

**TILAK MAHARASHTRA VIDYAPEETH, PUNE**  
**BACHELOR OF PHYSIOTHERAPY (B. P. T.)**

**A**

**EXAMINATION : MARCH - 2024**

**FIRST YEAR**

**Subject: Human Physiology (BPT- 21102)**

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**Date: 5/03/2024**

**Total Marks: 80**

**Time: 10.00 am To 1.00 pm**

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**SECTION – A**

**Q.1 Answer the following questions in short (Any five) (15)**

- Functions of Platelets
- Define Synapse. Enumerate any 6 properties of synapse.
- Define Homeostasis. Add a note on Positive feedback mechanism.
- State “Frank starling’s Law”
- Define dead space, giving its normal value
- State any three difference between simple diffusion and facilitated diffusion

**Q.2 Answer the following questions (Any Five) (35)**

- Write a note on  $\text{Na}^+\text{-K}^+$  ATPase Pump
- Draw and label  $\text{O}_2\text{-Hb}$  dissociation curve. Explain factors affecting it.
- Write a note on Baroreceptor reflex
- Classify nerve fibers and enlist properties of nerve fibers.
- Describe ABO system in detail. Add a note on Erythroblastosis fetalis
- Describe functions of Cerebellum

**SECTION – B**

**Q.3 Answer the following questions in detail (Any one) (15)**

- Define cardiac output. Describe factors affecting cardiac output. Write any two methods to determine cardiac output.
- What is excitation –contraction coupling? Explain the role of calcium ions in this process.

**Q.4 Answer the following questions in detail (Any one) (15)**

- Describe origin, course, termination and functions of pyramidal tracts.
- Describe Cardio respiratory changes during various phases of exercise.

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