F–2577

Sub. Code
7BMC1C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

Microbiology and Clinical Lab Technology

GENERAL MICROBIOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define three kingdom.
2. Explain about Spontaneous generation.
3. Define types of staining.
4. Write about fluorescence microscope.
5. List various components of cell envelope.
6. Define cell inclusions.
7. What do you mean by Chemotherapy?
8. Give some application of Antibiotics.
9. Define Decline phase.
10. Discuss about Nutritional group of Bacteria.

Part B (5 × 5 = 25)

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

11. (a) Write a short notes on scope of microbiology.

Or

(b) Write about the five kingdom concept of microbes.

12. (a) Explain the principles of phase contrast microscope.

Or

(b) Discuss about gram staining.

13. (a) Define cell wall and explain its types.

Or

(b) Write short notes on characteristics features of actinomycetes.

14. (a) Add a notes on chemical sterilization.

Or

(b) Discuss about the bacterial culture media.

15. (a) Give a account on various factors affecting microbial growth.

Or

(b) Explain about the transport of nutrients in bacteria.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about history of microbiology.

17. Elaborate the principles and application of electron microscope.

18. Explain general characteristics features of fungi.

19. Give brief account on principles and applications of physical method of sterilization.

20. Write in detail about bacterial growth curve.

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F–2579

Sub. Code
7BMC3C1

B.Sc DEGREE EXAMINATION, NOVEMBER 2019

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** the questions.

1. Lymphoid organ
2. Mast Cells
3. Haptens
4. Precipitation
5. Passive immunity
6. Complement
7. Macrophage
8. Montoux reaction
9. ELISA
10. Immuno fluorescence

Part B (5× 5= 25)

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

11. (a) Write note on Lymphnodes.

Or

(b) Give a brief note on granulocytic cells.

12. (a) What are adjuvants?

Or

(b) Give a note on antigen – antibody reactions

13. (a) What is cell mediated immunity? Explain it.

Or

(b) Explain indetailed about acquired immunity.

14. (a) Explain about the mechanism of T-cell activation.

Or

(b) Write about the prevention of graft rejection.

15. (a) Comment on monoclonal antibody production.

Or

(b) Explain about the principle of immune electrophoresis.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Give a detailed note on B-lymphocytes.

17. What are the properties and Biological functions of Immuneglubulins?

18. What are the types of immunity?

19. Give a detailed note on Transplantation.

20. Briefly explain about the RIA technique and add its applications.

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F–2581

Sub. Code
7BMC5C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

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** the questions.

1. Scalded skin syndrome
2. Pathogenicity
3. Meningitis
4. Choleragen
5. Botulism
6. Name any two antibiotics against Heamophilus influenza
7. Mantoux test
8. Hemoptysis
9. Carrier
10. Trachoma

Part B (5 × 5 = 25)

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

11. (a) Give a short note on normal flora of skin and respiratory tract.

Or

(b) Write about the general characteristics of Corynebacterium diphtheria.

12. (a) Write down the symptoms and lab diagnosis of plague.

Or

(b) Define Carrier and discuss about the laboratory diagnosis of Typhoid fever.

13. (a) Write in brief about pathogenicity and clinical presentation of H. influenzae.

Or

(b) Give a short note on pathogenicity of food poisoning caused by Cl. botulinum

14. (a) Write an account on general characteristics and cultivation of Mycobacterium tuberculosis.

Or

(b) How will you diagnose syphilis in laboratory and add a note on its prevention.

15. (a) Write about the pathogenicity and treatment of mycoplasma.

Or

(b) How will you diagnose Typhus fever in the laboratory?

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Briefly write about pathogenesis, lab diagnosis and treatment of Streptococcus pyogenes.

17. Discuss about the epidemiology, pathogenesis and laboratory diagnosis of bacillary dysentry.

18. Explain the pathogenesis, laboratory diagnosis and treatment of tetanus.

19. Write a detailed account on general characteristics and pathogenicity of Mycobacterium leprae.

20. Write briefly about the epidemiology, pathogenicity and treatment of Chlamydiae trachomatis.

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F–2582

Sub. Code
7BMC5C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

Fifth Semester

Microbiology and Clinical Lab Technology

VIROLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Capsomere
2. Envelope
3. T_4 phage
4. Lysogeny
5. Cytopathic effect.
6. HELA Cell lines
7. Plaque assay
8. Haemagglutination
9. Prions
10. Mumps

Part B (5 × 5 = 25)

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

11. (a) Write about the structural architecture of influenza virus.

Or

(b) Give the basic structure of TMV.

12. (a) Give a short note on lysogenic lifecycle of bacteriophages.

Or

(b) Write about the structure of T–even phages with a neat sketch.

13. (a) How will you cultivate viruses on embryonated egg?

Or

(b) Give a short note on inclusion bodies.

14. (a) Write about transformation assay of viruses.

Or

(b) Give a short note on measurement of viral enzyme activity.

15. (a) Write about the symptoms and pathogenesis of viral encepalitis.

Or

(b) Write about oncogenic viruses.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Brief explain the capsid, viral genome and envelope of HIV.

17. Explain the lytic cycle of T–even phages.

18. Write in detail about the different cell lines used in the cultivation of viruses.

19. Explain in detail about the different assay methods for enumeration of viruses.

20. Discuss about the causative agent, symptoms, pathogenesis, treatment and prevention of Rabies.

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F–2584

Sub. Code
7BMC1E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

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. Thermocycler.
2. Define primer and its role in the PCR.
3. Southern blotting.
4. Autoradiography.
5. Chemicals used in the Maxam – Gilbert sequencing method.
6. DNA sequencing.
7. DNA foot printing.
8. Microarray.
9. Tuberculosis.
10. Malaria.

Part B (5 × 5 = 25)

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

11. (a) Describe briefly about the types of PCR and its Applications.

Or

(b) Describe the role of Taq DNA polymerase in PCR with neat illustrations.

12. (a) Describe briefly about the western blotting.

Or

(b) Describe about the plaque blotting techniques.

13. (a) Describe briefly about the next generation sequencing.

Or

(b) Define briefly about the ddNTP.

14. (a) Explain RFLP and its applications.

Or

(b) Describe in detail about FISH.

15. (a) Explain about malaria and mention its diagnostic procedures.

Or

(b) List out the Diagnostic procedures for cystic fibrosis.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about the process involved in the PCR.

17. Describe in detail about the southern blotting technique.

18. Explain DNA sequencing by primer walking and chromosome walking.

19. Write the detail notes on the role of RAPD in molecular diagnosis.

20. Explain about Sickle cell anemia and its symptoms molecular diagnosis and treatment.

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F–2586

Sub. Code
7BMC2E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

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. What is blood?

2. Thrombopoiesis.

3. Coagulation factor.

4. Haemostasis.

5. Prothrombin.

6. FDP protamine sulphate test.

7. Haemogram.

8. PCV.

9. Write the screening test for Sickle cell anaemia.

10. Trypanosomiasis.

Part B (5 × 5 = 25)

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

11. (a) Describe briefly about the anticoagulants and its mechanism of action.

Or

(b) Write a short note on Leucopoiesis.

12. (a) Describe in brief about the intrinsic pathway of blood coagulation.

Or

(b) Describe in brief about the coagulation factor.

13. (a) Explain briefly about the basic test required for bleeding disorders?

Or

(b) Explain — Activated partial thromboplastin time test.

14. (a) Define anaemia and explain its types.

Or

(b) Describe briefly about ESR analysis.

15. (a) Describe in brief about Heinz body preparation.

Or

(b) Describe in brief about Lupus Erythematosus cell preparation.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about the Haematopoietic process.

17. Explain the extrinsic pathway of blood coagulation.

18. Explain in detail about the coagulation test procedures and mention its uses.

19. Explain–Anaemia and various anaemic calculation techniques.

20. Explain the principle, procedure of any two diagnostic tests for blood parasites.

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