

B.Sc. Allied Health Sciences First Year (Semester-II)
February 2020 Examination

Time : 2.30 Hrs.

[Max. Marks : 80]

SUBJECT : BIOCHEMISTRY

Q.P Code : J2030

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. What are the various preanalytical, analytical and post analytical errors? Add a note on quality control.
2. Describe various techniques used for the treatment and disposal of biomedical waste.

SHORT ESSAY (Answer any Six)

6X 5 = 30 Marks

3. How many moles of nitric acid are in 325mL of 16 M HNO₃ solution?
4. Define an indicator. Explain the mechanism of dissociation of an indicator and mention the indicators used for titration.
5. Describe the ethical conduct of laboratory personnel.
6. Explain different types of Acids & Bases Theories.
7. Define percentage solutions. What is the mass% (m/m) of a solution prepared by dissolving 30.0g of NaOH in 120.0 g of water?
8. Define stock solutions. Explain the preparation of working standard and limitations.
9. Write the types, principle, procedure maintenance and limitations of centrifuge.
10. Explain the maintenance of glassware apparatus.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. List any three Post analytical errors.
12. Preparation of Normal Saline.
13. Coefficient of Variance.
14. Define pH. What is normal blood pH?
15. What is Levey Jennings chart? Write the significance of LJ chart.
16. List 3 commonly used indicators for titration
17. What are Derived units? Give examples.
18. Precautions while using pipettes.
19. Define atomic weight and equivalent weight.
20. Anticoagulants used for blood collection.
21. Define buffer and mention its applications.
22. Standard solution.

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Time : 2.30 Hrs.

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SUBJECT : MICROBIOLOGY

Q.P Code : J2040

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Describe the source, modes of transmission, clinical features, complications, samples to be collected for *Streptococcus pneumoniae*.
2. Define Sterilization and Disinfection. Describe the principle, articles to be sterilized using Autoclave with a neat labeled diagram.

SHORT ESSAY (Answer any Six)

6 X 5 = 30 Marks

3. Describe source and mode of transmission of infection with examples.
4. Describe the standard precautions to be followed in the hospital.
5. Vaccines: types with examples.
6. Map the lesions of *Candida albicans* on Human body.
7. Describe the clinical features and samples collected in Typhoid fever.
8. Contributions of Louis Pasteur.
9. Describe the clinical picture of anaphylaxis and mechanisms of anaphylaxis with clinical importance.
10. Describe the modes of transmission, clinical manifestations and samples to be collected in Hepatitis B.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. Name 3 gaseous disinfectants.
12. Enumerate 3 diseases transmitted by Inhalation.
13. Name three infections caused by *Staphylococcus aureus*.
14. Draw a neat labeled diagram of Hot air oven.
15. Pasteurization: Methods and Uses.
16. Enumerate three clinical manifestations of Syphilis.
17. List three opportunistic infections in HIV.
18. List 3 clinical manifestations of Amoebiasis.
19. List 3 infections caused by *Klebsiella*.
20. Enumerate 3 bacteria causing diarrhea.
21. List 3 clinical manifestations of Herpes.
22. Write a neat labelled diagram of cyst of *giardia lamblia*.

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SUBJECT : PATHOLOGY

Q.P Code : J2050

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Define Anemia. Describe pathogenesis and laboratory investigation of Iron deficiency anemia.
2. Define Neoplasia. Discuss the differences between benign and malignant tumors with neat labeled diagram

SHORT ESSAY (Answer any Six)

6 X 5 = 30 Marks

3. Discuss pathogenesis and types of urinary stones
4. Discuss various agents causing cell injury. Give few examples for irreversible cell injury.
5. Describe pathogenesis and complications of atherosclerosis.
6. Describe pathogenesis and stages of pneumonia
7. Define leukemia. Discuss the causes for leucocytosis
8. Describe pathogenesis and types of hepatitis.
9. Discuss physical examination of urine. Brief note on Benedict test
10. Discuss the CSF findings in Tuberculous meningitis

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. List 3 methods of urine sample collections
12. Mention any 3 steps of tissue processing
13. List 3 disadvantages of FNAC
14. Mention 3 causes of iron deficiency anemia
15. Mention 3 cellular adaptations
16. List 3 agents causing cell injury
17. Mention 3 stages of shock
18. List 6 causes for leucopenia
19. Draw the diagram of peptic ulcer
20. List 3 infectious diseases
21. List 3 blood grouping systems
22. Mention any 3 stains used in Laboratory