BBF-003-1016036 Seat No. _____

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

July - 2021

Biochemistry : Paper - 601

(Human Physiology and Clinical Biochemistry)

Faculty Code : 003

Subject Code : 1016036

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instruction : Answer any five questions.

1	(A)	Write the correct answer for the questions :	**4**
		(l) What is thrombocytopenia?	
		(2) Thrombocytes are important in the process to stop bleeding. True/False	
		(3) Which WBCs turn into macrophages in tissues?	
		(4) Which organ produces most of the plasma proteins?	
	(B)	Give two functions of blood.	**2**
	(C)	What is haemoglobin composed of?	**3**
	(D)	Write a short note on clotting.	**5**
2	(A)	Write the correct answer for the questions :	**4**
		(1) Why is blood red in colour ?	
		(2) What is function of platelets ?	
		(3) Give any one haematological disorder ?	
		(4) Which vitamin is important during erythropoiesis process?	
	(B)	Enlist different types of leukocytes.	**2**
	(C)	Explain ABO systems.	**3**
	(D)	Write a short note on various types of anemia.	**5**
3	(A)	Write the correct answer for the questions :	**4**
		(1) What is the role of pharynx?	
		(2) Name the types of teeth present in human mouth.	
		(3) What do you mean by Succus entericus?	
		(4) Which cell of gastric glands releases pepsin.	
	(B)	Write down the layers of GI tract.	**2**
	(C)	Explain some liver function test.	**3**
	(D)	How are lipids digested and absorbed in human body?	**5**

4 (A) Write the correct answer for the questions : 4

(l) Where does the first digestion of carbohydrate takes place ?

(2) A cartilaginous flap called _____ prevents the entry of food into the glottisopening of the wind pipe-during swallowing.

(3) Name the sphincter which regulates the flow of bile to enter in small intestine.

(4) What is the function of portal vein?

(B) Which digestive juice in humans does not contain any digestive enzymes? 2

(C) Write a short note on gastric gland. 3

(D) How are proteins digested and absorbed in human body ? 5

5 (A) Write the correct answer for the questions : 4

(1) Which protein produced by kidneys, stimulate RBC production by the bone marrow?

(2) Define Glomerular Filteration Rate.

(3) Enlist 3 main steps involved in the process of urine formation.

(4) Name any two renal disorders.

(B) Differentiate between cortical and juxtamedullary nephron. 2

(C) Describe the structure of Nephron. 3

(D) Discuss in detail renal function tests. 5

6 (A) Write the correct answer for the questions : 4

(1) What part of nephron is responsible for glomerular filteration.

(2) Name main types of nitrogenous wastes excreted by living organism.

(3) What do you mean by proteinuria?

(4) What are the routes for tubular reabsorption ?

(B) Give two functions of kidney. 2

(C) Give factors affecting GFR. 3

(D) Write a note on regulation of salt balance. 5

7 (A) Write the correct answer for the questions : 4

(1) Name the types of glial cells present in the peripheral nervous system.

(2) What is the function of the microglial cells in the central nervous system?

(3) Why nerve impulse conduction is faster in myelinated axons compared to the nonmyelinated axons of the neurons?

(4) Write importance of the blood brain barrier.

(B) Briefly write about the relationship of brain size to the body weight of the organism. **2**

(C) Explain the structure of neuron with well labelled diagram. **3**

(D) Explain the events in nerve impulse transmission with suitable illustration. **5**

8 (A) Write the correct answer for the questions : **4**

(1) How many ventricles are present in a human brain?

(2) Define the term: Action potential.

(3) What is the difference between gyrus and sulcus?

(4) Write the full form of PNS.

(B) Briefly write about the relationship of brain size to the body weight of the organism. **2**

(C) Write about the classification of neuron based on the structure and function. **3**

(D) Write a note on reflex arch with diagram. **5**

9 (A) Write the correct answer for the questions : **4**

(1) What is Bohr effect?

(2) What is ECG?

(3) Define diastole.

(4) Where oxygen concentration is higher ? In venous blood or arterial blood ?

(B) Give various forms used by 02 for transportation in blood. **2**

(C) Describe any one respiratory disorder. **3**

(D) Describe the cardiac cycle in detail. **5**

10 (A) Write the correct answer for the questions : **4**

(1) Which blood vessel out of the three- artery, vein and capillary has thinnest membrane ?

(2) What is ECG?

(3) Give the function of alveoli.

(4) Define respiration.

(B) What is the role of Bundle of His ? **2**

(C) How is chemical control of respiration performed? **3**

(D) Give the overall design of circulatory system, alongwith systemic and pulmonary circulation. **5**
