Total No. = 03 pages

Q.P. Code: MBN104

M.B.B.S. 1st Prof.

(New Scheme w.e.f. 2019 admission onwards)

BF/2023/06

Physiology – B

M.M. : 100 Time : 3 Hours(First30 Min. for MCQs)

Note: 1. **Use OMR Sheet to answer Multiple Choice Questions(MCQs).**

2. Attempt all questions. Illustrate your answers with suitable diagrams
3. **NO SUPPLEMENTARY SHEET SHALL BE ALLOWED/PROVIDED**
4. ***The student must write Q.P. Code in the space provided on OMR Sheet and the Title page of the Answer Book.***

Q.1 **MCQs** (Attempt on OMR sheet) [1x20]

Q1 Multiple choice questions

1 Maximum contraction of gall bladder is seen with
a. CCK b. Secretin
c. Gastrin d. Enterogastrone

2. The PR interval is
a. The beginning of the P wave and the beginning of R wave
b. The beginning of the P wave and the beginning of QRS complex
c. The end of the P wave and the beginning of QRS complex
d. The end of the P wave and the end of QRS complex

3. Which of the following is *NOT* a hypovolemic shock?
a. Hemorrhage b. Burn
c. Diarrhea d. Heart failure

4. The most common cause of anemia in developing country is
a. Malignancy b. Infection
c. Nutritional deficiency
d. Drugs causing bone marrow suppression

5. Which is the first and immediate event in hemostasis
a. Platelet adhesion b. Platelet aggregation
c. Vasoconstriction d. Platelet activation

6. Which of the following intestinal movement is for mixing and grinding of intestinal content
a. Peristalsis b. Segmentation
c. Villus contraction d. Migrating myoelectric complex

7. Blood pressure is defined as the product of
a. Systolic pressure x pulse rate b. Diastolic pressure x pulse rate
c. Pulse pressure x pulse rate d. Cardiac output x peripheral resistance

8. Neutrophil count is high
a. During acute bacterial infection b. Typhoid fever
c. In pernicious anemia d. Drugs depressing bone marrow

9. Stimulation of parasympathetic nerve to salivary gland causes
   a. Increased secretion rich in organic constituents
   b. Decreased secretion
   c. Increased watery secretion rich in enzyme and mucin
   d. Secretion is unaffected
10. Baroreceptor stimulation produces
   a. Decreased heart rate and blood pressure
   b. Increased heart rate and blood pressure
   c. Increased cardiac contractility
   d. Baroreceptor adaptation

11. Exercise causes which of the following?
   a. Increased blood flow to the muscles after half minute
   b. Increase in cerebral blood flow due to increase in systolic blood pressure
   c. Increased body temperature
   d. Decreased O_2 consumption

12. GFR is precisely measured by
   a. Inulin b. Creatinine
   c. Hippuric acid d. PAH

13. Which of the following is NOT absorbed in proximal convoluted tubule
   a. Na^+ b. Phosphate
   c. HCO_3^- d. H^+
14. Countercurrent mechanism in the kidney is responsible for
   a. Maintenances of blood flow
   b. Absorption of Glucose
   c. Osmotic gradient of medulla
   d. Secretion of uric acid
15. The first physiological response to high environmental temperature is
   a. Sweating b. Vasodilation
   c. Decreased heat production d. Decreased non-shivering thermogenesis

16. Which of the following does not stimulate peripheral chemoreceptors?
   a. Hypoxic hypoxia b. Stagnant hypoxia
   c. Anemic hypoxia d. Histotoxic hypoxia
17. Timed vital capacity (FEV_1) is less than 70% in
   a. Bronchial asthma b. Bronchitis
   c. Pulmonary fibrosis d. Lung collapse

18. Which of the following is seen in high altitude climates?
   a. Decreased density of systemic capillaries
   b. Hypertension
   c. Bradycardia
   d. Increase in pulmonary ventilation
19. Activation of sympathetic fibers caused all *EXCEPT*
   a. Increased heart rate
   b. Increased conduction velocity
   c. Decreased coronary blood flow
   d. Increased myocardial contractility

20. Carbon monoxide poisoning is a type of
   a. Anemic hypoxia b. Histotoxic hypoxia
   c. Hypoxic hypoxia d. Stagnant hypoxia

Q.2. With the help of a neat diagram explain the volume and pressure changes in the cardiac cycle. Enumerate the heart sounds. Explain the mechanism of the third heart sound. [8+2+2]

Q.3. **Write short notes on:-** [5x4]

a. Explain mechanism of tubulo-glomerular feedback in kidney
b. Discuss mechanism of gastric acid secretion
c. Explain Bohr's effect in oxy-heamoglobin dissociation curve in detail
d. Discuss role of T helper cells in immunity

Q.4. **Explain why:-** [3x5]

a. Inulin is used to calculate renal clearance
b. ORS is the best treatment for dehydration
c. Vitamin K is administrated to newborns
d. A patient in circulatory shock feels thirsty
e. Normal intra-pleural pressure is negative

Q.5. **Short notes on(applied aspect):-** [6x3]

a. Define hypoxia. Discuss hypoxic hypoxia in detail.
b. Discuss dialysis in detail
c. Define and classify anemias. Discuss laboratory findings of iron deficiency anemia in detail.

Q.6. **Short notes on:-** [5x3]

a. Discuss rights and responsibilities of a patient.
b. Discuss nitrogen narcosis
c. Explain peristalsis in detail
