

Duration: 2 hours

N.B. All questions are compulsory
Numbers to the right indicate marks
Draw neat labelled diagram wherever necessary

Q.1 Answer any four of the following **16**

- a Describe the anatomy of the gastrointestinal tract.
- b Write a note on commonly seen abnormality of carbohydrate digestion.
- c Elaborate on the process of digestion of protein by pancreatic proteases.
- d Explain the mechanism of amino acid absorption.
- e Discuss the process of urine elimination..
- f Discuss the pathophysiology of Nephritis.
- g Write a note on glomerular filtration.
- h Elaborate on the excretory system and enlist its organs.

Q.2 Answer any four of the following **16**

- a Write a note on trachea and its function.
- b How does the transport of oxygen and carbon dioxide take place in human beings?
- c Explain cyanosis as a respiratory disorder.
- d Justify: Breathing is a part of the respiratory system.
- e Write a note on cardiac arrhythmias.
- f Explain the anatomy of arteries and capillaries in short.
- g Elaborate on the structure of cardiac muscle.
- h How does the circulatory system work?

Q.3 Answer any four of the following **16**

- a Define the method of sterilization by moist heat with a suitable diagram.
- b Elaborate the contribution of Louis Pasteur in the field of microbiology.
- c Explain Gram staining procedure for classification of microbes with the help of a flow diagram.
- d Differentiate between natural and synthetic media.
- e Derive the mathematical expression of the microbial growth curve.

- f Write a note on classification of bacteria based on their morphology.
- g Explain radiation as a sterilization method.
- h Write a note on the principle of acid fast staining.

Q.4 Answer any six of the following

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- a True or false:
 - 1. Villi helps in digestion of food.
 - 2. The correct order of small intestine is duodenum, ileum and jejunum.
- b What is the function of bile juice secreted by the liver?
- c Enlist the functions of the kidney.
- d What is renal clearance?
- e Define alkalosis.
- f What is tidal Volume?
- g What is brachycardia?
- h Define coronary circuit.
- i What are thermotolerant bacteria? Give an example.
- j Give any two examples of basic stains.
- k What is the thermal death point?
- l What is sterilisation?
