R-19

Code:6309E1/R

Faculty of Science

B. Sc (Microbiology) III-Year, CBCS –VI Semester

Regular Examinations -June/July, 2022

PAPER: Industrial Microbiology

Time: 3 Hours Max Marks: 80

Section-A

I. Answer any *eight* of the following questions (8x4=32 Marks)

1. Secondary screening
2. Seed culture
3. Adsorption
4. Limitations of a bioreactor
5. Sparger
6. Molasses
7. Fed-batch fermentation
8. Dual fermentations
9. Homofermentative lactic acid bacteria
10. Recombinant vaccines
11. Beer
12. Disposal of industrial waste

Section-B

II. Answer the following questions (4x12=48 Marks)

13.(a) Write a note on industrially important Yeasts and Molds

(OR)

(b) Explain methods of developing an industrial strain

14.(a) Explain the design of a typical fermenter with a neat labeled diagram

(OR)

(b) Explain various raw materials used in a fermentation industry

15.(a) Explain the kinetics of continuous fermentations.

(OR)

(b) Explain surface and submerged fermentations with suitable examples

16.(a) Explain industrial production of Vit-B12. Add a note on its importance

(OR)

(b) Explain microbial production of citric acid.

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R-19

Code:6309OPT/BL/19

Faculty of Science

B.Sc. (Microbiology) III-Year, CBCS –VI Semester Backlog Examinations –Jan, 2023

PAPER: Applied Microbiology (Optional)

Time: 3 Hours Max Marks: 60

Section-A

I. Answer any Three of the following questions (3x5=15 Marks)

1. MTCC.
2. Bio-fertilizers.
3. Monascin.
4. Coumarins.
5. Clinical samples.
6. Multi Drug Resistance.

Section-B

II. Answer the following questions (3x15=45 Marks)

7. (a) Explain the Patenting process. Give the significance of IPR.

(OR)

(b) Write about the Bio-pesticides, its types and significance in increasing the plant productivity.

8. (a) Give an account on Bacterial & Algal carotenoids.

(OR)

(b) Explain Bio-transformation & Metabolic engineering with examples.

9. (a) Describe the Serological methods for rapid detection of bacterial, fungal and viral pathogens.

(OR)

(b) Explain the monitoring of Sanitation in community.

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R-19

Code:6309/19/REG

Faculty of Science

B. Sc. (Microbiology) III-Year, CBCS –VI Semester

Regular Examinations –June 2023

PAPER: Applied Microbiology (Optional)

Time: 3 Hours Max Marks: 60

Section-A

I. Answer any three of the following questions (3x5=15 Marks)

1. IPR.
2. Bio-pesticides.
3. Carotenoids.
4. Bio-transformation.
5. Gram stain.
6. Biohazard disposal.

Section-B

II. Answer the following questions (3x15=45 Marks)

7. (a) Describe the process of maintenance of reference strain of microorganisms. Add a note on culture collection centres.

(OR)

(b) Write an essay on production of Biofertilizers Azolla, Rhizobium & Mycorrhizae.

8. (a) Write an essay on the Production & Significance of microbial pigments.

(OR)

(b) Describe the different Microorganisms used for Flavor and Aroma production.

9. (a) Write about collection, transport and culturing of Clinical samples.

(OR)

(b) Explain the different techniques used for the diagnosis of Hospital acquired infections.

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R-19

Code:5309GE/19/BL

Faculty of Science

B.Sc (Microbiology) III-Year, CBCS-V Semester Backlog Examinations –June, 2023

Generic Elective

PAPER: Microbiology and Human Health

Time: 3 Hours Max Marks: 80

Section-A

I. Answer any *Eight* of the following questions (8x4=32 Marks)

1. Germ theory of diseases
2. Nutrient agar
3. Types of microorganisms
4. Normal microbial flora
5. Dengue
6. VDRL test
7. Prophylaxis
8. Pandemic
9. Probiotics
10. Biomedical waste
11. Disposal of waste
12. Incineration

Section-B

II. Answer the following questions (4x12=48Marks)

13.(a) Explain different culture methods of bacteria.

(OR)

(b) What is staining. Describe the Gram staining method.

14.(a) Write about the pathogenesis, diagnosis, treatment and prevention of typhoid.

(OR)

(b) Write about any two viral diseases.

15.(a) Describe the innate immunity mechanisms of human body.

(OR)

(b) Differentiate between innate and acquired immunity.

16.(a) What are the guidelines of National Pollution Control Board for disposal of waste.

(OR)

(b) What is autoclaving. Explain its importance in waste disposal.

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R-19

Code:6309E1/BL/19

Faculty of Science

B.Sc(Microbiology)III-Year, CBCS–VI Semester Backlog Examinations –Jan, 2023

PAPER: Industrial Microbiology

Time: 3 Hours | Max Marks: 80

Section-A

I. Answer any *eight* of the following questions (8x4=32 Marks)

1. Industrial importance of Yeasts
2. Crowded plate technique
3. Whole cell immobilization
4. Bioreactor
5. Antifoam agents
6. Inoculation media
7. Continous fermentation
8. Submerged fermentation
9. Alcoholic fermentation
10. Wine
11. Biogas
12. Citric acid recovery

Section-B

II. Answer the following questions (4x12=48 Marks)

13.(a) Explain various methods of selecting industrially useful microorganisms.

(OR)

(b) Define immobilization. Explain various methods of immobilization.

14.(a) Explain various physico-chemical standards used in biorectors

(OR)

(b) Write on various types of bioreactors with their merits and demerits

15.(a) Define fermentation. Explain the process of batch fermentation with its advantages and disadvantages.

(OR)

(b) Explain solid state fermentations with its merits and demerits

16.(a) Explain the method of production of recombinant vaccines

(OR)

(b) What are Amylases. Explain production of microbial amylases.

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R-19

Code:6309E1/19/REG

Faculty of Science

B. Sc (Microbiology) III-Year, CBCS –VI Semester

Regular Examinations –June, 2023

PAPER: Industrial Microbiology

Time: 3 Hours Max Marks: 80

Section-A

I. Answer any *eight* of the following questions (8x4=32 Marks)

1. Actinomycetes
2. Crowded plate Technique
3. Entrapment
4. Fermentor Design
5. Fermentation media
6. Distillation
7. Fed Batch fermentation
8. Dual multiple fermentation
9. Lactic acid fermentation
10. Wine maturation
11. Methane production
12. Disposal of Industrial waste

Section-B

II. Answer the following questions (4x12=48 Marks)

13.(a) Explain the different types of Microorganisms used in industry.

(OR)

(b) Write in detail about the strain improvement strategies for industrial improvement microorganisms.

14.(a) Explain the Design of fermentor, types of fermentor and their importance.

(OR)

(b) Describe in detail about the raw materials used in fermentation media and their processing.

15.(a) Explain in detail about the different types of Fermentations.

(OR)

(b) Write in detail about the microbial fermentation of alcohol and lactic acid fermentation.

16.(a) Explain the manufacturing process of Beer production.

(OR)

(b) Write in detail about the production of Citric acid and its uses.

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