SECTION - A

Write brief notes on any TEN of the following.

(10×2=20)

1. a) Mycolic acid
- b) Numerical taxonomy
- c) Reserve food materials
- d) Gas vesicles
- e) Flagella staining
- f) Culturable bacteria
- g) Genus & species
- h) Origin of bacteria
- i) Binary cell division
- j) - Cynobacteria
- k) Extremophiles
- l) Nucleoid

SECTION - B

Write short notes on any SIX of the following.

(6×5=30)

2. Properties and germination of endospore.
3. General characteristics of mycoplasma.

4. Acid fast staining.
5. Fine structure of flagellum and its functions.
6. Economic importance of Actinobacteria.
7. Salient features of Bergy's manual of systematic bacteriology
8. Lifecycle and multiplication of Richettsiae.

SECTION - C

Answer any **THREE** of the following

(3×10=30)

9. Write the general characteristics of archaebacteria and their role in the evolution of microbial world.
 10. Give an account of bioluminescence and bioluminescent bacteria and their importance.
 11. Illustrate the structure of bacterial cell wall and its variations.
 12. Describe general characteristics and life cycle of Chlamydia.
 13. Write in detail the properties and germination of endospores
 14. Write an essay on origin discovery and evolution of bacteria.
-

Roll No _____

[Total No. of Pages : 2

PGIS-042-A-22
M.Sc. I Semester Degree Examination
MICROBIOLOGY
Virology and Mycology
Paper : SC 1.4

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

Answer all Sections.

SECTION - A

Write brief notes on any TEN of the following

(10×2=20)

1. a) Capsomere
- b) Prions
- c) Satellite virus.
- d) phycophages
- e) Zoonotic infection
- f) Uredospore
- g) Cytoskeleton
- h) Spermatogamy
- i) Lichens
- j) Apical growth
- k) Gametangial copulation
- l) ICTV

SECTION - B

Write short notes on any SIX of the following.

(6×5=30)

2. Write the physical and chemical components of viruses.
3. Write a note on purification of viruses.
4. Explain in detail general characters of cyanophages.
5. Write a note on general characters and types of oncogenic viruses.
6. Write a note on distribution of fungi
7. Explain the types of sexual reproduction in fungi
8. Write a note on mode of nutrition in fungi.
9. Subviral particles.

SECTION - C

Answer any THREE of the following

(3×10=30)

10. Explain in detail economic importance of Mold & Mycorrhizae
 11. Explain in detail vegetative and Asexual reproduction in fungi
 12. Write in detail type studies and significance of Arboviruses
 13. Explain the type studies and significance of plant viruses.
 14. Write in detail Baltimore classification of viruses.
 15. Write the general characteristics and cultivation of bacteriophages.
-

Roll No. _____

[Total No. of Pages : 2

PGIS-154-A-22
M.A. I Semester Degree Examination
SOCIOLOGY
Social Movement
Paper : S.C-1.1

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

- 1) Answer Five questions.
- 2) All questions carry equal marks.

1. a) Define the Social movement and analyze its significance.
ಸಾಮಾಜಿಕ ಚಳುವಳಿಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ ಅದರ ಮಹತ್ವವನ್ನು ವಿಶ್ಲೇಷಿಸಿರಿ.

(OR/ಅಥವಾ)

- b) Write an essay on typology.
ಟೈಪೋಲಾಜಿ ಕುರಿತು ಪ್ರಬಂಧ ಬರೆಯಿರಿ.

2. a) Define the peasant movement and write down its significance.
ರೈತ ಚಳುವಳಿಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ. ಅದರ ಮಹತ್ವವನ್ನು ಬರೆಯಿರಿ.

(OR/ಅಥವಾ)

- b) Write about the peasant movement in Karnataka.
ಕರ್ನಾಟಕದಲ್ಲಿನ ರೈತ ಚಳುವಳಿಯ ಕುರಿತು ಬರೆಯಿರಿ.

3. a) Discuss the role of the Brahma Samaj in the social movement.
ಸಾಮಾಜಿಕ ಚಳುವಳಿಯಲ್ಲಿ ಬ್ರಹ್ಮಸಮಾಜದ ಪಾತ್ರದ ಕುರಿತು ಚರ್ಚಿಸಿರಿ.

(OR/ಅಥವಾ)

- b) Write an essay on Trade union movement.
ವೃತ್ತಿ ಸಂಘ ಆಂದೋಲನದ ಕುರಿತು ಪ್ರಬಂಧ ಬರೆಯಿರಿ.

4. a) Critically discuss the Dalit Movement.
ದಲಿತ ಚಳುವಳಿಯ ಕುರಿತು ವಿಮರ್ಶಾತ್ಮಕವಾಗಿ ಚರ್ಚಿಸಿ.

(OR/ಅಥವಾ)

- b) Write an essay on students movement.
ವಿದ್ಯಾರ್ಥಿ ಚಳುವಳಿಯ ಕುರಿತು ಪ್ರಬಂಧ ಬರೆಯಿರಿ.