MAL-003-001636 Seat No. _____

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

March / April - 2018

Biochemistry : Paper-601

(Human Physiology and Clinical Biochemistry)

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 the difference between RBC and WBC ?

(2) What is anemia ?

(3) Name any two haemoglobinopathies.

(4) Mention the site of hematopoiesis.

(5) Write the names of different salivary glands.

(6) What is the role of gastric mucosal barrier ?

(7) What is bolus and chyme ?

(8) Write the role of bile salts in process of digestion.

(9) What part of nephron is responsible for glomerular filtration ?

(10) What is the effect of atrial natriuretic peptide hormone ?

(11) What is the function of epiglottis ?

(12) Give main function of juxtaglomerular apparatus of kidney.

(13) Name the glial cells present in central nervous system that produces CSF.

(14) Which neurotransmitter is secreted by sympathetic nervous system and increases heart beats ?

(15) Which blood vessel return deoxygenated blood from the body into the heart ?

(16) What is ventricular systole ?

(17) State types of errors.

(18) Define precision.

(19) Give names of isoenzyme forms of Creatine kinase.

(20) Why alpha amylase is called as endoamylases ?

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

(1) Write a short note on heparin.

(2) Mention the composition of pancreatic juice.

(3) Mention the structural components of upper and lower respiratory tract. Which structure forms respiratory zone ?

(4) Write a note on hormonal function of kidney.

(5) Write structural and functional classification of neurons.

(6) Give importance of auto analyzers in clinical laboratory.

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

(1) Write a note on platelets.

(2) Write a note on intestinal juice and its functions.

(3) Discuss oxygen dissociation curve with respect to role of hemoglobin in oxygen transport.

(4) Describe gross anatomy of kidney.

(5) Draw a labelled diagram of a typical neuronal cell/

(6) How is Urine sample preserved ?

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

(1) Give detailed account on hemoglobinopathies.

(2) Write a short note on process of digestion and absorption of carbohydrates in human GIT.

(3) Define respiration. Explain the role of hemoglobin in transport of gases.

(4) Give an account of the cardiac cycle.

(5) Write a note on use of anticoagulants and preservatives in clinical laboratory.

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

(1) What is the molecular composition of hemoglobin ?

(2) Write the important functions of digestive enzyme trypsin in the process of digestion.

(3) What are the factors affecting diffusion capacity of respiratory gases ?

(4) What is open and closed circulation ?

(5) List different mechanisms involved in the process of inactivation of neurotransmitters once their action gets over.

(6) Give other name of enzyme AST and ALT.

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

(1) Discuss functions of leucocytes.

(2) List the factors responsible for causing vomitting.

(3) Discuss chloride and reverse chloride shift mechanism in carbon dioxide transport.

(4) Write a short note on ECG.

(5) Write a short note on experiment that led to the discovery of the first neurotransmitter.

(6) Give Clinical Significance of enzyme Lactate Dehydrogenase.

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

(1) Enumerate the factors involved in blood clotting and describe the intrinsic mechanism of blood coagulation.

(2) Write a note on control of secretion of gastric juice.

(3) Write a note on regulation of water balance.

(4) Give diagrammatic representation of circulatory system and discuss systemic and pulmonary circulation.

(5) Write a note on Renal function test.
