



HAD-003-001636

Seat No. _____

B. Sc. (Sem. VI) (CBCS) Examination

June / July – 2017

Paper-601 : Human Physiology & Clinical Biochemistry

(Biochemistry : BC-601)

Faculty Code : 003

Subject Code : 001636

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following questions in just one or two lines : 20

- (1) What is purpura?
- (2) What is the molecular composition of haemoglobin?
- (3) Define hematopoietic stem cells.
- (4) Write the difference between plasma and serum.
- (5) What is the role of lysozyme in saliva?
- (6) Write the name of the cells in stomach secrete intrinsic factor. What is the role of intrinsic factor?
- (7) Name the lipoprotein that is involved in transporting absorbed triglycerides and cholesterol from small intestine to the liver.
- (8) Name the sphincter that is present at the junction of lower part of stomach and duodenum.
- (9) What is Haldane effect?
- (10) Enlist three main processes that produce urine.
- (11) What are the components of urinary system?
- (12) Which muscles are involved in the mechanism of respiration?
- (13) Which neurotransmitter plays an important role in mediating fight or flight response by sympathetic nervous system?
- (14) What is the role of microglia in CNS?

- (15) What is cardiac cycle?
- (16) What does P wave indicates in electrocardiogram?
- (17) Define Precision.
- (18) Define External quality control programme.
- (19) State symptoms associated with ketoacidosis.
- (20) Name enzyme deficient in Pompes disease

2 (a) Answer any **three** of the following questions **6**

- (1) Explain fibrinolysis
- (2) List the different types of drugs used to control hyperacidity in treatment of gastritis.
- (3) Write a note on Bohr Effect.
- (4) Enumerate functions of kidney.
- (5) Write the neurotransmitter criteria.
- (6) Why Sodium Fluoride is used as anticoagulant, when blood is collected for glucose estimation?

(b) Answer any three of the following questions **9**

- (1) Write a short note on ABO blood group system.
- (2) Write the functions of a Gall bladder. Which hormone is involved in contraction of gall bladder and secretion of bile juice?
- (3) How carbon dioxide is transported in the blood? Describe the process of chloride shift in detail.
- (4) Describe in detail plasma clearance test for assessing kidney function.
- (5) Write different ways of inactivation of neurotransmitters.
- (6) Explain: Polyuria, Oligouria and Anuria

- (c) Answer any **two** of the following questions : **10**
- (1) Give detailed account of erythropoiesis.
 - (2) Write a short note on process of digestion and absorption of proteins in human GIT.
 - (3) Give an account of the transport of oxygen by the blood during respiration. Add note on oxygen dissociation curve.
 - (4) Describe overall design of the circulatory system. Add note on pulmonary and systemic circulation.
 - (5) Write a short note on Hyperglycemia
- 3** (a) Answer any **three** of the following questions : **6**
- (1) Write short note on erythroblastosis fetalis
 - (2) Describe the important role of intestinal brush boarder enzymes in process of digestion
 - (3) Mention structures forming upper respiratory tract and give function of larynx.
 - (4) Describe waves of normal ECG.
 - (5) Draw a labeled diagram of a synapse.
 - (6) Define and give symptoms of Steatorrhea.
- (b) Answer any three of the following questions : **9**
- (1) Describe any two haemoglobinopathies.
 - (2) Write chemical composition and functions of a bile juice.
 - (3) Explain the role of partial pressure in exchange of gases across respiratory membrane.
 - (4) Give a detailed account of the cardiac cycle describing its phases.
 - (5) Describe the experiment that led to the discovery of neurotransmitter.
 - (6) Give functions of cerebrospinal fluid.

(c) Answer any two of the following questions : **10**

- (1) Give an account of extrinsic mechanism of blood coagulation. Give a brief description of clot retraction and fibrinolysis.
 - (2) Draw a labeled diagram of human digestive system.
 - (3) Describe the mechanism of urine formation.
 - (4) Discuss the different steps involved in process of nerve impulse transmission.
 - (5) Write a short note on inborn errors of amino acid metabolism.
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