



UNIVERSITI KUALA LUMPUR
ROYAL COLLEGE OF MEDICINE PERAK

FINAL EXAMINATION
MARCH SEMESTER 2026

COURSE CODE : RXD12703
COURSE NAME : BASIC ANATOMY AND PHYSIOLOGY II
PROGRAMME NAME : DIPLOMA IN MEDICAL IMAGING
DATE : 24 JUNE 2026
TIME : 9.00 A.M – 11.00 A.M
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read CAREFULLY the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of TWO (2) section; Section A and Section B.
4. Answer ALL questions in Section A. For Section B, answer THREE (3) questions ONLY.
5. Please mark/write your answers on the OMR answer script or answer booklet provided.
6. Answer ALL questions in English language ONLY.

THERE ARE 12 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A : MULTIPLE CHOICE QUESTIONS (Total: 25 marks)

INSTRUCTION: Answer ALL questions.

Please use the objective answer sheet provided.

1. Which statement best explains the main function of the kidneys?
 - A. They store urine before elimination.
 - B. They filter blood to remove waste products.
 - C. They transport urine to the bladder.
 - D. They control body movement.
2. Why is the right kidney located slightly lower than the left kidney?
 - A. The liver occupies space above it.
 - B. The stomach enlarges its position.
 - C. The heart pushes it downward.
 - D. The bladder pulls it downward.
3. What would most likely happen if the ureters were blocked?
 - A. Urine would move faster to the bladder.
 - B. Urine would be absorbed into the blood.
 - C. Urine would accumulate in the kidneys.
 - D. Urine would bypass the bladder.
4. Why people with type "AB" blood are considered "universal receiver" for blood transfusions?
 - A. Their blood do not have A and B antigens on red blood cells.
 - B. Their blood do not have A and B antibodies in their plasma.
 - C. Their blood is plentiful in A and B antibodies on red blood cells.
 - D. Their blood do not have A and B antigens in their plasma.
5. Select the **CORRECT** blood groups that can be received by people with blood group A:
 - I. B
 - II. A
 - III. AB
 - IV. O

A. I, and III	C. I, II, and III
B. II, and IV	D. II, III, and IV

6. Select the **CORRECT** blood circulation from the whole body to the heart:

- I. Left atrium
- II. Left ventricle
- III. Right atrium
- IV. Right ventricle

A. I, II, III, and IV

C. III, IV, I, and II

B. II, III, I, and IV

D. II, I, IV, and III

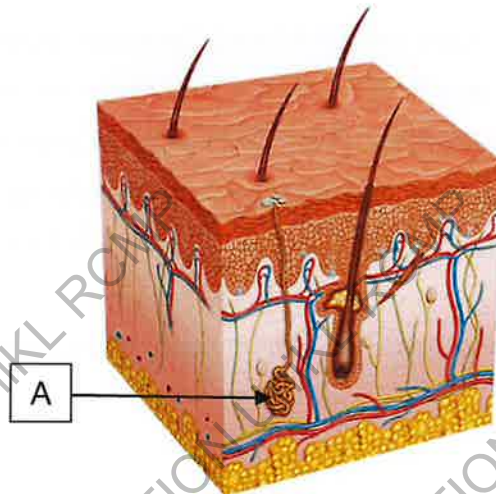
7. Identify the layers of the epidermis from deepest to the most superficial.

- A. Strata basale, corneum, granulosum, lucidum and spinosum
- B. Strata basale, spinosum, granulosum, lucidum and corneum
- C. Strata corneum, lucidum, spinosum, granulosum and basale
- D. Strata corneum, granulosum, lucidum, basale and spinosum

8. What happens when sweat evaporates from the skin?

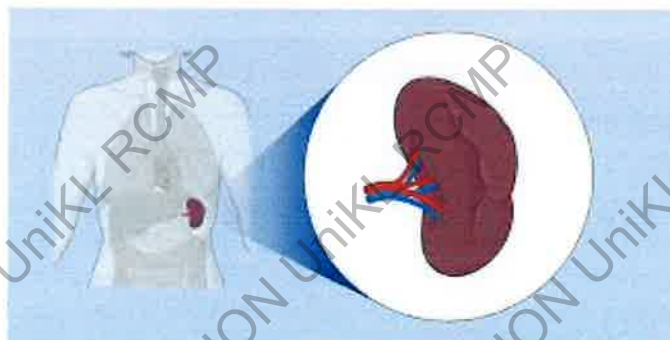
- A. Body temperature increases.
- B. Body temperature decreases.
- C. Blood pressure increases.
- D. Oxygen levels decrease.

9. What is the substance secreted by structure A?



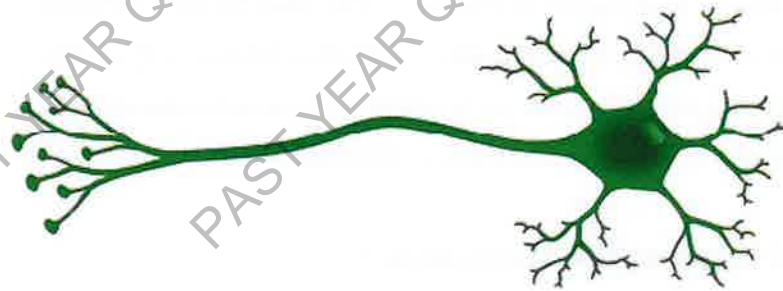
- A. Sweat
- B. Melanin
- C. Sebum
- D. Keratin

10. Why is keratin important?
- A. It waterproofs the skin.
 - B. It carries oxygen.
 - C. It produces hormones.
 - D. It stores nutrients.
11. Which structure helps detect touch, pain, and temperature?
- A. Hair follicles
 - B. Blood vessels
 - C. Sensory receptors
 - D. Sweat glands
12. Identify the **CORRECT** sequence for sound waves travel through the ear.
- A. Cochlea → Tympanic membrane → Ossicles bones → Pinna
 - B. Pinna → Tympanic membrane → Ossicles bones → Cochlea
 - C. Ossicles bones → Pinna → Cochlea → Tympanic membrane
 - D. Tympanic membrane → Pinna → Cochlea → Ossicles bones
13. Which part of the ear collects sound waves?
- A. Pinna
 - B. Cochlea
 - C. Eustachian tube
 - D. Semicircular canals
14. Identify function of the organ in diagram below:



- A. Pump blood.
- B. Filter blood.
- C. Store oxygen.
- D. Produce urine.

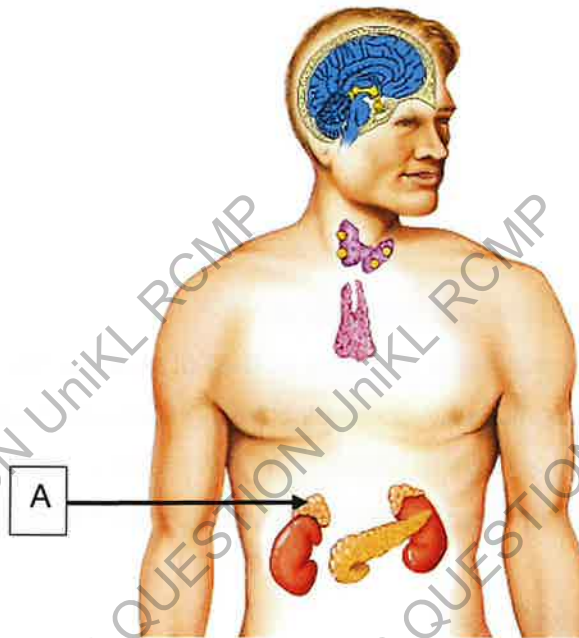
15. What would happen if lymph nodes are infected?
- A. It will shrink in size.
 - B. It will produce urine.
 - C. It will stop filtering lymph.
 - D. It will swell due to immune response.
16. What is the relationship between the lymphatic and cardiovascular systems?
- A. Cardiovascular system produces lymph.
 - B. Cardiovascular system secrete lymphocytes.
 - C. Lymphatic system pumps blood to whole body.
 - D. Lymphatic system returns fluid to the bloodstream.
17. Name the classification of neuron in figure below:



- A. Unipolar neuron
 - B. Bipolar neuron
 - C. Multipolar neuron
 - D. Pseudounipolar neuron
18. Which division of the autonomic nervous system prepares the body for "fight or flight"?
- A. Parasympathetic
 - B. Sympathetic
 - C. Somatic
 - D. Central
19. What is the function of the epididymis?
- A. Produce sperm.
 - B. Mature sperm.
 - C. Transport urine.
 - D. Produce hormones.

20. Name the phase of the ovarian cycle when the egg is released from follicle surge by luteinizing hormones.
- A. Luteal phase
 - B. Ovulation
 - C. Menstruation
 - D. Follicular phase
21. Identify the **CORRECT** statement regarding uterus.
- A. Perimetrium is the middle layer of uterus consist of muscus membrane.
 - B. Myometrium is the middle layer of uterus consist of smooth muscle.
 - C. Myometrium is the inner layer of uterus consist of muscus membrane.
 - D. Perimetrium is the inner layer of uterus consist of smooth muscle.
22. Identify the function of vas deferences.
- A. It secretes a thin lubricating fluid that passes into the urethra.
 - B. It store, mature and transport spermatozoa.
 - C. It transport mature sperm to the urethra.
 - D. It produce spermatozoa.
23. Select the **CORRECT** statements regarding spermatozoa:
- I. Ribosome help the sperm to swim in female reproductive system to the ovum.
 - II. Acrosome covers the head like a cap, contains enzymes that helps the sperm to penetrate the ovum.
 - III. Is a microscopic tadpole-shaped cell about 60µm long.
 - IV. Midpiece contains many mitochondria that provide energy for movement.
- A. I, and III
 - B. II, and IV
 - C. I, II, and III
 - D. II, III, and IV
24. Select the hormones released by the anterior pituitary gland:
- I. Oxytocin
 - II. Prolactin
 - III. Growth hormone
 - IV. Thyroid-stimulating hormone
- A. I, and III
 - B. II, and IV
 - C. I, II, and III
 - D. II, III, and IV

25. Identify hormone produced by the organ **A** in figure below:



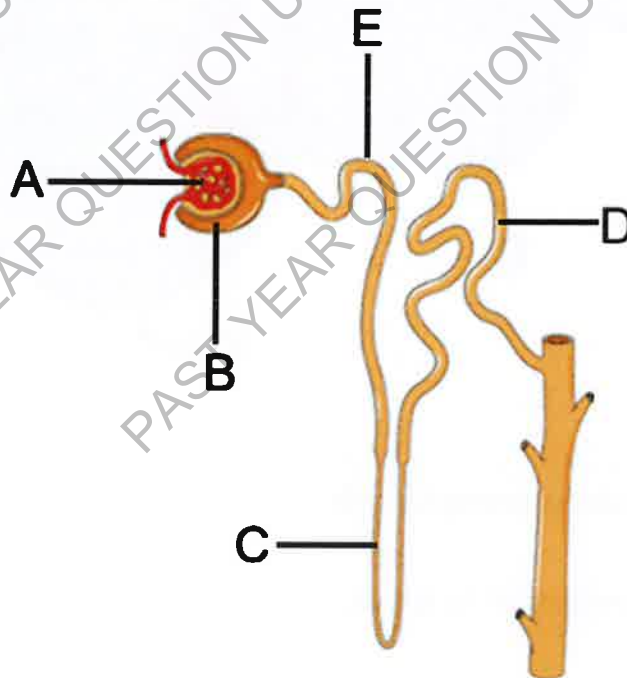
- A. Adrenocorticotropic
- B. Glucocorticoids
- C. Oxytocin
- D. Insulin

SECTION B : MODIFIED ESSAY QUESTIONS (Total: 75 marks)

INSTRUCTION: This section consists of **FOUR (4)** modified essay questions (MEQ).
You are required to answer **ONLY THREE (3)** questions in the answer booklet provided.

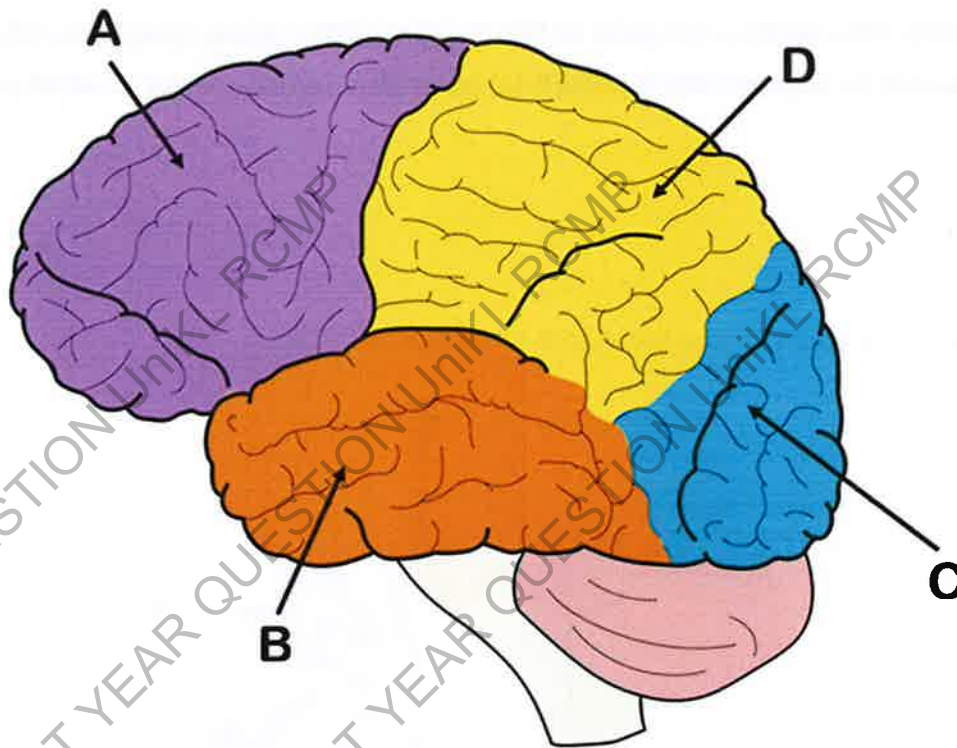
Question 1

- (a) Name the structure labelled **A** to **E** in the figure below:



(5 marks)

(b) Referring to the figure below:



i. Identify structures labelled **A** to **D**.

(4 marks)

ii. State the functions of the lobe **A**.

(2 marks)

(c) Interpret the process of hearing.

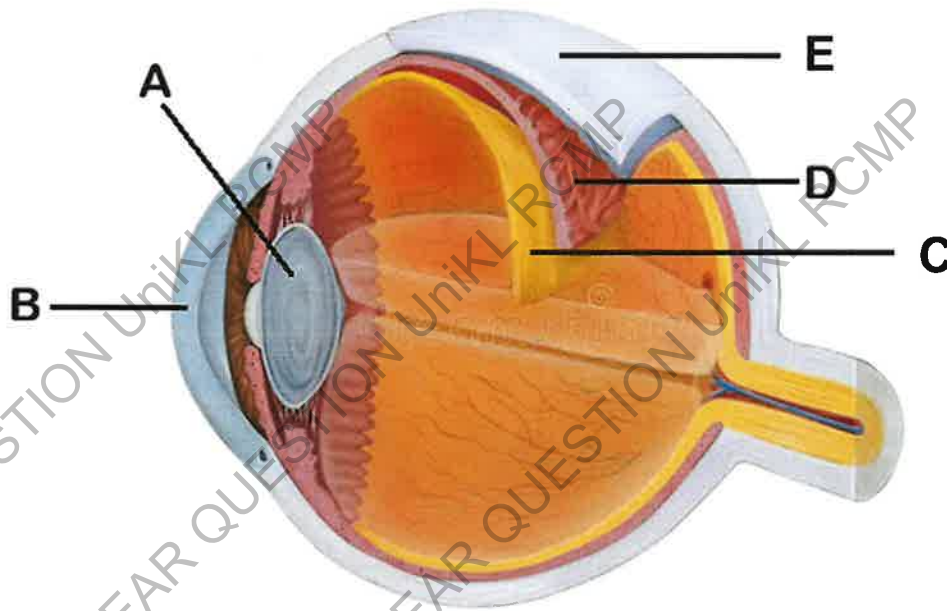
(6 marks)

(d) Differentiate between erythrocytes and leucocytes.

(8 marks)

Question 2

- (a) Name the eye structures labelled **A** to **E** in the figure below:

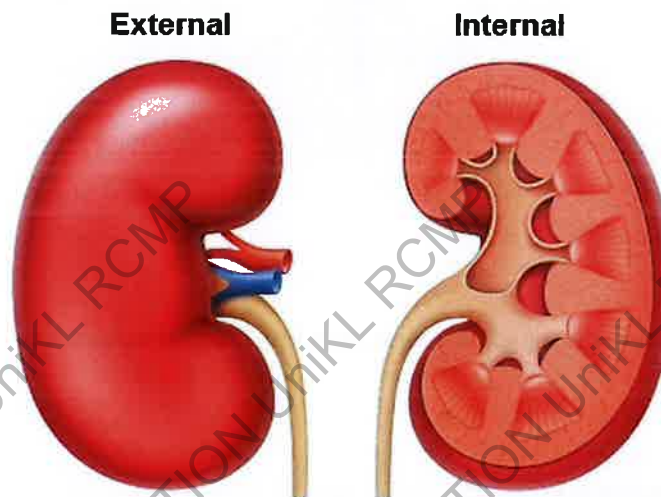


(5 marks)

- (b) Identify the **THREE (3)** functions of integumentary system.

(6 marks)

- (c) Interpret the anatomical structures of organ in the figure below:



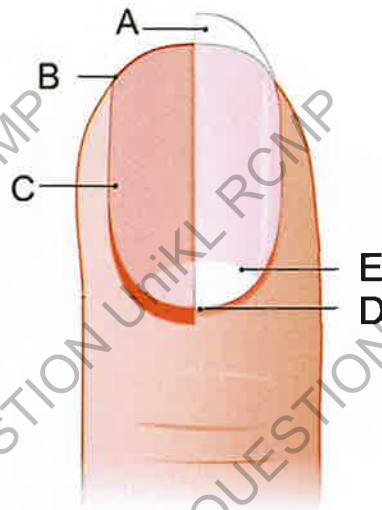
(6 marks)

- (d) Differentiate between type blood group AB and O.

(8 marks)

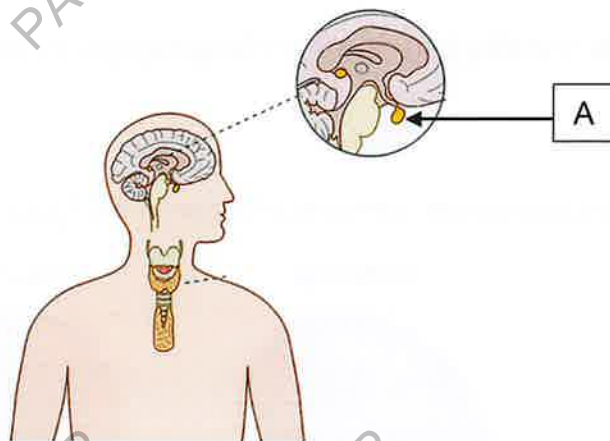
Question 3

- (a) Name the anatomical parts labelled **A** to **E** in the figure below:



(5 marks)

- (b) By referring to the figure below:



- Identify the gland **A**.
- Describe regarding the gland with hormones released.

(1 mark)

(5 marks)

- (c) Interpret the **THREE (3)** layers of meninges.

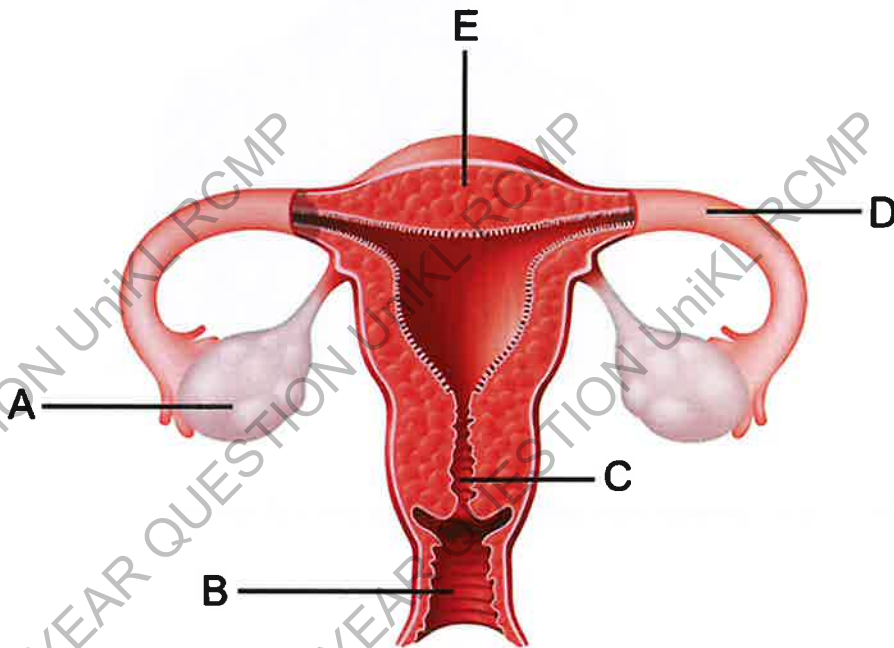
(6 marks)

- (d) Differentiate between nervous and endocrine system.

(8 marks)

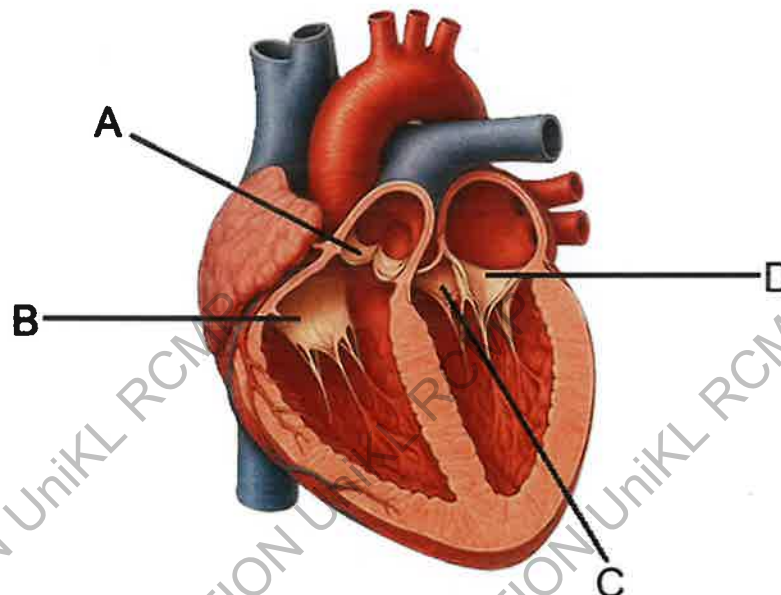
Question 4

- (a) Name the anatomical parts labelled **A** to **E** in the figure below:



(5 marks)

- (b) Referring to the figure below:



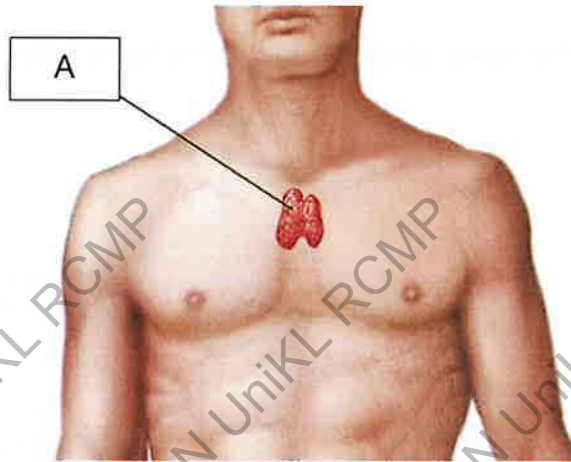
- (i) Identify the valves labelled **A** to **D**.

(4 marks)

- (ii) Identify the function of valve.

(2 marks)

- (c) Interpret the anatomical structures and functions of organ **A** in figure below:



(6 marks)

- (d) Differentiate between rods and cones nerve cells of retina.

(8 marks)

END OF EXAMINATION PAPER