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PF-003-001636 Seat No. _____

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

July - 2018

Human Physiology & Clinical Biochemistry : Paper - 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 thrombocytopenia?

(2) Define stem cells.

(3) What elements make up blood?

(4) Give difference between plasma and serum.

(5) Name accessory organs of digestive system.

(6) What is the function of portal vein?

(7) Name the major salivary glands in human.

(8) What is mastication?

(9) Define respiration.

(10) What is internal and external phase of respiration?

(11) What is plasma clearance test?

(12) Which vessels carry and drain blood from kidneys?

(13) Write structural classification of neurons

(14) What is myelin? Write its physiological role.

(15) Which peptide neurotransmitter is also known as a pain killer peptide?

(16) What is closed circulation?

(17) Define Quality control

(18) How is Cerebro spinal fluid collected?

(19) State Normal values of SGPT and SGOT

(20) Define Jaundice.

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

(1) Short note: Universal donor.

(2) List the functions of saliva in the digestion process.

(3) Write a note on Haldane effect.

(4) Differentiate between cortical and juxtamedullary nephron.

(5) Write a brief description about different types of glial cells present in CNS and their functions.

(6) State tests carried out for routine Liver Function test.

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

(1) Write a short note on plasma proteins.

(2) Write a short note on gastric gland.

(3) Discuss chloride shift in brief.

(4) Discuss renal failure briefly.

(5) Write a short note on neurotransmitter criteria used to identify and classify any substance as a neurotransmitter.

(6) Define and give importance of clinical enzymology.

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

(1) Give detailed account of erythropoiesis and enumerate factors affecting it.

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

(3) Give an account of diffusion of respiratory gases based on partial pressure and factors affecting diffusing capacity.

(4) Discuss Pulmonary and systemic circulation in detail.

(5) Give clinical significance of any 3 serum enzymes.

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

(1) Give clinical significance of hematocrit value.

(2) Give composition of bile.

(3) Mention structures forming upper respiratory tract.

(4) What is ECG? Give its importance.

(5) Name the gaseous neurotransmitters that can't be stored in to vesicles and are being produced when the neuron is stimulated?

(6) What do you understand by Reference Value?

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

(1) Describe abnormal hemoglobin derivatives.

(2) Write chemical composition and functions of a gastric juice.

(3) Describe juxtaglomerular apparatus and its function.

(4) Write a short note on hypertension.

(5) Write a brief note on organization of nervous system.

(6) Enlist different types of analyzers used in clinical laboratory.

(C) Answer Any **two** of the following questions : **10**

(1) Give a detailed account on extrinsic mechanism of blood coagulation.

(2) Draw a labeled diagram of human digestive system.

(3) Describe glomerular filtration process of urine formation and mention factors affecting GFR.

(4) Discuss different stages involved in nerve impulse conduction.

(5) Write an essay on steps involved in automated systems in clinical laboratory.
