**Time : 3 Hrs.**　　　　　　　　　　　　　　　　　　　　　　[ Max. Marks : 80]

### Biochemistry
### Q.P Code : AHS-105

*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 sources, RDA, Biochemical functions and deficiency disorders of vitamin C.

2. Give the structure and functions of hemoglobin. List out two abnormal types of hemoglobin.

## SHORT ESSAY (Answer any Six)　　　　　　　　　　6 X 5 = 30 Marks

3. How are carbohydrates classified.

4. Functions of albumin.

5. Vitamin B12.

6. With a neat labelled diagram explain absorption of glucose.

7. Secondary structure of proteins.

8. Define BMR. What are the factors affecting BMR?

9. Nitrogen balance.

10. How are proteins digested?

## SHORT ANSWERS (Answer any Ten)　　　　　　　10 X 3 = 30 Marks

11. Lactosuria.

12. Lipid profile.

13. Benedicts test.

14. Hypoglycemia.

15. Polyunsaturated fatty acids.

16. Urinary ketone bodies.

17. Organic and inorganic constituents of normal urine.

18. Bitot's spots.

19. Importance of dietary carbohydrates.

20. Reference range of electrolytes in serum.

21. Recommended dietary allowance for vitamin A.

22. Hematuria.

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Time : 3 Hrs.             [ Max. Marks : 80]

## Microbiology

### Q.P Code : AHS-109

*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 lesions caused by mycobacterium tuberculosis? Describe the lab diagnosis of pulmonary tuberculosis.

2. Describe the morphology and cultural characteristics of corynebacterium diphtheriae. Add a note on laboratory diagnosis of diphtheria.

**SHORT ESSAY (Answer any Six)**        6 X 5 = 30 Marks

3. Anaerobic culture methods.

4. Lab diagnosis of streptococcus pyogenes.

5. List organisms causing meningitis. Draw gram stain picture of neisseria miningitidis.

6. Coagulase test.

7. Bile solubility test.

8. ASLO test.

9. Laboratory diagnosis of gonorrhea.

10. Kirby bauer method.

**SHORT ANSWERS (Answer any Ten)**       10 X 3 = 30 Marks

11. Negative staining.

12. Oxidase test.

13. MRSA detection.

14. Blood agar.

15. Enumerate toxins produced by clostridium perfringens.

16. Describe the colony morphology of streptococcus pneumoniae.

17. Camp test.

18. Name three infections caused by bacillus anthracis.

19. List three biochemical characters to identify staphyloccus aureus.

20. Urease test.

21. List three gram positive bacilli

22. Name three infections caused by staphylococcus aureus.

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Time : 3 Hrs.　　　　　　　　　　　　　　　　　　　　　　[ Max. Marks : 80]

# Pathology

### Q.P Code : AHS-107

*Your answers should be specific to the questions asked.*
*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**　　　　　　　　　　　　　　　　　　　**2 X 10 = 20 Marks**

1. Describe in detail periheral smear procedure of staining. What are the characteristics of a good smear.
2. What is hemostasis. Describe the role of platelets in primary hemostasis.

**SHORT ESSAY　(Answer any Six)**　　　　　　　　　**6 X 5 = 30 Marks**

3. Write a neat diagram of WBC pipette and its uses.
4. What is reticulocyte and name what stain is used, with normal values.
5. Serum hemoglobin electrophoresis.
6. Anticoagulants used in coagulation studies.
7. ESR-mention anticoagulants used, various methods to determine. List the causes where it is increased or decreased.
8. Serum ferritin.
9. HbF.
10. Sodium meta bisulfate test.

**SHORT ANSWERS　(Answer any Ten)**　　　　　　　**10 X 3 = 30 Marks**

11. Target cell.
12. Hemochromatosis.
13. C clotting time.
14. Eosinophilia.
15. Normal hemoglobin values.
16. LE cell.
17. MCV-normal value, where it is increased.
18. Differential count.
19. Leukopenia.
20. EDTA.
21. Draw neat diagram of neutrophil.
22. What is Normoblast.

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