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PGIS -N 1073 B-2K13

M.Sc. Ist Semester(CBCS) Degree Examination

Microbiology

(Fundamentals of Microbiology)

Paper -1.1

(New)

Time : 3 Hours Maximum Marks :80

Section - A

1. Write brief notes on any **ten** of the following. **(10x2=20)**

a) Joseph Lister.

b) Peroxisome.

c) Negative staining.

d) Micromanipulation.

e) Disinfection.

f) Enriched media.

g) Vital staining.

h) Carl woese.

i) Glycerol preservation.

j) ATCC.

k) Transportmedia.

l) Flagella.

Section - B

Write short notes on any **six** of the following. **(6x5=30)**

2. Theories of spontaneous generation.

3. Function of Golgi complex.

4. Transmission Electron microscopy.

5. Laboratory safety measures.
6. Identification of microorganisms by phylogenetic relationships.
7. TLC.
8. Boundary electrophoresis.

Section - C

Answer any **three** of the following. **(3x10=30)**

9. Explain in detail the physical and chemical methods of sterilization.

10. Write a critical account on the components and preparation of microbiological media.

11. Discuss the principle and applications of preservation of microbial cultures.

12. Describe the principle and instrumentation of NMR spectroscopy. Give its application in biochemical studies.

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PGIS-N 1074 B-2K13

M.Sc. Ist Semester(CBCS) Degree Examination

Microbiology

(Microbial Biochemistry & Enzymalogy)

Paper -HC-1.2

(New)

Time : 3 Hourss Maximum Marks : 80

Instructions to Candidates:

Answer all Sections.

Section - A

1. Write brief notes on any **ten** of the following: **(10×2= 20)**

a) Covalent and non covalent bonds.

b) Structure of water molecule

c) Physiological buffers

d) Mono and disaccharides

e) Active site of an enzyme

f) Haldane and Briggs equation

g) Enzyme activator

h) Dialysis

i) Entrapment of enzyme

j) Acid base catalysis

k) Essential amino acids

l) A and B forms of DNA

Section - B

Write short notes on any **six** of the following **(6x5=30)**

2. Structural organization of protein
3. Enzyme inhibitors
4. Isoenzymes
5. Chromatographic purification of enzymes
6. Concept and significance of enzyme stabilization
7. Enzyme turnover
8. Major classes of enzymes

Section - C

Answer any **Three** Questions. Each question carries **Ten** marks. **(3x10=30)**

9. Discuss structure and biological properties of proteins
10. Explain Michaelis- Menton equation. Add a note on its significance and limitations .
11. Describe mechanism of enzyme action with two major illustrations.
12. Explain the major concepts of acid and bases.

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PGIS-N 1075B-2K13

M.Sc. I st Semester (CBCS) Degree Examination

Microbiology

(Bacteriology)

Paper -1.3

(New)

Time : 3 Hours Maximum Marks : 80

Answer all Sections

Section-A

1. Write brief notes on any **ten** of the following. **(10X2=20)**

a) Mesosomes.

b) Phycobilisomes.

c) Lithotrophy.

d) Barophiles.

e) Chlamydia.

f) Archaebacteria.

g) L-forms.

h) Flagella.

i) Nucleoid

j) Acid fast bacteria.

k) Reserve food metabolites.

l) Thermophiles.

Section-B

Write short notes on any **Six** of the following **(6x5=30).**

2. Genome organization.
3. Induction of endospore formation.
4. Economic importance of archaebacteria.
5. Diversity and distribution of actinomycetes..
6. Mechanism of bioluminescence.
7. Growth and multiplication of mycoplasma.
8. Characteristics of major groups of bacteria.

Section-C

Answer any **three** of the following. **(3x10=30)**

9. Discuss bacterial growth and cell division.
10. Describe morphological and ultra structure of gram negative and gram positive bacteria.
11. Describe the life cycle of rickettsia and their significance.
12. Give an account of Cyanobacteria.

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PGIS - N 1076 B-2K13

M.Sc. Ist Semester (CBCS) Degree Examination

Microbiology

(Virology and Mycology)

Paper -SC 1.4

(New)

Time : 3 Hours Maximum Marks : 80

Instructions:

Answer all sections

Section - A

1. Write short notes on any **TEN** of the following. **(10×2=20)**

a) Defective virus

b) Multipartite Virus

c) M_{13} phase

d) Eclipse phase

e) Phycophages

f) Antigenic drift

g) Cytopathic effect

h) Complex virus

i) Doliopore septum

j) Salk and sabin vaccine

K) parasexual in fungi

l) Alterneria solani

Section - B

Write short notes on any **six** of the following. **(6×5=30)**

2) Salient features of Deuteromycets

3) Ultra structure of Bacteriophage

4) Life cycle of typical mold

5) TMV

6) Structure and symmetry of viral capsid

7) Control measures for transmission in plant viruses

8) DNA oncogenic viruses

Section - C

Answer any **three** of the following. **(3×10=30)**

9) Write the general characters of plant viruses and their mode of transmission

10) Discuss in detail the isolation and cultivation of animal viruses

11) Write the salient features of division Mystigomycota and their classification upto classes giving reasons and examples

12) What are sub viral particles? Write their characters and significance.