

**BACHELOR OF OPTOMETRY
FIRST SEMESTER
GENERAL PHYSIOLOGY
BOP-104**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Objective

Time: 30 mins.

Choose the correct answer from the following:

Full Marks: 70

**SET
A**

Marks: 20

$$1 \times 20 = 20$$

1. The formed elements of blood are all, except:
 - a. RBC
 - b. Plasma
 - c. WBC
 - d. Platelets
2. The GFR of a normal healthy adult is (in ml/min/1.73m²)
 - a. 124
 - b. 125
 - c. 126
 - d. 128
3. The J shaped organ of the digestive system is:
 - a. Liver
 - b. Pancreas
 - c. Esophagus
 - d. Stomach
4. The plasma proteins are all except:
 - a. Albumin
 - b. Plasminogen
 - c. Globulin
 - d. Fibrinogen
5. The normal cardiac output of a healthy adult male is (in Liters):
 - a. 2-3
 - b. 3-4
 - c. 4-5
 - d. 5-6
6. The normal respiratory rate of a healthy adult is (in breaths per minute):
 - a. 10-12
 - b. 12-16
 - c. 20-23
 - d. 18-23
7. Which is not an organ of the digestive system?
 - a. Liver
 - b. Stomach
 - c. Pancreas
 - d. Prostate
8. The organs of urinary system are all except:
 - a. Urinary bladder
 - b. Uterus
 - c. Urethra
 - d. Kidneys
9. Which is a respiratory organ?
 - a. Trachea
 - b. Esophagus
 - c. Gall bladder
 - d. Pancreas
10. Which is not a part of Neuron?
 - a. Axon
 - b. Myoglobin
 - c. Dendrite
 - d. Nodes of Ranvier

11. The different parts of Small intestine are all except:
 - a. Duodenum
 - b. Ileum
 - c. Caecum
 - d. Jejunum
12. Which is a part of the colon?
 - a. Esophagus
 - b. LES
 - c. Stomach
 - d. Sigmoid
13. The normal urine output of a healthy person on an average is:
 - a. 180 liters/day
 - b. 12 liters /day
 - c. 1.5 liters/day
 - d. 5 liters /day
14. The parts of the nephron are all except:
 - a. DCT
 - b. PCT
 - c. LOH
 - d. DOP
15. In neuromuscular junction the main neurotransmitter is:
 - a. Dopamine
 - b. Acetylcholine
 - c. Dobutamine
 - d. Adrenaline
16. The lowest level we term as tachycardia is when the heart rate exceeds:
 - a. 100 beats per minute
 - b. 110 beats per minute
 - c. 160 beats per minute
 - d. 200 beats per minute
17. The positive waves of ECG are all except:
 - a. P
 - b. QRS
 - c. S
 - d. T
18. The first heart sound is produced due to:
 - a. Closure of AV valves
 - b. Opening of AV Valves
 - c. Closure of Semilunar valves
 - d. Opening of Semilunar valves
19. The normal platelet count is:
 - a. 5-6 lakhs cells per cubic mm of blood
 - b. 1.5-4 lakhs cells per cubic mm of blood
 - c. 7-8 lakhs cells per cubic mm of blood
 - d. 9-10 lakhs cells per cubic mm of blood
20. The main type of anemia in India in women:
 - a. Pernicious
 - b. Sickle Cell
 - c. Aplastic
 - d. Iron deficiency

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. What is Cardiac cycle? Describe the mechanical events of the cardiac cycle with proper diagrams. | 3+7=10 |
| 2. Define Erythropoiesis. Describe the different stages of Erythropoiesis. | 2+8=10 |
| 3. What is a nephron? Mention the steps of Urine formation. | 2+8=10 |
| 4. Define a neuron. Draw the diagram and label its parts of a neuron. Enumerate the differences between sympathetic and parasympathetic system. | 1+4+5=10 |
| 5. Describe the different ways of the digestion and absorption of different principal food stuff components that takes place in our body. | 10 |
| 6. Differentiate between extrinsic and intrinsic pathway of blood coagulation. Name the different clotting factors. Why blood does not clot in circulation? | 4+3+3=10 |
| 7. Describe the different static lung volumes and capacities. Mention the process of Respiration and the organs of Respiration. | 6+4=10 |
| 8. Mention the renal function tests. Define GFR. What are the factors on which GFR depends? | 6+2+2=10 |

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