



Class: XI

Time Allowed: 20 minutes

**MODEL PAPER EXAMINATION 2025**  
**SUBJECT: ANATOMY & MICROTECHNIQUES**

Q1:

SECTION "A"

Marks: 17

**Note:** Attempt **ALL** questions from this section. Each question carries **ONE** mark.

1. Which body system removes waste products from the blood and maintains water and electrolyte balance?
  - A. Urinary system
  - B. circulatory system
  - C. digestive system
  - D. respiratory system
2. Which layer of the meninges is closest to the brain's surface?
  - A. Hinge joint
  - B. Ball and Socket joint
  - C. Pivot joint
  - D. Condylloid joint
3. If a patient is lying on their back, this position is known as:
  - A. Prone
  - B. Lateral
  - C. Supine
  - D. Medial
4. Which abdominal region is primarily associated with the liver and gallbladder?
  - A. Epigastric region
  - B. Right Hypochondriac region
  - C. Umbilical region
  - D. Left hypochondriac region
5. Which cellular component acts as a selective barrier, regulating the entry and exit of substances?
  - A. Nucleus
  - B. Cytoplasm
  - C. Cell membrane
  - D. Mitochondria
6. The pelvic cavity primarily contains which organs?
  - A. Heart and lungs
  - B. Reproductive organs and bladder
  - C. Brain and spinal cord
  - D. Stomach and liver
7. What is the correct path through the circulatory system which describes the passage of blood originating in the left leg?
  - A. Vena cava → left atrium → right atrium → lungs → left ventricle → right ventricle → aorta
  - B. Vena cava → right atrium → left atrium → lungs → right ventricle → left ventricle → aorta
  - C. Vena cava → left atrium → left ventricle → lungs → right atrium → right ventricle → aorta
  - D. Vena cava → right atrium → right ventricle → lungs → left atrium → left ventricle → aorta
8. The heart is enclosed in a protective sac called the:
  - A. Pericardium
  - B. Pleura
  - C. Peritoneum
  - D. Myocardium
9. Which enzyme in saliva breaks down starches into sugars?
  - A. pepsin
  - B. lipase
  - C. amylase
  - D. trypsin
10. Which hormone is produced by the pancreas to regulate blood sugar levels?
  - A. Insulin
  - B. Thyroxin
  - C. Cortisol
  - D. Adrenaline
11. The hormone melatonin, produced by the pineal gland, is associated with:
  - A. Sleep-wake cycles and circadian rhythms
  - B. Blood sugar regulation
  - C. Immune system function
  - D. Bone development
12. Oxytocin and ADH are produced by the \_\_\_\_\_ and stored in the \_\_\_\_\_.
  - A. Posterior pituitary; Anterior pituitary
  - B. Adrenal cortex; Adrenal medulla
  - C. Hypothalamus; Neurohypophysis
  - D. Adenohypophysis; Kidneys
13. What is the function of the seminal vesicle in the male reproductive system?
  - A. Sperm storage
  - B. Secretion of alkaline fluid
  - C. Sperm maturation
  - D. Production of testosterone
14. What is the function of ligaments in the musculoskeletal system?
  - A. Connect muscle to bone
  - B. Facilitate joint movement
  - C. Connect bone to bone
  - D. Store minerals
15. Which type of muscle is responsible for involuntary movements like digestion?
  - A. Smooth muscle
  - B. Cardiac muscle
  - C. Skeletal muscle
  - D. Ligaments
16. Which type of joint allows movement in multiple planes, including flexion, extension, abduction, and adduction?
  - A. Ball and Socket joint
  - B. Hinge joint
  - C. Condylloid joint
  - D. Pivot joint
17. Which process involves the elimination of concentrated urine from the body?
  - A. absorption
  - B. Selective reabsorption
  - C. micturition
  - D. glomerular filtration

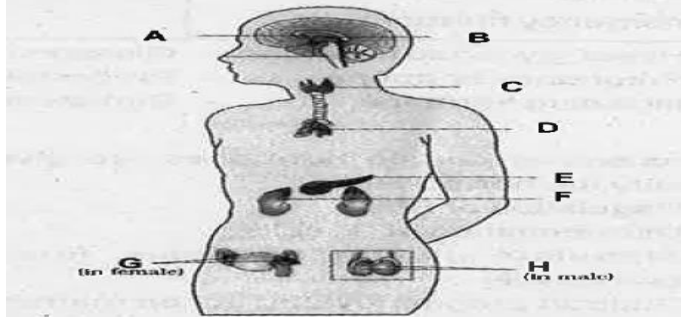
Time Allowed: 30 minutes

**Practical Based Assessment (PBA)**

**(Marks: 15)**

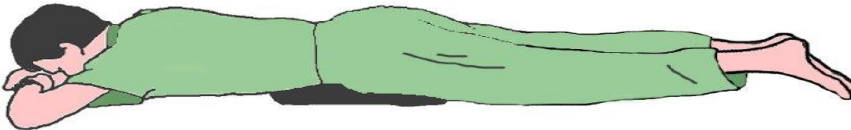
18. The diagram of the human body shows some parts of the endocrine system. Label the given parts.

Marks (4)



19. Identify the position given below:

Marks (1)



\_\_\_\_\_

20. Answer the given questions:

Marks (2)

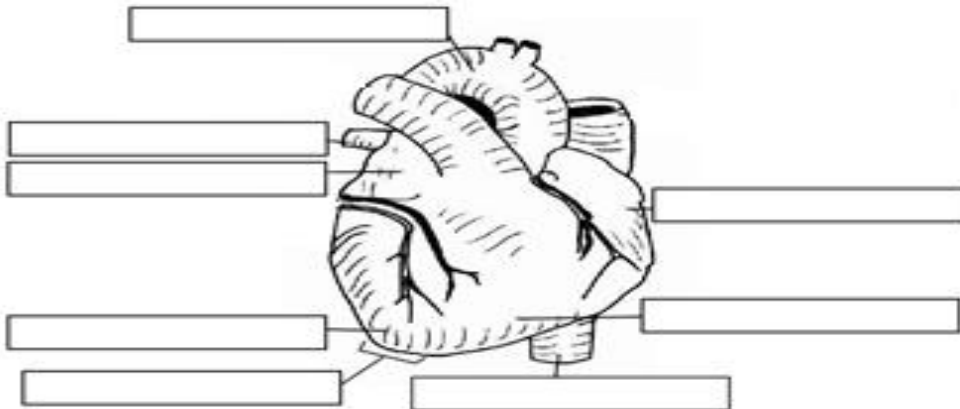
a) Which is the largest and the main artery of the circulatory system? \_\_\_\_\_

b) Name the blood vessels that carry blood from upper and lower parts of the body?

\_\_\_\_\_  
\_\_\_\_\_

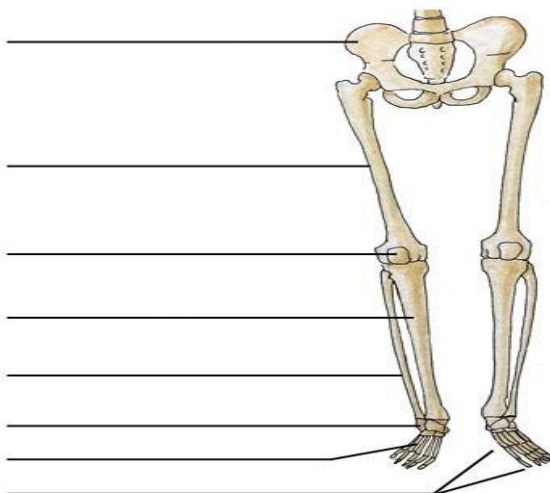
21. Label the given parts:

Marks (4)



22. Label the diagram.

Marks (4)





Class: XI  
Time: 2 hours 40 minutes

**MODEL PAPER EXAMINATION 2025**  
**SUBJECT: ANATOMY & MICROTECHNIQUES**  
**SECTION "B" AND SECTION "C"**

**Total Marks 68**  
**36 Marks**

**Q2: SECTION "B" SHORT ANSWER QUESTIONS**

Note: Answer any **NINE** questions from this section. All questions carry equal marks.

- (i) Give a comparison of types of muscle.
- (ii) Enlist hormones of anterior pituitary gland.
- (iii) How does the exchange of gases occur at the alveolar level?
- (iv) List down the main nine abdominal regions along with their organs
- (v) Differentiate between smooth & cardiac muscles.
- (vi) Write down the difference between meiosis & mitosis.
- (vii) Write down the steps of paraffin wax embedding.
- (viii) Differentiate between light and electron microscopy.
- (ix) Enlist the different types of stains used for bone tissues.
- (x) Why are secretions of the adrenal cortex called corticosteroids?
- (xi) Differentiate between the following:
  - a. Insulin & Glucagon
  - b. Central Nervous system & Peripheral Nervous system

**SECTION "C" DETAILED ANSWER QUESTIONS**

**32 Marks**

Note: Answer any **TWO** questions from this section. All questions carry equal marks.

- Q3: Describe the structure and function of a neuron.
- Q4: Explain pituitary gland, its lobes and hormones in details.
- Q5: Explain the skeletal system in detail with diagram.

**END OF PAPER**