F–8137

Sub. Code
7BMC3C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Microbiology and Clinical Lab Technology

CLINICAL IMMUNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is immune system?
2. Define eosinophils.
3. What is known as epitope?
4. Explain haptens.
5. What are the types of immunity?
6. Define cell mediated immunity.
7. What is macrophage?
8. Explain transplantation.
9. Expand RIA. Mention any two applications of it.
10. Define immunoelectrophoresis.

Part B (5 × 5 = 25)

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

11. (a) What is lymphoid organs? Explain about secondary lymphoid organs.

Or

(b) Explain about monoculear cells.

12. (a) What is antigen? Explain the types and properties of antigens.

Or

(b) Explain Antigen – Antibody reaction.

13. (a) What is immune system? Explain about immune response.

Or

(b) Explain cell mediated immunity.

14. (a) Define Infection. Explain the hypersensitivity reaction related to sneezing.

Or

(b) Write a short notes on graft rejection mechanism.

15. (a) Explain the mechanism of immunoelectrophoresis

Or

(b) Write a short notes on ELISA.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain primary and secondary lymphoid organs.

17. Give detailed account on Antigen-antibody reaction.

18. Explain about types of immunity.

19. Explain hypersensitivity reaction.

20. Give detailed account on monoclonal antibody production.

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F–8138	Sub. Code
	7BMC5C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Microbiology and Clinical Lab Technology

CLINICAL BACTERIOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define epidemiology?
2. Write about *Staphylococcus aureus*?
3. Define typhoid fever?
4. What disease is cause by *Yersinia pestis*?
5. Define pathogenicity.
6. What are the symptoms of *clostridium perfrigens?*
7. Write example of acid fast bacteria?
8. Where are spirochetes found?
9. Epidemic typhus.
10. PPLO

Part B (5 × 5 = 25)

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

11. (a) Give a short note on microbial flora of mouth and intestinal tract?

Or

(b) Write about the general characteristics *Staphylococcus aureus*?

12. (a) What are the laboratory diagnoses of *Neisseria meningitides?*

Or

(b) Write about the pathogenicity of *E.coli.*

13. (a) Write about the general characteristics of *Cloustridium boutinim*?

Or

(b) Explain about the treatment for *Bacillius anthracis*?

14. (a) Write a short note acid fast bacteria?

Or

(b) Write about the general characteristics of *Mycobacterium lepreae*?

15. (a) Write a short note on pathogenicity for *Chlamydiae trachomatis*?

Or

(b) Explain about the treatment for *Mycoplasma*?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain about the microbial flora that present in our human body?

17. Briefly write about the pathogenicity, laboratory and treatment for *Shigella dysenteriae*.

18. Explain the pathogenicity, laboratory and treatment for anthrax.

19. Write a detailed account on general characteristics and pathogenicity of *Treponema palladium*?

20. Write a briefly about the epidemiology, pathogenicity and treatment of *Rickettsiae prowazekii*?

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F–8139	Sub. Code
	7BMC5C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Fifth Semester

Microbiology and Clinical Lab Technology

VIROLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Capsid.

2. LHT.

3. Penetration.

4. Nuclear egress.

5. Cell lines.

6. CPE.

7. Transformation assay.

8. Haemagglutination.

9. Kopliks spots.

10. Viroids.

Part B (5 × 5 = 25)

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

11. (a) Briefly explain about types of viral genome with suitable examples.

Or

(b) Draw and explain about the structure of HIV.

12. (a) Narrate in brief about structure of Bacteriophage with clear diagram.

Or

(b) Discuss in brief about life cycle of TMV.

13. (a) List out the applications of cell lines.

Or

(b) Add a short note on viral inclusion bodies.

14. (a) How will you perform viral plaque assay.

Or

(b) Describe about working principle of atomic force microscopy.

15. (a) Illustrate in brief about symptoms and pathogenesis of influenza virus.

Or

(b) Give a brief note on onrogenic viruses.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Analyze briefly about viral architecture with suitable examples.

17. Categorize different stages of Lytic life cycle of bacteriophages.

18. State out the importance of viral cultivation in Embryonated eggs.

19. Write a short note on measurement of viral enzyme activity.

20. Sketch out pathogenesis, symptoms and treatment of polio virus.

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F–8141

Sub. Code
7BMC1E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Microbiology And Clinical Lab Technology

Elective: MOLECULAR BASED DIAGNOSTICS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Define PCR
2. Explain the denaturation process.
3. Plasmid DNA
4. Blotting
5. Chain termination methods
6. Chromosome walking
7. Protein microarray
8. FISH
9. HIV
10. Symptoms of sickle cell anemia

Part B (5 × 5 = 25)

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

11. (a) Summarize the steps involved in PCR

Or

(b) List out the types of PCR.

12. (a) Short note on the isolation of DNA.

Or

(b) Discuss the process of western blotting.

13. (a) Explain in brief the Maxam-Gilbert sequence method.

Or

(b) Describe the mechanism of electrophoresis for DNA sequencing.

14. (a) Comment on DNA foot printing techniques

Or

(b) Infer the application of RAPD

15. (a) Mention the symptoms of latent and active tuberculosis.

Or

(b) Write the primary test for diagnosing HIV.

Part C (3 × 10 = 30)

Answer any **three** questions:

16. Analyze the history of polymerase chain Reaction.

17. Illustrate the principle and applications of Autoradiography .

18. Discuss in detail the Microarray analysis technique.

19. Explain dideoxynucleotide method of DNA sequencing.

20. Summarize the diagnostic process of AIDS.

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F–8143

Sub. Code
7BMC2E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Fifth Semester

Microbiology and Clinical Lab Technology

Elective – HAEMATOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. WBC.

2. Thrombopoiesis.

3. Define coagulation.

4. Hemostasis.

5. Thromboplastin.

6. Bleeding time.

7. ESR.

8. Anaemic.

9. Trypanosomiasis.

10. Heinf body preparation.

Part B (5 × 5 = 25)

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

11. (a) Write the composition of blood and its function.

Or

(b) Give a note on common anticoagulants.

12. (a) What are the basic steps involved in Hemostasis?

Or

(b) Comment on the mechanism of blood coagulation.

13. (a) Explain the laboratory diagnosis of bleeding disorders.

Or

(b) Mention the test for FDP protamine sulphate test.

14. (a) Comment on Haemoglobin.

Or

(b) What is the method of calculating anemia using MCV?

15. (a) Write note on Heinf body preparation.

Or

(b) What are the symptoms and laboratory diagnosis of Malaria?

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about Haemopoietic system of the body.

17. Write in detail the intrinsic pathway of blood coagulation.

18. Discuss the coagulation tests and its uses.

19. Describe in detail the types of anaemia.

20. Explain the principle, procedure and diagnosis for Leishmaniasis.

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