



All India Institute of Medical Sciences, Kalyani

B.Sc.(Hons) Nursing First Year Examination (Batch-2021-22)

Time: 3 Hrs.

ANATOMY & PHYSIOLOGY

Marks: 75

INSTRUCTIONS:

- Answer Anatomy & Physiology Section in separate answer booklets.
- Draw diagram wherever necessary.

ANATOMY (37 MARKS)

SECTION A

Answer any ONE of the following

(1X7=7)

1. Describe Kidneys under following headings:

(3+3+1=7)

- Relations
- Internal Macroscopic features
- Applied Anatomy

OR

2. Describe the heart under following headings:

(2+2+2+1=7)

- Position & coverings
- External features
- Blood supply
- Applied anatomy

SECTION B

Write short notes on any FOUR:

(4X5=20)

3. Middle ear
 4. Relations of liver
 5. Knee joint- type and ligaments
 6. Spinal cord
 7. Deltoid- origin, insertion, nerve supply and applied aspect
 8. Testis
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PHYSIOLOGY (38 MARKS)

SECTION-A

Answer any TWO of the following:

[2X8=16]

1. Define anaemia. Enumerate the clinical and morphological classifications of anaemia. Discuss in brief the steps of erythropoiesis with neat diagrams. (1+2+5)
2. Define Blood pressure. Classify hypertension. Describe in brief the various regulation mechanisms for control of blood pressure in our body. (2+2+4)
3. What do you mean by resting membrane potential? Enumerate the properties of action potential. How excitation contraction coupling occurs in a muscle? Explain with a neat diagram. (1+2+5)

SECTION-B

Write short notes on any THREE:

[3X5=15]

4. Write a brief note on cardiac output.
 5. Role of Counter-current multiplier system in medullary osmotic gradient
 6. Ventilation perfusion ratio
 7. Describe Secondary active transport across cell membrane with examples
 8. Describe various motility patterns of GIT with suitable diagrams.
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SECTION C (PHYSIOLOGY)

INSTRUCTIONS:

- Section C (Anatomy & Physiology) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one ✓ mark to only one answer that you consider correct for each question.
- Mark your ✓ in pen.

Multiple Choice Questions (MCQs):

[7X1=7]

1. Compared to fresh blood the stored blood has
 - a. More 2-3-DPG
 - b. High extracellular K⁺
 - c. High extracellular Hb
 - d. Increased platelets
 2. The major form of transported CO₂ in blood is
 - a. Carbamino compound
 - b. Dissolved form
 - c. Bicarbonates
 - d. Carbonic acid form
 3. The anterior hypothalamus is not associated with the control of
 - a. Temperature
 - b. Water intake
 - c. Sexual functions
 - d. Hunger
 4. In a 70Kg adult man, the total amount of water roughly equals to
 - a. 5-7 L
 - b. 14- 18 L
 - c. 25-30 L
 - d. 40-42 L
 5. All of the following hormones are involved in glucose homeostasis except
 - a. Cortisol
 - b. prolactin
 - c. Thyroxin
 - d. Growth hormone
 6. Ovulation is associated with a sudden rise in
 - a. Prolactin
 - b. Luteinizing hormone
 - c. Oxytocin
 - d. Testosterone
 7. The optical power of human eye is
 - a. 25D
 - b. 50D
 - c. 60D
 - d. 100D
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SECTION C (ANATOMY)

INSTRUCTIONS:

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- Put one ✓ mark to only one answer that you consider correct for each question.
- Mark your ✓ in pen.

Multiple Choice Questions (MCQs):

(10X1=10)

1. Elbow joint is a type of synovial joint of
 - a. Plane
 - b. Hinge type
 - c. Ball and socket
 - d. Pivot type
2. Normal position of uterus is
 - a. Anteverted and anteflexed
 - b. Retroverted and Retroflexed
 - c. Anteverted and Retroflexed
 - d. Anteflexed
3. Sebaceous gland is which type of gland, based on the mechanism of secretion
 - a. Apocrine
 - b. Holocrine
 - c. Merocrine
 - d. Ecorine
4. In an adult, the intramuscular injection in the upper limb is commonly given in this muscle
 - a. Deltoid
 - b. Gluteus maximus
 - c. Biceps brachii
 - d. Pectoralis major
5. Dwarfism is a disorder of which gland?
 - a. Thyroid
 - b. Pituitary
 - c. Pancreas
 - d. Adrenal
6. Lungs are enclosed within
 - a. Perichondrium
 - b. Periosteum
 - c. Pleura
 - d. Pericardium

7. After lower third molar tooth extraction following a local anesthetic injection, a 65 old lady complained of numbness in posterior part of her lower jaw. Which of the following nerve would have been affected?
- Lingual nerve
 - Hypoglossal nerve
 - Recurrent laryngeal nerve
 - Maxillary nerve
8. Which is the balancing organ of the ear?
- Organ of Corti
 - Cochlea
 - Tectorial membrane
 - Vestibular apparatus
9. Which of the following organs contains the 'Bundle of His'?
- Pancreas
 - Brain
 - Kidney
 - Heart
10. A patient came to the cardiology outpatient department for routine checkup. Which artery would you use for checking of blood pressure in upper extremity?
- Common carotid artery
 - Brachial artery
 - Femoral artery
 - Axillary artery
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