



*Zagdu Singh Charitable Trust's (Regd.)*  
**THAKUR INTERNATIONAL SCHOOL**

**FIRST PRELIMINARY EXAMINATION 2021 – 2022**

Paper: Biology

Grade: 10

Date: 11/02/2022

Marks: 40

Time : 1 hr 30 mins.

*Answer 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.*

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*Attempt all questions from **section A** and attempt any three questions from **section B**.*

*The intended marks for questions or parts of a question are given in the brackets [ ]*

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**SECTION – A**

*(All the questions from this Section are compulsory.)*

**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]

a) Blockage in the coronary artery leads to: (scientific term)

- i) Myocardial infarction
- ii) Cardiac arrest
- iii) Angina pectoris
- iv) Chest pain

b) A vessel which starts and ends in capillaries.

- i) Coronary vein
- ii) Hepatic Portal vein
- iii) Pulmonary vein
- iv) Renal vein

c) In humans, urea is produced in:

- i) Kidney
- ii) Liver
- iii) Lungs
- iv) Spleen

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*This paper consists of 4 printed pages.*

- d) The pigmented circular area seen in front of the eye:
- Cornea
  - Ciliary muscles
  - Lens
  - Iris
- e) The part of the brain which controls the body temperature:
- Thalamus
  - Diencephalon
  - Hypothalamus
  - Cerebral peduncles
- f) Non-granular leucocytes are:
- Lymphocytes and monocytes
  - Lymphocytes and basophils
  - Eosinophils and basophils
  - Eosinophils and monocytes
- g) The pigment that gives colour to urine:
- Haemoglobin
  - Urochrome
  - Chlorophyll
  - Melanin
- h) The function of Eustachian tube:
- Equalizing air pressure
  - Conducting sound waves in external ear
  - Static balance
  - Dynamic balance
- i) The outer most layer of meninges:
- Pia matter
  - Grey matter
  - Arachnoid layer
  - Dura mater
- j) The short stem joining the bases of semicircular canal to the cochlea is termed as:
- Ampulla
  - Vestibules
  - Organ of corti
  - Perilymph

## SECTION B

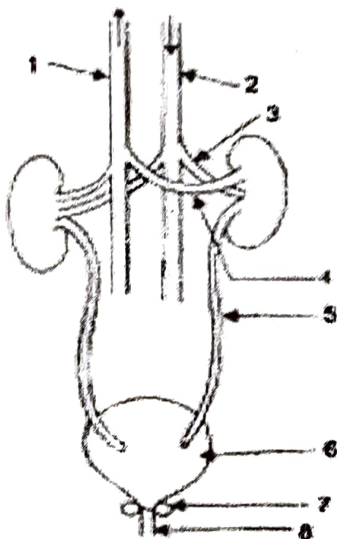
(Attempt any THREE questions from this section.)

### Question 2

- a) Name the kind of natural reflex associated with digestion of food and mention its working. [2]
- b) Name the two liquids filled in the two chambers of the eye. [2]
- c) Write a short note on feedback mechanism with respect to endocrine glands with example. *Not in scope* [3]
- d) Enlist three important functions of capillaries. [3]

### Question 3

- a) The diagram given below shows the excretory system in humans. Study the same and answer the questions. [10]



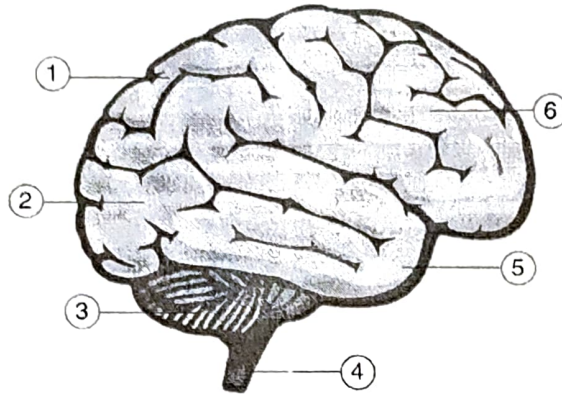
- i) Name the parts labelled 1, 2, 3 and 4.
- ii) Give the main function of the parts labelled 5, 6, 7 and 8.
- iii) Define: Excretion
- iv) Urine is slightly thicker in summers. Why?

### Question 4

- a) If an individual were to sustain a significant injury to their right cerebral hemisphere, where might somatosensory loss of functioning occur? Justify. [2]
- b) 'Women with beard and Men with breasts' Explain with reference to the abnormalities in hormonal secretion. [2]

c) Observe the diagram carefully and answer the questions that follow:

[6]



- i) Label the different lobes of brain numbered 1 to 6 in the diagram.
- ii) State the characteristic function of the part numbered 3.
- iii) Which part of cerebrum is involved in recalling the past experience?
- iv) Explain the arrangement of grey and white matter in the different parts of the brain.

**Question 5**

*function?*

- a) Write about origin and functions of erythrocyte. [3]
- b) Explain the following terms: [3]
  - i) Diapedesis
  - ii) Rh factor
  - iii) Presbyopia
- c) With reference to the structure of eye, name the three concentric layers. Also enlist the contribution of each in functioning of eye. [4]

**Question 6**

- a) What is CSF? Mention its function. [2]
- b) Name the two non-circulating fluids present in the human body. [2]
- c) Enlist three important functions of glucocorticoids. [3]
- d) Differentiate: [3]
  - i) Night blindness and colour blindness (with reference to sensory cells unable to function)
  - ii) Renal pelvis and Renal papilla (structure)
  - iii) Serum and Vaccine (composition)

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