NAM-003-001636 Seat No. _____

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

March / April - 2017

Biochemistry : BC-601

(Human Physiology & 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) Where are red blood cells destroyed?

(2) What is polycythemia?

(3) Name any two haemoglobinopathies.

(4) What is clot retraction?

(5) Write the names of different salivary glands.

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

(7) Name the bacterium that is capable of residing in extreme acidic environment of stomach and can cause hyperacidity and ulcers.

(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 and where it is located?

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

(13) What is the ratio of numbers of neuronal to glial cells in the CNS?

(14) Which glial cells are involved in secretion of CSF in CNS?

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

(16) What is ventricular systole?

(17) Define Sensitivity in quality control.

(18) Define systemic errors.

(19) Give clinical significance of enzyme CPK.

(20) Define Sphingolipidosis.

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

(1) What are anticoagulants? Give examples.

(2) Describe the role of chief cells and parietal cells of stomach.

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

(4) Write a brief note on functions of kidney.

(5) Briefly describe different levels of protection nature has provided for central nervous system.

(6) Give significance of Glycosylated Hemoglobin.

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

(1) Write a note on plasma proteins and their functions.

(2) Why most digestive enzymes are produced in the inactive forms and are activated only after they come in the lumen of GIT?

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

(4) Describe gross anatomy of kidney.

(5) Write structural and functional classification of neurons.

(6) State different types of Analyzers used in clinical laboratory.

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

(1) Give detailed account of bleeding disorders.

(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? What do you understand by ECG?

(5) Write a short note on Cardiac Function Test.

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

(1) Write a note on platelets and its function.

(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) Draw a labeled diagram of typical nerve cell.

(6) State common features of lipid storage disease.

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

(1) Discuss functions of leukocytes.

(2) List the factors responsible for causing vomiting.

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

(4) Write a short note on ECG and its significance.

(5) Write the neurotransmitter criteria.

(6) Discuss Internal Quality Control Programme.

(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 chemical composition, control of secretion of pancreatic juice and its functions.

(3) Write a note on renal function tests.

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

(5) Write a short note on Diabetes.
