

Time allowed: One and a half hours

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this Paper is the time allowed for writing the answers.

Attempt **all** questions from **Section A** and **any three** questions from **Section B**.

The intended marks for questions or parts of questions are given in brackets [].

SECTION - A

(Attempt **all** questions.)

Question 1.

Name the following by choosing the correct answers to the questions from the given options. (Do not copy the question, write the correct answer only.) [10]

- (i) Which of the following statement is true for eosinophils?
- (a) They have the affinity for basic dyes.
 - (b) They are about 70 % of total WBC count.
 - (c) They engulf particles formed by antigen-antibody reaction.
 - (d) They produce a chemical histamine.
- (ii) Nissl's granules are found in
- (a) Axon
 - (b) Dendrites
 - (c) Cyton
 - (d) Axon terminals
- (iii) The hormone calcitonin is secreted by
- (a) Adrenal gland
 - (b) Thyroid gland
 - (c) Thymus gland
 - (d) Pancreas
- (iv) The tympanic membrane lies between
- (a) the outer and inner ear
 - (b) the middle and inner ear
 - (c) the outer and middle ear
 - (d) the middle ear and membranous labyrinth
- (v) Glomerular filtrate is received by
- (a) Proximal tubule
 - (b) Bowman's capsule
 - (c) Loop of Henle
 - (d) Distal convoluted tubule
- (vi) Gout disease in the joints is caused by
- (a) Excess glucose and ammonia in the urine
 - (b) Excess salts in the body
 - (c) Deposition of uric acid
 - (d) All the above
- (vii) The number of cranial nerves in humans:
- (a) 12 pairs
 - (b) 31 pairs
 - (c) 21 pairs
 - (d) 23 pairs
- (viii) Hypersecretion of ACTH causes
- (a) Gigantism
 - (b) Acromegaly
 - (c) Addison's disease
 - (d) Cretinism

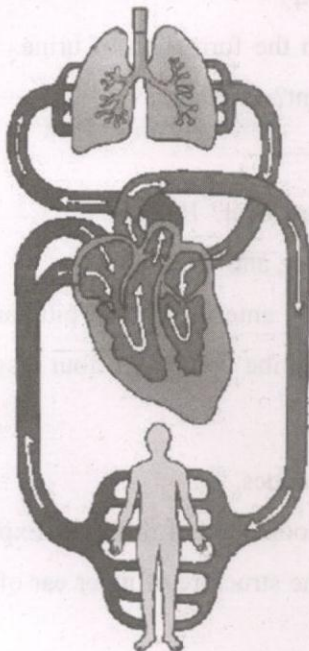
- (ix) Which of the following is not a function of cerebrum?
- | | |
|---|-------------------------------------|
| (a) Seat of thinking and memory | (b) Responds to cold, heat and pain |
| (c) Reflex centre for muscular activities | (d) Controls emotions and speech |
- (x) The colour of the eye refers to colour of the
- | | |
|-----------|------------|
| (a) lens | (b) iris |
| (c) pupil | (d) sclera |

SECTION - B

(Attempt any three questions from this Section.)

Question 2.

- (i) Name the gland which is heterocrine in function. Mention the name of hormones released from it. [2]
- (ii) State the differences between voluntary and involuntary actions. [2]
- (iii) Given below is the diagram showing double circulation of blood in humans. Label the following parts. [3]

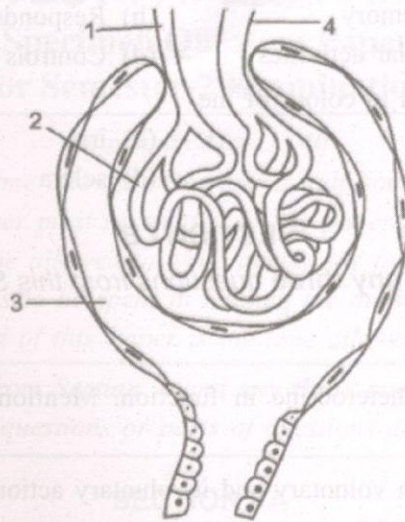


- | | |
|----------------------|--------------------|
| (a) Vena cava | (b) Aorta |
| (c) Pulmonary artery | (d) Left ventricle |
| (e) Right atrium | (f) Pulmonary vein |
- (iv) Give the biological term for the following. [3]
- | |
|---|
| (a) The point of contact between two neurons |
| (b) Inflammation of meninges |
| (c) The fluid present in the anterior part in front of eye lens |

Question 3.

- (i) Mention two differences between RBCs and WBCs. [2]
- (ii) Where is spleen located? Mention two functions of it. [2]

(iii) Study the diagram given below and answer the questions. [3]



(a) Name the region in the kidney where the above structure is present.

(b) Name the parts 1, 2, 3 and 4.

(c) Name the stages involved in the formation of urine.

(iv) Why is osmoregulation important? Explain.

[3]

Question 4.

(i) How is pulse rate related to heart beat? Explain.

[2]

(ii) Differentiate between Acromegaly and Cretinism.

[2]

(iii) Name three hormones secreted by anterior lobe of pituitary gland along with their functions. [3]

(iv) What is blood coagulation? Describe briefly the four stages of it.

[3]

Question 5.

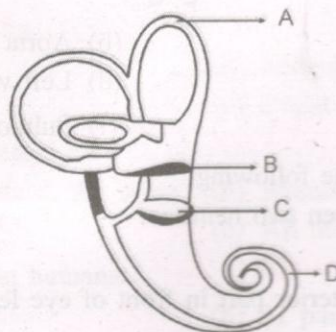
(i) Differentiate between rods and cones.

[2]

(ii) Distinguishing colours in the moon light is difficult. Explain giving suitable reason.

[2]

(iii) The diagram below represents the structure of inner ear of human. Study the diagram and answer the questions. [3]



(a) Name the part of the ear which is responsible for transmitting impulses to the brain.

(b) Name the part A, B, C and D.

(c) Name the fluid present A.

(iv) (a) Differentiate between exocrine glands and endocrine glands.

(b) Which hormone is also called 'birth hormone'? Give reason.

[3]

Question 6.

(i) Mention the location and function of

[2]

(a) Myelin sheath

(b) Pinna

(ii) Give the full form of

[2]

(a) MSH

(b) PNS

(iii) Draw a well labelled diagram of T.S. of spinal cord and name the following parts.

[3]

(a) Grey matter

(b) White matter

(c) Relay neuron

(d) Motor neuron

(e) Sensory neuron

(iv) Complete the table.

[3]

| Glands | Hormone secreted | Function |
|---------------|------------------|--------------------------|
| Pancreas | _____ | Lowers blood sugar level |
| Adrenal gland | _____ | Metabolism in emergency |
| Thyroid | Thyroxine | _____ |