

F-5224

Sub. Code

7BMC5C1

B.Sc DEGREE EXAMINATION, NOVEMBER 2021

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. S.pyogenes
3. N.meningitidis
4. Yersinia pestis
5. Haemophilus influenzae
6. Anthrax
7. Spirochetes
8. AFB
9. Endemic typhus
10. Chlamydiae.

Part B

(5 × 5 = 25)

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

11. (a) Give an account on Normal flora of upper respiratory tract.

Or

- (b) Comment on staphylococcus aureus.

12. (a) Write down the general characteristics, pathogenicity and treatment of Neisseria gonorrhoeae.

Or

- (b) Explain about the epidemiology, pathogenicity, lab diagnosis and treatment of vibrio cholera.

13. (a) Narrate on Clostridium Perfringens.

Or

- (b) Write a short note on Clostridium botulinum.

14. (a) Add notes on Treponema Pallidum.

Or

- (b) List out the general characteristics and pathogenicity of Mycobacterium Tuberculosis.

15. (a) Give a brief note on Mycoplasma.

Or

- (b) Explain about Rickettsiae prowazekii.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain about Corynebacterium diphtheria.
 17. Give an detailed account on Salmonella typhi.
 18. Describe about H. influenzae.
 19. Explain in detail about M.leprae
 20. Discuss about Chlamydiae trachomatis.
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F-6444

Sub. Code

7BMC1C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

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. Joseph Lister
2. Define kingdom
3. Condensor
4. Spore
5. Teichoic acid
6. Slime layer
7. Antibiotics
8. Selective media
9. pH
10. Passive transport

Part B

(5 × 5 = 25)

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

11. (a) Explain spontaneous generation.

Or

- (b) Comment on Whittaker's five kingdom.

12. (a) Discuss the working principles of dark field microscope.

Or

- (b) Explain acid fast staining.

13. (a) Write down the ultra structure of Bacteria.

Or

- (b) Narrate the general characteristics algae.

14. (a) Analyse the chemical sterilization methods.

Or

- (b) Explain differential media.

15. (a) Assume the active transport of nutrient in Bacteria.

Or

- (b) Discuss the factors affecting the growth of microbes.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Elaborate the history of microbiology.

17. Determine the working principles of scanning electron microscope.

18. Distinguish the general characteristics of actinomycetes.
 19. Define media. Explain the types of culture media.
 20. Inspect the nutritional transport systems in bacteria.
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F-6445

Sub. Code

7BMC3C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. Plasma cells
2. NK cells
3. Define adjuvants
4. Define agglutinin.
5. Sebum
6. Opsonization
7. Serum sickness
8. Allograft
9. RIA
10. HAT medium.

Part B

(5 × 5 = 25)

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

11. (a) Discuss the bonemarrow as secondary lymphoid organ.

Or

- (b) Describe the steps involved in phagocytosis.

12. (a) Write the principle and application of CFT.

Or

- (b) Give salient features of Antigen-Antibody reaction.

13. (a) Comment on biochemical barriers in innate immunity.

Or

- (b) Biological function of complement – Justify.

14. (a) Comment on Arthus reaction.

Or

- (b) Give short notes on HLA typing.

15. (a) Describe the principle and applications of ELISA.

Or

- (b) Discuss single immunodiffusion.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the structure and immunological function of spleen and lymph node.
 17. What is precipitation? Add a note on its applications.
 18. Elaborate the types of community.
 19. Write an essay on anaphylactic hypersensitivity reaction.
 20. Discuss the production steps of monoclonal antibody.
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F-6446

Sub. Code

7BMC5C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. Capsomere
2. Viral genome
3. T4 phage
4. TMV
5. Cell culture technique
6. CPE
7. Fluorescent focus assay
8. Atomic force microscopy
9. Negri bodies
10. Viroids

Part B

(5 × 5 = 25)

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

11. (a) Explain about the structure of TMV.

Or

- (b) Brief the structure of HIV.

12. (a) Give an account on lytic cycle and lambda phage.

Or

- (b) Comment on the life cycle of CMV.

13. (a) Narrate on the culture of virus using laboratory animals.

Or

- (b) Write short notes on inclusion bodies.

14. (a) Add notes on haemagglutination.

Or

- (b) Explain the measurement of viral enzyme activity.

15. (a) Write down the causative agent, symptoms, pathogenesis, treatment and prevention of measles.

Or

- (b) Write a note on symptoms, pathogenesis, treatment and prevention of Encephalitis.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss in detail about influenza virus.
 17. Explain in detail about lytic and lysogenic cycle of T4 phage.
 18. Describe about embryonated cell culture techniques.
 19. Explain about electron microscopy.
 20. Give an detailed account on hepatitis.
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F-6447

Sub. Code

7BMC1E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

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. Write down the applications of PCR.
3. What is autoradiography?
4. Explain about plasmid DNA.
5. What is DNA sequencing?
6. Explain about next generation sequencing.
7. Define RFLP.
8. What is FISH? Explain about it.
9. Which is the major causative agent for tuberculosis?
10. Define cancer.

Part B

(5 × 5 = 25)

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

11. (a) Write down the history of PCR

Or

- (b) Explain the types of PCR.

12. (a) List out the steps involved in isolation of DNA

Or

- (b) Write about Southern blotting technique.

13. (a) State Maxam Gilbert technique

Or

- (b) Explain chromosome walking.

14. (a) Write down the applications of DNA finger printing.

Or

- (b) What is microarray? Explain about it.

15. (a) Explain the life cycle of malarial parasites.

Or

- (b) Write a short note on AIDS.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Give detailed account on PCR.

17. Write down the nucleic acid blotting techniques.

18. What is automated DNA sequencing? Explain about it.
 19. Explain RAPD. .
 20. Write down the diagnosis process of cystic fibrosis
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F-6448

Sub. Code

7BMC2E2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. Serum
2. Heparin
3. Coagulation
4. Trisodium citrate
5. Clotting time
6. FDP
7. Aplastic anaemia
8. MCHC
9. Trypanosomiasis
10. Heinz body

Part B

(5 × 5 = 25)

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

11. (a) Explain the process of Leukopoiesis.

Or

- (b) Give short notes on anti coagulants.

12. (a) Write about the mechanism of blood coagulation.

Or

- (b) Comment on steps involved in haemostasis process.

13. (a) How do you diagnose clotting time in laboratory?

Or

- (b) Comment on Prothrombin time.

14. (a) What are the laboratory findings of iron deficiency anaemia?

Or

- (b) Give notes on

(i) Haemoglobin

(ii) MCV

15. (a) Explain about osmotic fragility.

Or

- (b) Illustrate LE cell preparation.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Elaborate the haemopoietic system of the body.
 17. Describe the steps involved in extrinsic and intrinsic pathway of haemostasis.
 18. Give notes on
 - (a) bleeding time
 - (b) activated partial thromboplastin time
 19. Define anaemia and mention its types.
 20. Comment on any two laboratory diagnosis of blood parasites.
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