

# **2010 Scheme**

**Q.P. Code: 103001**

**Reg. No.: .....**

## **First Professional MBBS Degree Supplementary Examinations January 2025 Physiology - Paper I**

**Time: 3 Hours**

**Total Marks: 50**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Long essay**

**(10)**

1. A 40 year old man was admitted to hospital with complaints of diarrhoea and vomiting since last 2 days. On examination, heart rate of 125bpm, bp 90/60 and tachypnoea were recorded.

- a) What is this condition
- b) Explain the physiological basis of tachycardia, tachypnoea and hypotension.
- c) What is the cause for weak thready pulse and cold clammy skin in this condition.

**(1+6+3)**

**Short essays**

**(2x5 =10)**

2. Describe the intrinsic pathway of coagulation.
3. Explain the factors regulating gastric emptying.

**Answer briefly**

**(5x3=15)**

4. What is Hering Breuer reflex and what is its importance.
5. Define Forced vital capacity and forced expiratory volume in first second.
6. Describe hypothermia and its clinical importance.
7. What is the fate of RBCs. How is bilirubin produced.
8. What is autoregulation of renal blood flow. What is its importance.

**Draw and label**

**(2x2½ =5)**

9. Draw a neat, labelled diagram of the cystometrogram of a healthy bladder.
10. Draw a neat, labelled diagram of pacemaker potential of human heart.

**Explain the physiological basis of the following**

**(5x2=10)**

11. Cardiac muscle cannot be tetanized.
12. Renal splay.
13. Loading zone in oxygen hemoglobin dissociation curve.
14. Post-prandial alkaline tide.
15. Histotoxic hypoxia.

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