FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year, II-Semester Regular/Backlog Examinations, May/June-2019

Code No: 50102/C

Microbiology-II

(General Microbiology-II)

Time:3Hours

Max Marks: 80

PART-A

(Short Answer Type) (4X5=20 Marks)

Answer any four questions

1. Whittaker's five kingdom concept.
2. Mycoplasma.
3. TMV.
4. Phospholipids.
5. Purines.
6. Buffers.

PART-B

(Essay Answer Type) (4X15=60 Marks)

Answer the following questions in not exceeding 90 line each

7. (a) Describe the General characteristics of eubacteria.

(OR)

(b) Describe the general characters of cyanobacteria.

8. (a) Give a broad outline of ultrastructure of prokaryotic cell.

(OR)

(b) Explain in detail about general characteristics of viruses and their multiplication.

9. (a) Give an account of general characteristics and classification of amino acids.

(OR)

(b) Write a detailed note on carbohydrates.

10. (a) Describe the structure of nucleic acids.

(OR)

(b) Describe the principle and applications of colorimeter.

Code No: 50102/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Backlog Examinations, June-2023

Microbiology-II

(Microbial Diversity)

me: 3 Hours

Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

Conservation of biodiversity.

Microbial richness.

Trophozoite.

Great plate count anomaly.

Methanogens.

Giardia.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

(a) Define Biodiversity. Give an account on Elements of biodiversity.

(OR)

(b) Write a detailed note on Carl woese system of classification of living organisms.

(a) Explain the general characteristics of Rickettsia.

(OR)

(b) Write a note on Metabolic characteristics of extremophiles.

(a) Give an account on structural, physiological and metabolic characteristics of Rhodophyta.

(OR)

(b) Write about the structural and metabolic characteristics of Basidiomycetes.

(a) Write a detailed note on Microbial interactions.

(OR)

(b) Write a note on Preserved and perturbed microbial ecosystems.

FACULTY OF SCIENCE Code No: 50103

B.Sc. (CBCS) II-Year III-Semester Examinations, November/December-2018.

MICROBIOLOGY

(Microbial physiology & Enzymology)

Time: 3 Hours Max Marks: 80

PART-A (4X5=20 Marks)

Short Answer questions

1. Methylotrophs
2. Mac Conkey Agar
3. Nitrate respiration
4. Transferases

PART-B (4X15=60 Marks)

(Essay Answer Type)

5. (a) Give an account on Nutritional requirements of microbes?

(OR)

(b) Explain the Nutrients uptake by microbial cells

6. (a) Discuss enriched and differential media and its importance ?

(OR)

(b) Explain the effect of p^H, temperature and salt concentration on microbial growth ?

7. (a) Give a detail account on enzymes involved in kreb's cycle ?

(OR)

(b) Define fermentation, explain in detail about Ethanol fermentation?

8. (a) Write the properties and Nomenclature of Enzymes ?

(OR)

(b) Explain the factors effecting catalytic reactions of Enzymes?

Code No: 50102/R16

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Backlog Examinations, June-2023

Microbiology-II

(General Microbiology-II)

Time: 3 Hours | Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Rickettsia.
2. Microalgae.
3. Phospholipids.
4. Thin layer chromatography.
5. Disaccharides.
6. Bacterial flagella.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) Describe the differences between prokaryotic and eukaryotic organisms.

   (OR)

   (b) Discuss the general characteristics of ray fungi with its significance.

8. (a) Elaborate the ultra-structure of prokaryotic cell.

   (OR)

   (b) Explain about the general characteristics of virus and its multiplication.

9. (a) Brief about types and importance of various polysaccharides.

   (OR)

   (b) Give an account on general characteristics of aminoacids.

10. (a) Define P^H. Write the methods of hydrogen ion concentration in biological fluids.

    (OR)

    (b) Brief about the principles and applications of calorimetry.

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FACULTY OF SCIENCE

Code No: 50103

B.Sc. (CBCS) II-Year (III-Semester) Regular Examinations, No/Dec-2019
MICROBIOLOGY-III
(Microbiology Physiology and Enzymology)

Time: 3 Hours

Max Marks: 80

PART-A
Short Answer Type (4x5=20 Marks)
(Answer any four of the following questions)

1. Mixotrophs.
2. Differential media.
3. Nitrate respiration.
4. Coenzymes.
5. Growth factors.
6. Idiophase.

PART-B
Essay Answer Type (4x15=60 Marks)
Answer all of the following questions

7. (a) Give an account on uptake of Nutrients by cell?

(OR)

(b) Explain Anoxygenic photosynthesis in bacteria?

8. (a) Give a brief note on methods of measuring Microbial growth?

(OR)

(b) Explain growth media and its types?

9. (a) Give an account on TCA?

(OR)

(b) Write a detailed note on Alcohol fermentation?

10. (a) Explain the properties and classification of enzymes?

(OR)

(b) Discuss the inhibition of enzymes activity?

Code No: 50102/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Backlog Examinations, June-2023

Microbiology-II

(Microbial Diversity)

Time: 3 Hours | Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Conservation of biodiversity.
2. Microbial richness.
3. Trophozoite.
4. Great plate count anomaly.
5. Methanogens.
6. Giardia.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) Define Biodiversity. Give an account on Elements of biodiversity.

   (OR)

   (b) Write a detailed note on Carl woese system of classification of living organisms.

8. (a) Explain the general characteristics of Rickettsia.

   (OR)

   (b) Write a note on Metabolic characteristics of extremophiles.

9. (a) Give an account on structural, physiological and metabolic characteristics of Rhodophyta.

   (OR)

   (b) Write about the structural and metabolic characteristics of Basidiomycetes.

10. (a) Write a detailed note on Microbial interactions.

    (OR)

    (b) Write a note on Preserved and perturbed microbial ecosystems.

Code No: 50102/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Regular Examinations, August-2023

Microbiology-II

(Microbial Diversity)

Time: 3 Hours Max Marks: 80

SECTION-A (4x5=20 Marks)

Answer any Four questions from the following

1. Genetic Diversity.
2. Mycoplasma.
3. Plasmodium.
4. Synergism.
5. Extremophiles.
6. Haeckel's Classification.
7. Bacillariophyta.
8. GPCA.

SECTION-B (4x15=60 Marks)

Answer all the following questions

9. (a) Write about differences between Prokaryotes and Eukaryotes.

(OR)

(b) Write about the "Carl Woese System" of classification.

10. (a) Write about general characteristics of Eubacteria.

(OR)

(b) Write about general characteristics of "Cyanobacteria".

11. (a) Write brief note on general characteristics of "Protozoa".

(OR)

(b) Write about Structural, Physiological and metabolic characteristics of Algae.

12. (a) Write about Microbial Positive Interactions: Symbiosis.

(OR)

(b) Write a detailed note on "Human Microbiome".

Code No: 50101/R20

FACULTY OF SCIENCE

B.Sc. CBCS I-Year (I-Semester) Regular Examinations, February/March-2023

Microbiology-I

(General Microbiology)

Time: 3 Hours 22044130475+1002 Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Hanging drop method.
2. Lyophilization.
3. Anaplerotic reactions
4. Aldehydes.
5. Negative stain.
6. TMV.
7. Autotrophs.
8. UV rays.

SECTION-B

Answer all the following questions (4x15=60 Marks)

9. (a) Describe the contributions of Louis Pasteur and Robert Koch to the development of microbiology.

(OR)

(b) Explain the working principle of Electron microscope and its applications in biology.

10. (a) Draw and explain the ultrastructure of bacteria.

(OR)

(b) Give an account on the techniques used for the isolation of pure cultures from mixed population of microorganisms.

11. (a) Describe the classification of microorganisms based on their nutritional requirements with examples.

(OR)

(b) Draw and explain the TCA cycle.

12. (a) Define sterilisation. Brief about the various physical methods used for sterilisation.

(OR)

(b) Explain bacterial growth in batch culture. Add a note on factors influencing bacterial growth.

Code No: 50102/R16

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Backlog Examinations, June-2023

Microbiology-II

(General Microbiology-II)

Time: 3 Hours Max Marks: 80

SECTION-A (4x5=20 Marks)

Answer any Four questions from the following

1. Rickettsia.
2. Microalgae.
3. Phospholipids.
4. Thin layer chromatography.
5. Disaccharides.
6. Bacterial flagella.

SECTION-B (4x15=60 Marks)

Answer all the following questions

7. (a) Describe the differences between prokaryotic and eukaryotic organisms.

   (OR)

   (b) Discuss the general characteristics of ray fungi with its significance.

8. (a) Elaborate the ultra-structure of prokaryotic cell.

   (OR)

   (b) Explain about the general characteristics of virus and its multiplication.

9. (a) Brief about types and importance of various polysaccharides.

   (OR)

   (b) Give an account on general characteristics of aminoacids.

10. (a) Define P^H. Write the methods of hydrogen ion concentration in biological fluids.

    (OR)

    (b) Brief about the principles and applications of calorimetry.

FACULTY OF SCIENCE

Code No: 50102/R-19

B.Sc. (CBCS) I-Year (II-Sem) Backlog Examinations, July/Aug 2021

Microbiology-II

(Microbial Physiology and Biochemistry)

Time: 2 Hours. Max. Marks: 80

Answer any Four questions from the following. (4x20=80 Marks)

1. Define bacterial growth and the different phases of bacterial growth in batch culture.
2. Write about the classification of Microorganisms based on the nutrition.
3. Brief about the anoxygenic photosynthesis in bacteria.
4. Explain TCA cycle.
5. Write the general properties of amino acids and proteins.
6. Define an Enzyme. Explain the mechanisms of biocatalysis.
7. Give an account on paper chromatography.
8. Define Buffer. Write its importance in biological fluids.

Code No: 50102/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Backlog Examinations, June-2023

Microbiology-II

(Microbial Diversity)

Time: 3 Hours | Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Conservation of biodiversity.
2. Microbial richness.
3. Trophozoite.
4. Great plate count anomaly.
5. Methanogens.
6. Giardia.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) Define Biodiversity. Give an account on Elements of biodiversity.

   (OR)

   (b) Write a detailed note on Carl woese system of classification of living organisms.

8. (a) Explain the general characteristics of Rickettsia.

   (OR)

   (b) Write a note on Metabolic characteristics of extremophiles.

9. (a) Give an account on structural, physiological and metabolic characteristics of Rhodophyta

   (OR)

   (b) Write about the structural and metabolic characteristics of Basidiomycetes.

10. (a) Write a detailed note on Microbial interactions.

    (OR)

    (b) Write a note on Preserved and perturbed microbial ecosystems.

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Code No: 50101/R20

Backlog Sem I Aug 23 | 8/2022

FACULTY OF SCIENCE

B.Sc. CBCS I-Year (I-Semester) Backlog Examinations, July/August-2022

Microbiology-I

(General Microbiology)

Time: 3 Hours Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Contributions of Louis Pasteur.
2. Structure and Morphology of HIV.
3. TCA Cycle.
4. Batch culture.
5. Oxidative phosphorylation.
6. Turbidometry.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Write the principle and working procedure of the phase contrast and electron microscope.
8. Give a detailed account on different staining techniques and their applications.
9. Write an easy on preservation of pure cultures.
10. Explain about ultrastructure of bacterial cell.
11. Write about different nutritional groups of bacteria with suitable examples.
12. Give a detail account on HMP pathway.
13. Write about different chemical sterilization methods.
14. Write in detail about bacterial growth phases.

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Code: 50101/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (I-Semester) Regular Examinations, Nov/Dec-2019

MICROBIOLOGY-I

(Introductory Microbiology)

Time: 3Hours Max Marks: 80

PART-A

(Short Answer Type)

Answer any four of the following questions (4X5=20 Marks)

1. Contributions of Winogradsky?
2. Sterilization?
3. Phase contrast microscopy?
4. Enrichment media?
5. Lyophilization?
6. TMV?

PART-B

(Essay Answer Type)

Answer all of the following questions (4X15=60 Marks)

7. (a) Write in detail about the contributions of Louis Pasteur?

(OR)

(b) Enumerate the chemical methods of sterilization?

8. (a) Describe in detail about the principles and applications of SEM?

(OR)

(b) Write in detail about capsular and flagellar stains?

9. (a) Write in detail about Carl Woese system of classification?

(OR)

(b) Enumerate the different methods for preserving microbial cultures?

10. (a) Describe the general characters of Archaebacteria?

(OR)

(b) Describe the morphology and structure of HIV?

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Code No: 50106/A/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, July/August-2021

MICROBIOLOGY-VIII (A) Elective

Food Microbiology

Time: 2 Hours

Max Marks: 80

Answer any Four from the following questions.

(4x20=80 Marks)

1. Give an account on microorganisms in food.
2. Explain food borne diseases and their detection.
3. Give a brief note on Probiotics.
4. Explain microbiological production of bread.
5. Give an account on Food preservation methods.
6. Write a detailed note on food intoxication.
7. Explain the biodegradation of pesticides.
8. Discuss the sewage treatment.

Code No: 50102/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (II-Semester) Regular Examinations, December-2020

Microbiology-II

(Microbial Physiology and Biochemistry)

Time: 2 Hour

Max Marks: 80

Answer any Four questions from the following. (4x20=80 marks)

1. What are the different types of nutritional uptake methods for microorganisms?
2. Explain different methods for measuring microbial growth.
3. Explain the mechanism of oxygenic photosynthesis.
4. Write about glycolysis pathway.
5. Describe factors affecting enzyme activity.
6. Explain general characters of carbohydrates.
7. Write an essay on colorimetry.
8. Explain principle and applications of SDS PAGE.

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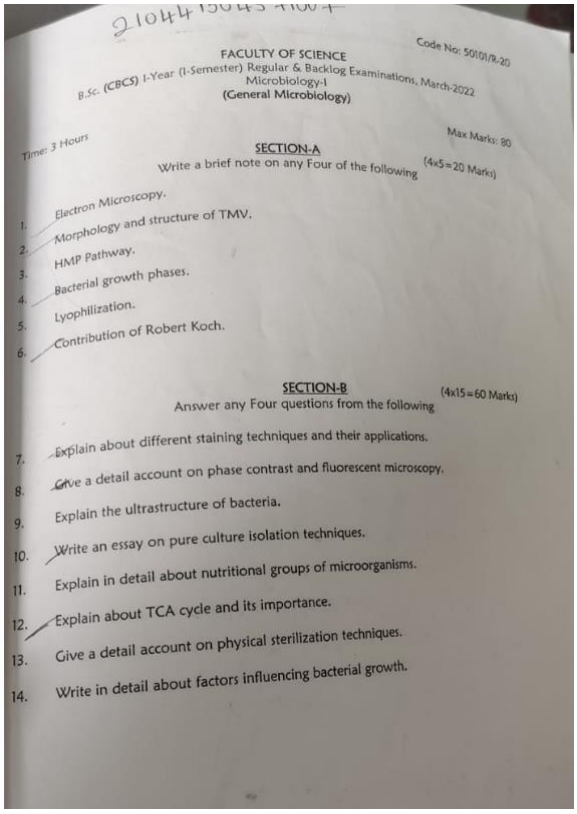


Code No: 50101/R-20

FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (I-Semester) Regular & Backlog Examinations, March-2022

Microbiology-I

(General Microbiology)

Time: 3 Hours Max Marks: 80

SECTION-A

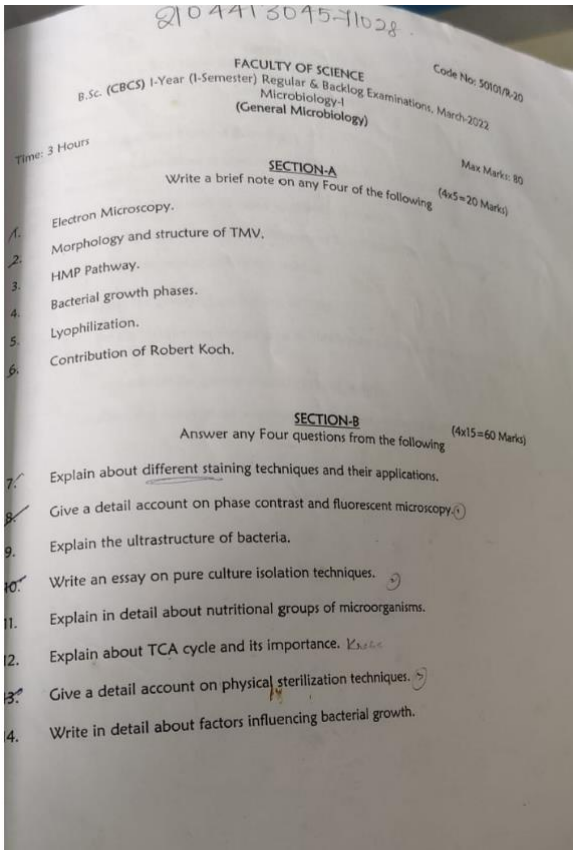
Write a brief note on any Four of the following (4x5=20 Marks)

1. Electron Microscopy.
2. Morphology and structure of TMV.
3. HMP Pathway.
4. Bacterial growth phases.
5. Lyophilization.
6. Contribution of Robert Koch.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Explain about different staining techniques and their applications.
8. Give a detail account on phase contrast and fluorescent microscopy.
9. Explain the ultrastructure of bacteria.
10. Write an essay on pure culture isolation techniques.
11. Explain in detail about nutritional groups of microorganisms.
12. Explain about TCA cycle and its importance.
13. Give a detail account on physical sterilization techniques.
14. Write in detail about factors influencing bacterial growth.



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FACULTY OF SCIENCE

B.Sc. (CBCS) I-Year (I-Semester) Regular & Backlog Examinations, March-2022

Microbiology-I

(General Microbiology)

Time: 3 Hours Max Marks: 80

SECTION-A

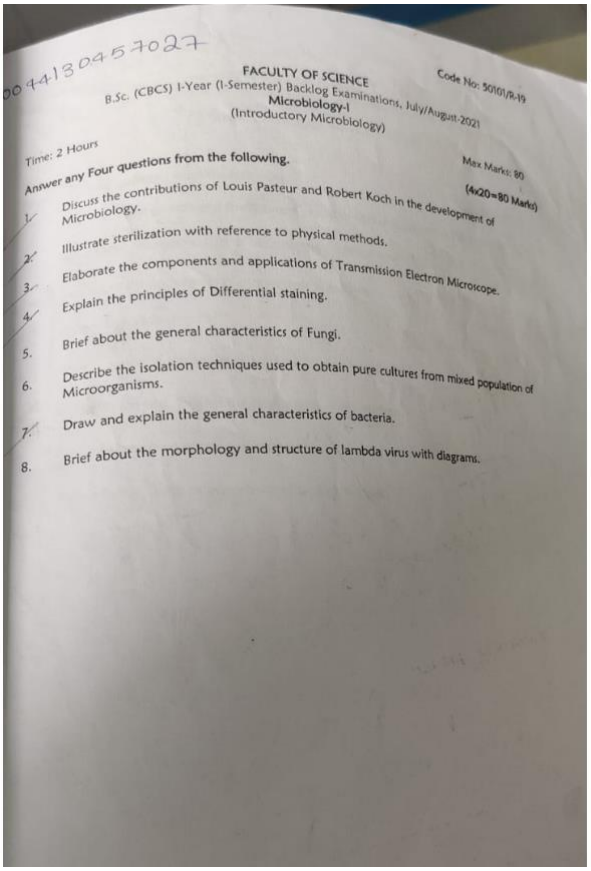
Write a brief note on any Four of the following (4x5=20 Marks)

1. Electron Microscopy.
2. Morphology and structure of TMV.
3. HMP Pathway.
4. Bacterial growth phases.
5. Lyophilization.
6. Contribution of Robert Koch.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Explain about different staining techniques and their applications.
8. Give a detail account on phase contrast and fluorescent microscopy.
9. Explain the ultrastructure of bacteria.
10. Write an essay on pure culture isolation techniques.
11. Explain in detail about nutritional groups of microorganisms.
12. Explain about TCA cycle and its importance.
13. Give a detail account on physical sterilization techniques.
14. Write in detail about factors influencing bacterial growth.



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FACULTY OF SCIENCE

Code No: 50101/R-19

B.Sc. (CBCS) I-Year (I-Semester) Backlog Examinations, July/August-2021

Microbiology-I

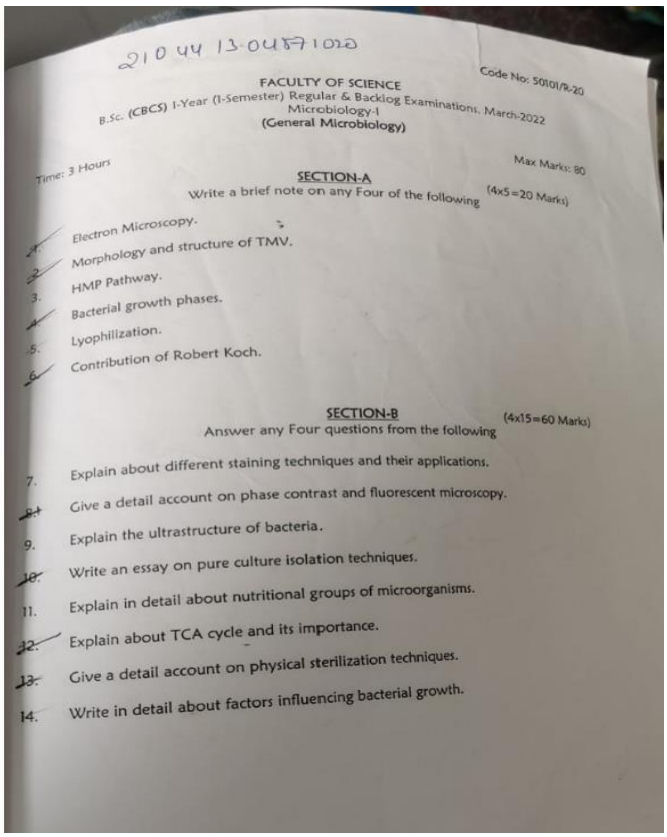
(Introductory Microbiology)

Time: 2 Hours

Max Marks: 80

Answer any Four questions from the following. **(4x20=80 Marks)**

1. Discuss the contributions of Louis Pasteur and Robert Koch in the development of Microbiology.
2. Illustrate sterilization with reference to physical methods.
3. Elaborate the components and applications of Transmission Electron Microscope.
4. Explain the principles of Differential staining.
5. Brief about the general characteristics of Fungi.
6. Describe the isolation techniques used to obtain pure cultures from mixed population of Microorganisms.
7. Draw and explain the general characteristics of bacteria.
8. Brief about the morphology and structure of lambda virus with diagrams.



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FACULTY OF SCIENCE

Code No: 50101/R-20

B.Sc. (CBCS) I-Year (I-Semester) Regular & Backlog Examinations, March-2022

Microbiology-I

(General Microbiology)

Time: 3 Hours

Max Marks: 80

SECTION-A

Write a brief note on any Four of the following (4x5=20 Marks)

1. Electron Microscopy.
2. Morphology and structure of TMV.
3. HMP Pathway.
4. Bacterial growth phases.
5. Lyophilization.
6. Contribution of Robert Koch.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Explain about different staining techniques and their applications.
8. Give a detail account on phase contrast and fluorescent microscopy.
9. Explain the ultrastructure of bacteria.
10. Write an essay on pure culture isolation techniques.
11. Explain in detail about nutritional groups of microorganisms.
12. Explain about TCA cycle and its importance.
13. Give a detail account on physical sterilization techniques.
14. Write in detail about factors influencing bacterial growth.

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Code No: 50106/A/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, July/August-2021

MICROBIOLOGY-VIII (A) Elective

Food Microbiology

Time: 2 Hours

Max Marks: 80

Answer any Four from the following questions.

(4x20=80 Marks)

1. Give an account on microorganisms in food.
2. Explain food borne diseases and their detection.
3. Give a brief note on Probiotics.
4. Explain microbiological production of bread.
5. Give an account on Food preservation methods.
6. Write a detailed note on food intoxication.
7. Explain the biodegradation of pesticides.
8. Discuss the sewage treatment.

Code No: 50106/A/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, July/August-2021

MICROBIOLOGY-VIII (A) Elective

Food Microbiology

Time: 2 Hours

Max Marks: 80

Answer any Four from the following questions. **(4x20=80 Marks)**

1. Give an account on microorganisms in food.
2. Explain food borne diseases and their detection.
3. Give a brief note on Probiotics.
4. Explain microbiological production of bread.
5. Give an account on Food preservation methods.
6. Write a detailed note on food intoxication.
7. Explain the biodegradation of pesticides.
8. Discuss the sewage treatment.

Code No: 50103/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (III-Semester) Regular Examinations, Dec-2023/Jan-2024

Microbiology-III

(Food and Environmental Microbiology)

Time: 3 Hours | Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Idly.
2. Probiotics.
3. Microbial food poisoning.
4. Importance of quality control.
5. Sanitary quality of water.
6. Water-borne pathogenic microorganisms.
7. Rhizosphere.
8. Nitrogen cycle.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

9. (a) Write about the processing and fermentation of Sauerkraut and add a note on health aspects of fermented food.

(OR)

(b) Briefly discuss about the types of microorganisms in milk and their significance.

10. (a) Write the various food preservation methods and food safety issues.

(OR)

(b) (i) Detection of pathogens in food

(ii) Screening and Enumeration of spoilage microorganisms.

11. (a) Write about the microorganisms in air and their importance.

(OR)

(b) Explain the aerobic and anaerobic sewage treatment.

12. (a) Discuss the physical, chemical and biological properties of soil.

(OR)

(b) Explain the microbial degradation of organic pollutants.

Code No: 50106/A/R-16

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FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, July/August-2021

MICROBIOLOGY-VIII (A) Elective

Food Microbiology

Time: 2 Hours

Max Marks: 80

Answer any Four from the following questions. **(4x20=80 Marks)**

1. Give an account on microorganisms in food.
2. Explain food borne diseases and their detection.
3. Give a brief note on Probiotics.
4. Explain microbiological production of bread.
5. Give an account on Food preservation methods.
6. Write a detailed note on food intoxication.
7. Explain the biodegradation of pesticides.
8. Discuss the sewage treatment.

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Code No: 1075/F/R19

FACULTY OF ARTS & SOCIAL SCIENCES/SCIENCE

B.A./B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, Dec-2022/Jan-2023

Fundamentals of Food and Nutrition (GE)

Time: 3 Hours | Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Nano foods.
2. Prebiotics.
3. Food adulteration.
4. Write about Sanitation.
5. Give a note on Nutrition.
6. Write about space food.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) What is Food? Write about the convenience foods and texturized foods.

   (OR)

   (b) Explain – Novel and Organic foods.

8. (a) Write about digestion, absorption and assimilation of nutrients in the human gut.

   (OR)

   (b) Write in detail about the role of intestinal flora in Nutrition.

9. (a) Give a detailed note on storing raw foods and cooked foods.

   (OR)

   (b) What should you consider when purchasing food. Explain.

10. (a) Write in detail about personal hygiene of food handler.

    (OR)

    (b) Describe the techniques of washing hands.

Code No: 50105/A/R20

FACULTY OF SCIENCE

B.Sc. CBCS III-Year (V-Semester) Regular Examinations, Dec-2022/Jan-2023

Microbiology-V/A

(Molecular Biology and Microbial Genetics)

Time: 3 Hours Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Law of Independent assortment.
2. Transformation.
3. rRNA.
4. DNA polymerases.
5. Linkage.
6. Vectors.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) Write in detail about DNA and RNA as genetic materials.

   (OR)

   (b) Write about the replication of DNA by semi conservative mechanism.

8. (a) Write a note on various physical and chemical mutagens.

   (OR)

   (b) Write a brief note on DNA damage and repair mechanisms.

9. (a) Give a brief account on protein synthesis in bacteria.

   (OR)

   (b) Write about the regulation of gene expression in bacteria-Lac operon.

10. (a) Write a detailed note on Genomic libraries.

    (OR)

    (b) Write a note on application of genetic engineering in industry, agriculture and medicin

Code No: 50106/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, July/August-2021

MICROBIOLOGY-VI

Medical Microbiology

Time: 2 Hours

Max Marks: 80

Answer any Four from the following questions. **(4x20=80 Marks)**

1. Write about the history of Medical Microbiology.
2. Write about the distribution and importance of Normal flora of human body.
3. Write about the General methods of lab diagnosis.
4. What are Therapeutic drugs and write about the Mode of action of Pencillins and their clinical use.
5. Write a general account on Tuberculosis.
6. What is enteric fever and write about the etiology, pathogenesis and treatment of Typhoid.
7. Write a detailed note on Influenza.
8. Give any two examples of blood borne infections and write the etiology, pathogenesis and treatment of serum hepatitis.

Code No: 50106/A/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular Examinations, June-2022

Microbiology-VI (A)

Industrial Microbiology

Time: 3 Hours

Max Marks: 80

SECTION-A (4x5=20 Marks)

Answer any Four questions from the following

1. Actinomycetes.
2. Impeller – Sparger.
3. Fed batch fermentation.
4. Biogas.
5. Amylase.
6. Molasses.

SECTION-B (4x15=60 Marks)

Answer any Four questions from the following

7. Describe the types of microorganisms that have industrial importance.
8. Define Screening. Mention the methods used for primary screening of industrial microbes.
9. Draw and explain the design of Bioreactor.
10. Give an account on the raw materials used for preparation of fermentation media.
11. Explain the Batch fermentation, its kinetics and its applications.
12. Illustrate the industrial production of alcohol by fermentation.
13. Describe the fermentative production of antibiotic penicillin.
14. Explain the steps of wine production.

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Code No: 50103/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (III-Semester) Regular Examinations, July-2021

MICROBIOLOGY-III

(Food and Environmental Microbiology)

Time: 2 Hours

Max Marks: 80

Answer any Four questions from the following. **(4x20=80 Marks)**

1. Write a brief note on "Microbial Products of Milk".
2. Write about the "Concept of Probiotics".
3. Write a note on "Mycotoxins and their toxicity".
4. Write about the Screening and Enumeration of Spoilage Microorganisms.
5. Write a detailed note on "Water borne-pathogenic Microorganisms.
6. Write about the sewage treatment methods.
7. Write a brief note on Physical, Chemical & Biological properties of Soil.
8. Write general account on "Nitrogen Cycle".

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Code No: 50104/R20

FACULTY OF SCIENCE

B.Sc. CBCS II-Year (IV-Semester) Regular & Backlog Examinations, July/August-2022

Microbiology-IV

(Medical Microbiology & Immunology)

Time: 3 Hours

Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Antimicrobial resistance.
2. Amoebiasis.
3. Major Histocompatibility complex (MHC).
4. Classical pathway of complement.
5. Antigens.
6. Attenuation.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Give an account on History of Medical microbiology.
8. Write a detailed note on Pathogenesis and diagnosis of Typhoid.
9. Explain the morphology, transmission and pathogenesis of Rabies.
10. Write a note on structure, pathogenesis and lab diagnosis of Influenza.
11. Give an account on Cells of immune system.
12. Elucidate the structure of antibody and write the functions of Immunoglobulins.
13. Explain the production and applications of Monoclonal antibodies.
14. Write a brief note on the types of Hypersensitivity.

Code No: 50105/A/R20

FACULTY OF SCIENCE

B.Sc. CBCS III-Year (V-Semester) Regular Examinations, Dec-2023/Jan-2024

Microbiology-V/A

(Molecular Biology and Microbial Genetics)

Time: 3 Hours Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Linkage.
2. Transformation.
3. Muton, Recon.
4. Restriction endonuclease.
5. Plasmids.
6. tRNA.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) Brief about the semi conservative model of replication of DNA.

(OR)

(b) Explain the experiments that proved DNA as genetic material.

8. (a) Write a brief note on various physical and chemical mutagens.

(OR)

(b) Outline the gene transfer techniques in bacteria.

9. (a) Write about the regulation of gene expression in bacteria with reference to Lac Operon

(OR)

(b) Give a brief note on RNA transcription in Prokaryotes.

10. (a) Write a note on gene cloning methods.

(OR)

(b) Discuss the applications of genetic engineering in Industry and Medicine.

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Code No: 50105/A/R20

FACULTY OF SCIENCE

B.Sc. CBCS III-Year (V-Semester) Regular Examinations, Dec-2022/Jan-2023

Microbiology-V/A

(Molecular Biology and Microbial Genetics)

Time: 3 Hours

Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Law of Independent assortment.
2. Transformation.
3. tRNA.
4. DNA polymerases.
5. Linkage.
6. Vectors.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) Write in detail about DNA and RNA as genetic materials.

(OR)

(b) Write about the replication of DNA by semi conservative mechanism.

8. (a) Write a note on various physical and chemical mutagens.

(OR)

(b) Write a brief note on DNA damage and repair mechanisms.

9. (a) Give a brief account on protein synthesis in bacteria.

(OR)

(b) Write about the regulation of gene expression in bacteria-Lac operon.

10. (a) Write a detailed note on Genomic libraries.

(OR)

(b) Write a note on application of genetic engineering in industry, agriculture and medicin

Code No: 50104/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (IV-Semester) Regular & Backlog Examinations, June/July-2023

Microbiology-IV

(Medical Microbiology and Immunology)

Time: 3 Hours | Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Bacterial toxins.
2. Entamoeba histolytica.
3. Macrophage.
4. Neutralization.
5. Nosocomial infection.
6. Dengue fever.

SECTION-B

Answer all the following questions (4x15=60 Marks)

7. (a) Give an account on Normal flora of human body.

   (OR)

   (b) Write a detailed note on Tuberculosis.

8. (a) Explain the morphology, transmission and pathogenesis of Malaria.

   (OR)

   (b) Write a note on structure, pathogenesis and lab diagnosis of HIV.

9. (a) Give an account on Secondary Organs of immune System.

   (OR)

   (b) Write about the types of Immunity.

10. (a) Write the labelled antibody based techniques (ELISA, RIA).

    (OR)

    (b) Write a note on Systemic and localized autoimmune disorders.

Code No: 50104/R-16

FACULTY OF SCIENCE

B.Sc. CBCS II-Year (IV-Semester) Regular Examinations, December-2020

Microbiology

(Microbial Genetics and Molecular Biology)

Time: 2 Hour

Max Marks: 80

Answer any Four questions from the following. (4x20=80 marks)

1. Write a detailed note on "DNA and RNA" as genetic material.
2. Define replication and write about Semi-Conservative mechanism of DNA replication.
3. What are mutations and write about the different types of mutations.
4. Give a general account on DNA damage and repair mechanism.
5. Write about the types of RNA and their functions.
6. Write about the Salient features of Genetic code.
7. Define Genetic engineering and write about the basic principles of Genetic engineering.
8. Write about Genomic and C-DNA Libraries.

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CODE No: 50104

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year, IV-Sem Regular/Backlog Examinations, May/June-2019

Microbiology

(Microbial Genetics and Molecular Biology)

Time:3Hours

Max. Marks: 80

SECTION-A

(4X5=20 Marks)

(Short Answer Type)

Answer these questions at one place only.

1. Semi conservative Replication.
2. Physical mutagens.
3. Genetic code.
4. Restriction Endonucleases.

SECTION-B

(4X15=60 Marks)

(Essay Answer Type)

Answer the following questions in not exceeding 90 line each.

5. a) Write about mendelian laws, Alleles, crossing over and linkage.

(OR)

b) Describe extra chromosomal genetic elements plasmids and transposons.

6. a) Explain DNA damage and repair mechanism

(OR)

b) Give an account on conjugation and transformation.

7. a) Write about structure of ribosomes and protein synthesis.

(OR)

b) Explain one gene-one enzyme, one gene- one polypeptide, one gene-one product Hypothesis.

8. a) Give an account on application of genetic engineering in industry, agriculture and Medicine.

(OR)

b) Explain gene cloning methods.

Code No: 50105/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, July-2021

MICROBIOLOGY-V

(Applied Microbiology)

Time: 2 Hours

Max Marks: 80

Answer any Four questions from the following. **(4x20=80 Marks)**

1. Give an account on Mycorrhizae.
2. What are Biofertilizers? Write about Production of Biofertilizers.
3. Give an account on Biopesticides.
4. Explain the plant diseases caused by bacteria.
5. Write about the nitrogen cycle.
6. Explain the interactions of microbes.
7. Explain the methods of sewage water treatment.
8. Write about the biodegradation of pesticides.

Code No: 50104/R20

FACULTY OF SCIENCE

B.Sc. CBCS II-Year (IV-Semester) Regular & Backlog Examinations, July/August-2022

Microbiology-IV

(Medical Microbiology & Immunology)

Time: 3 Hours Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Antimicrobial resistance.
2. Amoebiasis.
3. Major Histocompatibility complex (MHC).
4. Classical pathway of complement.
5. Antigens.
6. Attenuation.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Give an account on History of Medical microbiology.
8. Write a detailed note on Pathogenesis and diagnosis of Typhoid.
9. Explain the morphology, transmission and pathogenesis of Rabies.
10. Write a note on structure, pathogenesis and lab diagnosis of Influenza.
11. Give an account on Cells of immune system.
12. Elucidate the structure of antibody and write the functions of Immunoglobulins.
13. Explain the production and applications of Monoclonal antibodies.
14. Write a brief note on the types of Hypersensitivity.

Code No: 50105/A/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, January/February-2022

Microbiology-V/A

(Molecular Biology & Microbial Genetics)

Time: 3 Hours Max Marks: 80

SECTION-A

Answer any Four questions from the following (4x5=20 Marks)

1. Law of Independent assortment.
2. Induced mutations.
3. Cistron.
4. Plasmid vectors.
5. Conjugation.
6. cDNA Library.

SECTION-B

Answer any Four questions from the following (4x15=60 Marks)

7. Explain Watson and Crick double helical model of DNA.
8. Explain replication of DNA in detail in prokaryotes.
9. Discuss different DNA repair mechanisms in prokaryotes.
10. Discuss in detail about transduction in bacteria.
11. Write an account on protein synthesis (translation) in prokaryotes.
12. Explain in detail about regulation of gene expression in bacteria taking Lac Operon as a model.
13. Explain the steps involved in gene cloning in detail.
14. Write an account on the enzymes used in genetic engineering with their significance.

Code No: 50105

FACULTY OF SCIENCE
B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, Nov/Dec-2019
MICROBIOLOGY-V
(Applied Microbiology)

Time: 3 Hours Max Marks: 80

PART-A (4X5=20 Marks)
(Short Answer Type)
Answer all of the following questions

1. Cyanobacteria.
2. *Bacillus thuringensis.*
3. Mutualism.
4. Oxidation Lagoons/Ponds.

PART-B (4X15=60 Marks)
(Essay Answer Type)
Answer all of the following questions

5. (a) Write a detailed note on the plant growth promoting microorganisms.
   (OR)
   (b) Write about the Biofertilizers.
6. (a) What are pesticides and write about the role of *Bacillus thuringensis* and *Trichoderma* in the biocontrol of plant diseases.
   (OR)
   (b) Write about the concept of disease in plants.
7. (a) Define diazotrophy and write about the Biological N_2 fixation mechanism.
   (OR)
   (b) Give a detailed note on Microbial interactions.
8. (a) Give a general account on the microbiology of potable and polluted water.
   (OR)
   (b) Write the outlines of Biodegradation of environmental pollutants.

Code No: 50105

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, Nov/Dec-2019

MICROBIOLOGY-V

(Applied Microbiology)

Time: 3 Hours Max Marks: 80

PART-A

(Short Answer Type) (4X5=20 Marks)

Answer all of the following questions

1. Cyanobacteria.
2. *Bacillus thuringensis.*
3. Mutualism.
4. Oxidation Lagoons/Ponds.

PART-B

(Essay Answer Type) (4X15=60 Marks)

Answer all of the following questions

5. (a) Write a detailed note on the plant growth promoting microorganisms.

   (OR)

   (b) Write about the Biofertilizers.

6. (a) What are pesticides and write about the role of *Bacillus thuringensis* and *Trichoderma* in the biocontrol of plant diseases.

   (OR)

   (b) Write about the concept of disease in plants.

7. (a) Define diazotrophy and write about the Biological N_2 fixation mechanism.

   (OR)

   (b) Give a detailed note on Microbial interactions.

8. (a) Give a general account on the microbiology of potable and polluted water.

   (OR)

   (b) Write the outlines of Biodegradation of environmental pollutants.

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Code No: 50103/R20

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (III-Semester) Regular Examinations, Dec-2022/Jan-2023

Microbiology-III

(Food and Environmental Microbiology)

Time: 3 Hours Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Prebiotics.
2. Food safety issues.
3. Food borne illness.
4. Importance of microorganisms in air.
5. Nitrogen cycle.
6. Cheese production.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) Give a detailed account on health benefits of fermented foods and significance.

   (OR)

   (b) Define Probiotics? Describe in detail about the probiotics with suitable examples and applications.

8. (a) Explain about Food intoxication with suitable examples.

   (OR)

   (b) Explain in detail about the methods used for preservation of foods.

9. (a) Mention an essay on different methods of sewage treatment.

   (OR)

   (b) Write in detail about sanitary quality of water methods.

10. (a) Discuss about various types of microbial interactions with suitable examples.

    (OR)

    (b) Mention an account on microbial degradation of organic pollutants.

Code No: 50105/A

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, Nov/Dec-2019

MICROBIOLOGY-VI (A) Elective

(Immunology)

Time: 3 Hours

Max Marks: 80

PART-A

(4X5=20 Marks)

(Short Answer Type)

Answer all of the following questions

1. Hapten.
2. Eosinophils.
3. Complement fixation test.
4. Vaccine.

PART-B

(4X15=60 Marks)

(Essay Answer Type)

Answer all of the following questions

5. (a) Give an account on cell and humoral immunity?

   (OR)

   (b) Give a brief note on structure of immunoglobulin and its types?

6. (a) Give an account on Primary Organs of Immune System.

   (OR)

   (b) Define secondary immune organs and explain the structure of spleen and lymph node

7. (a) Give an account on Agglutination?

   (OR)

   (b) Write a detailed note on ELISA?

8. (a) Explain the Hypersensitivity and its types?

   (OR)

   (b) Discuss Monoclonal antibody production.

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Code No: 50104/R-19

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (IV-Semester) Regular Examinations, July/Aug-2021

Microbiology-IV

(Medical Microbiology & Immunology)

Time: 2 Hours

Max Marks: 80

Answer any Four questions from the following. **(4x20=80 Marks)**

1. Describe the pathogenesis and diagnosis of enteric fever caused by *S. typhi.*
2. Explain the virulence factors of pathogenic organisms.
3. Give an account on transmission and pathogenesis of Rabies.
4. Explain the structure and pathogenesis of Influenza.
5. Define an antibody. Explain the structure and the properties of antibodies.
6. What is immunity? Write about acquired immunity.
7. Give an account on ELISA.
8. Explain the production of Monoclonal Abs and their applications.

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Code No: 50105/A/R-16

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, July-2021

MICROBIOLOGY-VI (A) Elective

Immunology

Time: 2 Hours

Max Marks: 80

Answer any Four questions from the following. (4x20=80 Marks)

1. Define Immunoglobulin. Explain the structure and types of Immunoglobulins.
2. What is immunity? Write about the types of immunity.
3. Give an account on the peripheral lymphoid organs.
4. Explain in detail about lymphocytes.
5. Write about the precipitation reactions.
6. Explain the Labeled Ab technique of ELISA.
7. What is hypersensitivity and brief about various types of hypersensitivity.
8. Explain the production of monoclonal antibodies by Hybridoma technology.

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Code No: 50106/A/R19

FACULTY OF SCIENCE

B.Sc. (CBCS) III-Year (VI-Semester) Regular & Backlog Examinations, June-2023

Microbiology-VI (A)

(Industrial Microbiology)

Time: 3 Hours

Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Crowded plate technique.
2. Temperature control in fermentor.
3. Submerged fermentation.
4. Alcohol.
5. Glutamic acid.
6. Turbidostat.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) Describe the characteristics of industrially useful Actinomycetes and Molds.

(OR)

(b) Define Immobilisation. Mention the methods used for immobilization of cells and enzymes.

8. (a) Draw and explain the design of Fermenter.

(OR)

(b) Give an account on the Downstream Processing.

9. (a) Explain the phases of microbial growth in Batch fermentation with its kinetics and its applications.

(OR)

(b) Give an account on solid state fermentation.

10. (a) Describe the fermentative production of beer.

(OR)

(b) Explain the production of recombinant vaccines.