F–4595

Sub. Code
7BMC6C1

B.Sc. DEGREE EXAMINATION, APRIL 2021 &

Supplementary/Improvement/Arrear Examinations

Sixth Semester

Microbiology and Clinical Lab Technology

BIO INSTRUMENTATION AND DIAGNOSTICS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Molarity.
2. Eosin.
3. Planck's constant.
4. NMR.
5. Mobile phase.
6. TLC.
7. Centrifugation.
8. Density gradient.
9. Histopathology.
10. ECG.

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Comment on PPM, PPB.

Or

(b) Comment on Normality, Molarity.

12. (a) Explain UV spectroscopy.

Or

(b) Explain methods of X-ray diffraction.

13. (a) Enlist applications of chromatography.

Or

(b) Give notes on paper chromatography.

14. (a) Write about types of rotor.

Or

(b) Give detail notes on ultracentrifugation.

15. (a) Write short notes on Histopathology.

Or

(b) Comment on Immuno histochemistry.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. How do you prepare

(a) Methylene blue

(b) Eosin

(c) Haematoxylin solution.

17. Write principle, instrumentation and application of IR Spectroscopy.

18. Explain in detail HPLC.

19. Define RPM. Explain about Rahe-zonal centrifugation.

20. Comment on :

    (a) Angiogram

    (b) X-Ray

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F–4596

Sub. Code
7BMC6C2

B.Sc. DEGREE EXAMINATION, APRIL 2021 &

Supplementary/Improvement/Arrear Examinations

Sixth Semester

Microbiology and Clinical Lab Technology

CLINICAL PARASITOLOGY AND MYCOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Intermediate host
2. Sarcodina
3. Tropozoite
4. Kala-Azar
5. Nematodology
6. Filariasis
7. Deuteromycetes
8. LCB
9. Mycotoxin
10. Antifungal agents.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Give notes on host parasite relationship.

Or

(b) Discuss about immunity of host against parasitic infections.

12. (a) Comment of Leishmaniasis.

Or

(b) Give a brief on ciliates.

13. (a) Narrate the life cycle of Taenia Solium.

Or

(b) Explain the life cycle of Ascaris Lumbricoides.

14. (a) Give notes on classification of fungi with examples.

Or

(b) Write about any two cutaneous mycoses diseases.

15. (a) Give a brief on mycotoxins.

Or

(b) Comment on Antifungal chemotherapy.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Give brief notes on diagnostic procedures for parasitic infections.

17. Explain morphology, life cycle, pathogenesis and lab diagnosis of Entamoeba.

18. Give a detailed account on Filariasis.

19. Describe about any three systemic mycoses.

20. Comment on lab diagnosis and treatment of fungal infections.

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F–4597	Sub. Code
	7BMC6C3

B.Sc DEGREE EXAMINATION, APRIL 2021 &

Supplementary/Improvement/Arrear Examinations

Sixth Semester

Microbiology and Clinical Lab Technology

RECOMBINANT DNA TECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Klenow Fragments
2. Alkaline Phosphatase
3. Bacteriophage
4. Cosmids
5. Ultrasonication
6. Shot gun method
7. Genomic libraries
8. Safety guidelines for rDNA technology
9. Cryoprecipitate
10. Live Attenuated Vaccine.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain klenow Fragments.

Or

(b) Write about RNase - H enzyme.

12. (a) What is Cosmid?

Or

(b) Differentiate Expression and shuttle vectors.

13. (a) What is Liposome Fusion?

Or

(b) Explain ultrasonification.

14. (a) Comment on Genomic library.

Or

(b) What is site directed mutagenesis?

15. (a) Describe about GMO blood products.

Or

(b) What is a Vaccine ? Explain its types.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. What is Restriction Endonucleases? Explain its types.

17. Outline the strategies involved in Gene cloning

18. Explain in detail about blue white screening?

19. How to construct a cDNA library?

20. Discuss in detail about the production of Healthcare products.

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F–4598

Sub. Code
7BMC3E2

B.Sc. DEGREE EXAMINATION, APRIL 2021 &

Supplementary/Improvement/Arrear Examinations

Sixth Semester

Microbiology and Clinical Lab Technology

Elective – ENVIRONMENTAL MICROBIOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Aerosol
2. State few Airborne diseases
3. Estuary
4. Coliform
5. Saccarification
6. What is a Sledge?
7. Bioleaching
8. Define Pesticides and give any two examples.
9. What is green house effect?
10. Acid rain

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) How to Control Airborne Infections?

Or

(b) What are the Microorganisms present in air?

12. (a) Explain Fresh water ecosystem.

Or

(b) Describe the Microbial assessment of water quality.

13. (a) Explain about secondary sewage treatment process.

Or

(b) Comment on Vermicomposting.

14. (a) Write an account on petroleum products.

Or

(b) How do pesticides get degraded in soil?

15. (a) Explain the biotechnological approaches for control of acid rain.

Or

(b) State an account on green house gases.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain about the different types of microorganisms present in air and their role in the environment.

17. Summarize Water borne diseases.

18. Write a note on Solid waste management.

19. Describe the degradation of petroleum products.

20. What are the major environmental problems faced by the society?

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F–5623

Sub. Code
7BMC2C1

B.Sc. DEGREE EXAMINATION, APRIL 2021 &
SUPPLEMENTARY / IMPROVEMENT / ARREAR EXAMINATIONS
Second Semester

Microbiology and Clinical Lab Technology

CLINICAL BIOCHEMISTRY

(CBCS – 2017 onwards)

Time : Three Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer ALL questions.

1. Anti Coagulants.
2. pH.
3. Monosaccharides.
4. Hyperglycimea.
5. Phospholipids.
6. Xanthomatosis.
7. Alanine.
8. Creatinine.
9. Rickets.
10. Bile Salts.

Part B (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) How could you collect the Blood Sample?

Or

(b) Add brief notes on Buffer Systems.

12. (a) Briefly explain about the Oligosaccharides with example.

Or

(b) Write short notes on GTT.

13. (a) How could you classify the Lipids with respect to their properties?

Or

(b) Give short notes on Lipidosis.

14. (a) What are the properties of aminoacids?

Or

(b) Write short notes on teritary structure of proteins.

15. (a) Write about the fat soluble vitamins and their deficiency diseases.

Or

(b) Mention an account on basic principle and application of SGOT.

Part C $(3 \times 10 = 30)$

Answer any three Questions

16. What are electrolytes? Write the function of electrolytes.

17. Illustrate a detailed study on Diabetes Mellitus and their types?

18. Do Elaborate study on aetiology, clinical features and Complication of Atherosclerosis.

19. Explain about the clinical features of Phenylketonuria.

20. Give a brief study on Kidney function test and mention their clinical importance in detail.

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F–5624

Sub. Code
7BMC4C1

B.Sc. DEGREE EXAMINATION, APRIL 2021 &
SUPPLEMENTARY / IMPROVEMENT / ARREAR EXAMINATIONS
Fourth Semester

Microbiology and Clinical Lab Technology

MOLECULAR BIOLOGY AND MICROBIAL GENETICS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Smooth Strain
2. 16srRNA
3. Ethidium bromide
4. Rec A
5. RNA primase
6. ORF
7. Transcription bubble
8. Core enzyme
9. Leader Sequence
10. *Lac Y.*

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Comment on Hershey and Chase experiment.

Or

(b) Define flow of genetic information with suitable example.

12. (a) Illustrate the mode of chemical mutagen.

Or

(b) Write short notes on DNA Repair mechanism.

13. (a) Describe DNA polymerase reaction and its mechanism.

Or

(b) Differentiate prokaryotic and eukaryotic DNA replication.

14. (a) Define the process of reverse transcription.

Or

(b) Comment on role translational factors that's involved in eukaryotic translation.

15. (a) Define Intron and exon.

Or

(b) Add brief notes on promotor.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Define in brief about Griffith experiment for DNA as a genetic material.

17. Write detail account on DNA repair mechanisms.

18. Detailed accounts about eukaryotic replication.

19. Elaborate the process of Initiation and termination of protein synthesis.

20. Describe in detail about tryptophan operon.

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