

M.Sc. Sem-7
CBCS

ACHOLA - I (CBCS) : SUMMER- 2017
SUBJECT : MEDICAL BIOCHEMISTRY

Day : Saturday
Date : 01/04/2017

Time : 02.00 PM TO 05.00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION - I

- Q.1** Answer in brief **ANY FIVE:** (10)
- a) Mention four functions of plasma proteins.
 - b) What are ketogenic and glucogenic amino acids? Give their examples.
 - c) Which are the specialized products of tryptophan?
 - d) State the clinical consequences of the deficiency of any two water soluble vitamins.
 - e) What is the significance of cholesterol in humans?
 - f) What does total and differential WBC count signify?
- Q.2** Answer **ANY TWO:** (10)
- a) Explain the role of ADH in water balance?
 - b) Explain Phenylketonuria.
 - c) Describe β -oxidation of fatty acids.
- Q.3** Explain in detail **ANY TWO:** (10)
- a) Define Diabetes mellitus. Give the difference between Type I and Type II DM.
 - b) Structure and positive co-operativity of hemoglobin.
 - c) Procedure and clinical significance of glucose tolerance tests.

SECTION - II

- Q.4** Answer in brief **ANY TWO:** (10)
- a) What are Renal function tests? Discuss the significance of Clearance tests.
 - b) How are xenobiotics detoxified? Explain in brief.
 - c) What are vitamins? Describe in brief the biochemical role of fat soluble vitamins.
- Q.5** Answer the following: (06)
- a) Describe the diagnostic significance of serum enzymes.
- OR**
- a) Mention normal blood pH. How is pH of blood regulated? Explain acidosis and ketosis.
 - b) Describe the principle and application of agar gel electrophoresis. (04)
- Q.6** Write notes on **ANY TWO:** (10)
- a) Jaundice
 - b) Antioxidants and oxidative stress
 - c) Fatty liver

ACHOLA – I (CBCS) : SUMMER- 2017
SUBJECT : MEDICAL MICROBIOLOGY

Day : Sunday
Date : 09/04/2017

Time : 02.00 PM TO 05.00 PM
Max. Marks : 60

N.B.

- 1) **Q.1 and Q.5 are COMPULSORY.** Attempt any **TWO** questions from **Q.2, 3,4** and any **TWO** questions from **Q.6,7,8**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Draw neat diagrams **WHEREVER** necessary.

SECTION – I

- Q.1** Attempt any **TWO** of the following: (10)
- a) With the help of suitable diagram write the principle and uses of Dark Field microscope.
 - b) Draw a neat and well labeled diagram of typical bacterial cell and explain extra cellular features of bacteria.
 - c) Define “Sterilization”. Enlist physical methods of sterilization and elaborate moist heat sterilization.
- Q.2** Answer the following: (10)
- a) Enlist various culture media and explain types of special media with suitable examples.
 - b) Describe various methods of isolation of pathogens with examples.
- Q.3** Answer the following: (10)
- a) Enlist various staining methods of bacteria and add a note on negative staining techniques.
 - b) Define Agglutination reactions. Describe the different types of Agglutination reactions with suitable examples.
- Q.4** Write short notes on: (10)
- a) Contribution of Louis Pasteur
 - b) Biochemical tests based on enzyme activity

SECTION – II

- Q.5** Attempt any **TWO** of the following: (10)
- a) Define “Parasites”. Give classification of Parasites with examples.
 - b) What are nosocomial infections? Explain with suitable examples.
 - c) Describe various diagnostic methods for viral infections.
- Q.6** Briefly describe the following: (10)
- a) Describe standard safety measures in microbiology laboratory.
 - b) Describe stool concentration methods.
- Q.7** Elaborate on: (10)
- a) Zoonotic infections
 - b) Molecular methods of diagnosis of microbial infections.
- Q.8** Briefly describe (10)
- a) Hospital waste management
 - b) Common diagnostic methods for CSF