

**FEB - 2024**

**HUMAN PHYSIOLOGY AND BIOCHEMISTRY – I**

**Full Mark -100 / Time : 3.00 Hours**

**(Answer all questions)**

**Section (A) MCQs**

**Q.No.1 Multiple choice questions (10x1=10)**

- i. During parturition, a woman experiences an increasing force and frequency of Labor pain until the baby is born the process is:
  - a. Adaptive Control
  - b. Feed-forward control
  - c. Negative feedback
  - d. Positive feedback
- ii. Site of protein synthesis:
  - a. Mitochondria
  - b. Ribosome
  - c. Lysosomes
  - d. All
- iii. If common salt is dissolved in water then the surface tension of salt water is?
  - a. Increased
  - b. Decreased
  - c. Not changed
  - d. First increase then decreases
- iv. The central temperature regulating centers are located in the :
  - a. Cerebellum
  - b. Brainstem
  - c. Hypothalamus
  - d. Thalamus
- v. What is the primary function of albumin in plasma ?
  - a. Transporting Oxygen
  - b. Maintaining Osmotic Pressure
  - c. Regulating PH
  - d. Transporting Hormones
- vi. Which of the following heart sounds is associated with isovolumetric contraction?
  - a. First
  - b. Second
  - c. Third
  - d. Fourth
- vii. Spirometry is used for measuring the lung volume of following except:
  - a. Inspiratory Reserve volume
  - b. Expiratory Reserve volume
  - c. Tidal Volume
  - d. Residual volume
- viii. In the nephron, glucose reabsorption occurs mainly in the:
  - a. PCT
  - b. DCT
  - c. Loop of Henle
  - d. Collecting duct

- ix. Which layer of the skin contains melanin:
  - a. Stratum corneum
  - b. Stratum lucidum
  - c. Stratum granulosum
  - d. Stratum spinosum
  - e. Stratum germinativum
- x. The structural and functional unit of a muscle is:
  - a. Sarcolemma
  - b. Sarcoplasm
  - c. Sarcomere
  - d. Motor end plate

**Section B (SAQ & LAQ)**

**Q.No.2.Short Answer Questions**

**(8x5=40 )**

- |                     |                              |
|---------------------|------------------------------|
| a. Cell membrane    | e. Surfactant                |
| b. Action Potential | f. Renin angiotensin System  |
| c. Hemostasis       | g. Function of skin          |
| d. Heart sounds     | h. Classification of muscles |

**Q.No.3.Long Answer Questions**

**(5x10=50)**

- a. Define erythropoiesis with different stages of erythropoiesis. Describe the factors necessary for erythropoiesis.
- b. Enumerate the factors involved in blood coagulation and describe the intrinsic mechanism of coagulation.
- c. Define Arterial blood pressure and describe its regulation.
- d. Describe the transport of carbon dioxide in blood.
- e. Define micturition. Explain micturition reflex.

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