Roll No. _____ [Total No. of Pages : 2

PGIIIS-N 1587 B-14

M.Sc. IIIrd Semester (CBCS) Degree Examination

Microbiology

(Molecular Biology and Genetic Engineering)

Paper : HC 3.1

(New)

Time : 3 Hours 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) Klenow fragment

b) Digoxygenin labeling

c) Universal primers

d) Rec A protein

e) Blunt end ligation

f) Isophycnic centrifugation

g) Anbtisense RNA

h) Alpha complementation

i) Ribonuclease H

j) Multiple cloning site

k) Annealing

l) YAC

SECTION - B

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

2. Genomic library

3. Pulse Field Gel Electrophoresis

4. Northern blotting

5. Hosts for expression of genes

6. Ti Plasmid vectors

7. Introduction of recombinant DNA into a suitable host

8. SOS repair mechanism

SECTION - C

Answer any Three of the following: **(3 × 10 = 30)**

9. Discuss methods applied for chemical synthesis of oligonucleotides

10. How is genetic information in living organisms maintained error free from generation to generation.

11. What are genetically engineered organisms? How do they improve quality of our lives?

12. Discuss the recent advances in nucleic acid sequencing.

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PGIIIS-N 1588 B-14

M.Sc. IIIrd Semester (CBCS) Degree Examination
Microbiology
(Food and Dairy Microbiology)
Paper : HC - 3.2

(New)

Time : 3 Hours 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) Accessory food substances

b) Single cell protein

c) Semi perishable food

d) Rancidity of food

e) Whisker of meat

f) Pro biotics

g) Botulism

h) Acidophilus milk

i) Curdling

j) Nitroso myoglobin

k) Thermal death time

l) Soft cheese

SECTION - B

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

2. Physical methods of food preservation

3. Contamination of food Sewage

4. Causes of spoilage of food

5. Common or cellar storage

6. Preparation of tempeh

7. Agmark standards

8. Quality tests in milk industries

SECTION - C

Answer any Three of the following: **(3 × 10 = 30)**

9. Write detailed account on food additives

10. Explain the steps involved in the preparation of shrikhand

11. Discuss the contamination, preservation and spoilage of milk and milk products

12. Describe the different methods used to detect the food borne diseases.

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PGIIIS - N 1589 B-14
M.Sc. IIIrd Semester (CBCS) Degree Examination
Microbiology
Immunology and Immunotechniques
Paper : SC 3.3
(New)

Time : 3 Hours 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) Suppressor cells

b) Lymphokines

c) Complement fixation test

d) CD4 receptors

e) Attenuation

f) V_H and V_1 sites of antibody

g) Co-stimulators

h) Booster dose

i) HLA typing

j) Immunobloting

k) Immunomodulators

l) Mast and Dendritic cells

SECTION - B

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

2. Production of monoclonal antibodies

3. Blood transfusion and tissue transplantation

4. Autoimmune diseases

5. Type - I hypersensitivity

6. Hematopoiesis

7. Recombinant vaccines

8. Immune Deficiency Syndrome due to deficiency of T - cells

SECTION - C

Answer any Three of the following: **(3 × 10 = 30)**

9. Explain the classical pathway of component activation and discuss the related diseases.

10. Give a comparative account of the structure and functions of primary lymphoid organs.

11. Write a detailed account on development and maturation of B-cells. Add a note on their functions.

12. Define immunity and explain the types of immunity with suitable examples.

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PGIIIS-N 1590 B-14
M.Sc. IIIrd Semester (CBCS) Degree Examination
Microbiology
(Microbial Technology and Entrepreneurship)
Paper : OEP 3.4
(New)

Time : 3 Hours 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) Sour dough bread

b) Single cell protein

c) Milk protein

d) Compost

e) Aging of wine

f) Bioleaching

g) Monoclonal antibodies

h) Biogas

i) Biopesticide

j) Replica plate

k) List pharmaceutical biotech industries of India

l) Lactic acid

SECTION - B

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

2. Industrially important protein based raw materials

3. Successful entrepreneur

4. Genetically engineered microorganisms in agriculture sectors

5. Important types of fermented wines

6. An overview of intellectual property rights

7. Production of cheese

8. Human resource management in microbial technology industries.

SECTION - C

Answer any Three of the following: **(3 × 10 = 30)**

9. Write detailed account on production of algal biofertilizer

10. Discuss the microbial production of Penicillin

11. Explain the microbial fuels as alternate sources of energy

12. Write an account on isolation and screening of industrially important microorganisms