F–0354	Sub. Code
	7BMC5C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2023

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 Normal flora
2. Define Diphtheria toxin
3. H antigen
4. Haemolytic uridic syndrome
5. Tetanus toxoid
6. Give the example of Neurotoxin producing organism?
7. Write a Selective medium for *M.tuberculosis*
8. Syphilis
9. Walking pneumonia
10. NAAT

Part B (5 × 5 = 25)

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

11. (a) Explain Clinical Bacteriology.

Or

(b) Write an essay about *Streptococcusphogens*.

12. (a) Give a detail about *Vibrio cholera*.

Or

(b) Write down the disease caused by *Salmonella typhi* in detail.

13. (a) Write down the diagnosis and Laboratory treatment of *Heamophilus infulenzae*.

Or

(b) Give a short note on gas gangrene.

14. (a) *Treponema pallidum* – explain its characteristic, pathogenicity, diagnosis and treatment.

Or

(b) Explain in detail about *Mycobacterium tuberculosis*.

15. (a) Give a detail about *Mycoplasma*.

Or

(b) Write about the *Chlamydiae trachomatis*.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a detail on characteristics, epidemiology, pathogenicity, laboratory diagnosis and treatment of *Corynebacterium diphtheria*.

17. Give an account on epidemiology, pathogenicity, laboratory diagnosis and treatment *Neisseria gonorrhoeae*.

18. Describe the disease caused by *Clostridium tetani.*

19. Discuss in brief the Pathogenesis of M.lepreae and mention the diagnostics methods.

20. Elaborate the infection caused by Mycoplasma.

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F–0355	Sub. Code
	7BMC5C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2023

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. Envelope
2. ICTV
3. Burst Size
4. Mosaic pattern
5. Mono culture
6. Inclusion bodies
7. Plaque assay
8. Haemagglutination
9. Flavivirus
10. Prions

Part B (5 × 5 = 25)

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

11. (a) Write an account on viral capsids with suitable example.

Or

(b) Draw and explain about structure of Influenza virus.

12. (a) Illustrate in brief about various stages involved in lysogenic life cycle of bacteriophages.

Or

(b) Add a note on the Life cycle of CMV.

13. (a) How could you cultivate viruses in embryonated eggs?

Or

(b) What do you mean by cytopathic effect?

14. (a) Discuss in brief about end point dilution assay.

Or

(b) Why we need to measure viral enzyme activity?

15. (a) Discuss in short about pathogenesis and treatment of rabbies virus.

Or

(b) Give an account on treatment and prevention of AIDS.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Briefly explain about any one viral classification.

17. Critically comment on structure and life cycle of TH bacteriophage.

18. Narrate in detail the importance of viral cultivation in Laboratory animals.

19. Describe in detail about working principle and applications of Election microscope.

20. State out the causative agent, symptoms, pathogenesis and prevention of Hepatitis B virus.

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F–0357

Sub. Code
7BMC1E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2023

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** questions.

1. Taq DNA polymerase
2. Define RT - PCR
3. RNA
4. Autoradiography
5. Dot - blotting
6. Primer
7. DNA sequencing
8. Microarray
9. Mycobacterium tuberculosis
10. Malaria Vaccine

Part B (5 × 5 = 25)

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

11. (a) Explain in brief the RT - PCR.

Or

(b) Summarize the applications of PCR.

12. (a) Give an account on plasmid DNA isolation.

Or

(b) Explain Autoradiography.

13. (a) Give a short note on Next generation sequencing.

Or

(b) Analyze the role of primer walking.

14. (a) List out the types of microarray.

Or

(b) Write in brief about fluorescence insitu hybridization.

15. (a) Discuss in short the cystic fibrosis.

Or

(b) Infer the diagnosis of sickle cell anemia.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Elaborate the types of polymerase chain Reaction.

17. Discuss the principle and application of southern blotting.

18. Illustrate Maxam and Gillbert technique for DNA Sequencing.

19. Explain the molecular based diagnostic technique of RAPD.

20. Write in detail the diagnosis of Tuberculosis.

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F–0359

Sub. Code
7BMC2E2

B.Sc DEGREE EXAMINATION, NOVEMBER 2023

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. RBC
2. Leucopoiesis
3. Intrinsic pathway
4. Coagulation factor
5. Prothrombin time
6. FDP
7. PCV
8. Folic acid
9. Sickle anemia
10. Trypanosomiasis

Part B (5 × 5 = 25)

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

11. (a) Give a brief note on Haemopoietic system of the body.

Or

(b) Write short note on anticoagulants.

12. (a) Explain the coagulation factor.

Or

(b) Comment on Extrinsic pathway.

13. (a) Describe the activated partial thromboplastin time.

Or

(b) Explain the coagulation tests and its uses.

14. (a) Give a note on Folic acid.

Or

(b) Describe ESR analysis.

15. (a) Explain Heinz body preparation.

Or

(b) Give a note on Lupus Erythematosus cell preparation.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Give a detailed note on composition of blood and its functions.

17. Describe the intrinsic pathway of blood.

18. Describe the basic test required for bleeding disorders.

19. Give a brief account on the types of anaemia.

20. Explain the principle, procedure and diagnostic test for Malaria.

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