

GREENLAWNS HIGH SCHOOL
TERMINAL EXAMINATION 2017-18

SUB : BIOLOGY
TIME : 2 HOURS

CLASS : X
MARKS : 80

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. The question paper is divided into 2 section.

Section I is the compulsory Section.

Attempt all questions.

Section II has 6 questions. solve any 4. All questions carry equal marks.

SECTION I

Question 1

[10]

A) Name the following:-

- i. A gas that reduces the oxygen carrying capacity of red blood cells.
- ii. Defect of eye due to lengthening of eyeball.
- iii. Chemical used to test presence of starch.
- iv. Smallest structural and functional unit of kidney
- v. World AIDS day
- vi. Scientist who first discovered antibiotics.
- vii. Stage of maturity when an individual develops secondary sexual characters and ability to reproduce.
- viii. Tube that allows testies to descend just prior to birth
- ix. Structures where chlorophyll is present
- x. State of cell where cell wall pressure is greater than turgor pressure

b) Choose the odd one out and give a reason for your answer.

[5]

- i. Oxygen, glucose, chloroplast, water
- ii. Cushing syndrome, addisons disease, gravies disease, virilism
- iii. Carbolic acid, Iodine, tincture, phenol, Lysol
- iv. Cyton, dendrite, axon, Nissl's granules, synapse
- v. Coughing, hiccups, breathing, heart beat, peristalsis

c) Give one difference between the following pairs.

[5]

- i. Lenticular transpiration & stomatal transpiration (duration)
- ii. Lysosome and lysozyme (function)
- iii. Corpus luteum and corpus callosum (Which system they belong to)
- iv. Bleeding and guttation (definition)
- v. Endocrine and exocrine glands (mode of action)

d) Define the following terms.

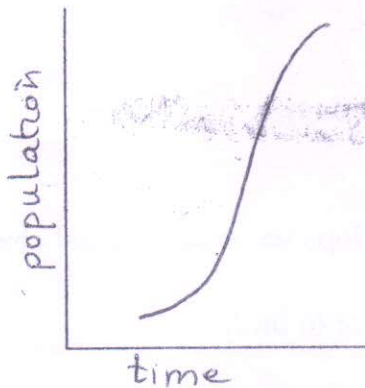
[5]

- i) Excretion
- ii) Parturation
- iii) Hormone
- iv) Astigmatism
- v) Osmotic pressure

e) gland	Hormone secreted	effect on body	[3 ½]
(1)	(2)	regulates basal metabolism	
β cells pancreas	(3)	controls blood sugar	
(4)	(5)	heartbeat increases	
(6)	TSH	(7)	

f)

[4 ½]

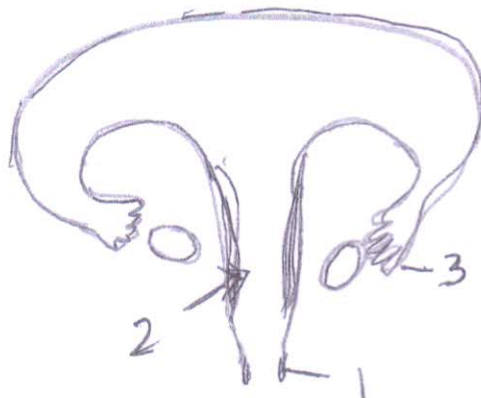


The above graph shows a population explosion curve

- i) List 6 factors why this condition exists in India.
- ii) Give the difference between natality and mortality.
- iii) Name any 2 methods of contraception used by women.

g) The following diagram represents the vertical view of the human female reproductive system.

[5]



- i. Label parts 1, 2
- ii. Give one important functions of part 3
- iii. Name the site of fertilization
- iv. Give the difference between oogenesis and ovulation
- v. Define menarche
- vi. Arrange the following ovary, cervix, vagina, uterus, oviducal funnel, fallopian tube

h) Draw a diagram to show the T.S. of a sperm.

[2]

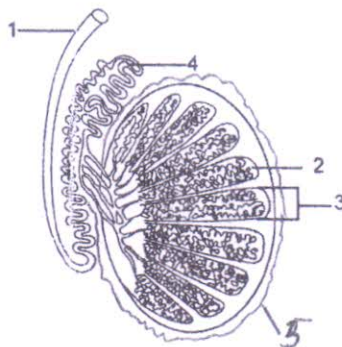
SECTION - II

Solve any 4 questions from the given 6 questions.

Question 2.

[5]

a) Drawn below is a part of the male reproductive part. Study it and answer the questions that follow.



- i. Label parts 1 and 2
- ii. Give the function of parts 3 and 4.
- iii. Why do the testies lie outside the human body.?
- iv. Give the parts which correspond to the following in the female reproductive system.

- A) Penis —————>
 B) Vas deferens —————>
 C) Sperm —————>
 D) Testies —————>

b) Give location and functions of the following

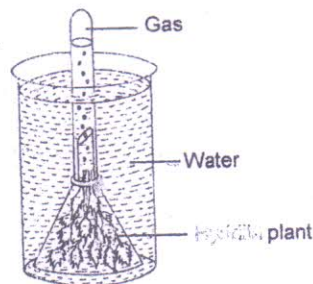
[5]

- i) aldosterone
- ii) root hair
- iii) Chlorophyll
- iv) Stomata
- v) Choroin

Question 3.

a) The set- up below shows a particular process in plants.

[5]



- i) Define the physiological process shown in the set- up.
- ii) Name the gas being produced
- iii) What would you observe if a pinch of sodium bicarbonate is added to water? Why?
- iv) Name a plant that can be used for this experiment
- v) Draw a diagram to show the stomatal apparatus

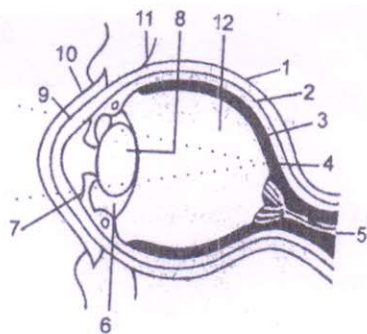
b) With respect to the ear, answer the questions.

[5]

- i) Name the 3 ossicles
- ii) Give the function of the eustachian tube.
- iii) Name the parts of the vestibule
- iv) Why are pilots not allowed to fly a plane when they have a cold.
- v) Draw a diagram to show the membranous labyrinth.

Question 4.

[5]



- a) i) Name parts 1,3,9,10
- ii) Give function of parts 6,7,8
- iii) Give the difference between myopia and hyperopia (reason)
- iv) Name the sense cells and the pigments present in the eye.
- v) Define "accommodation of eye".

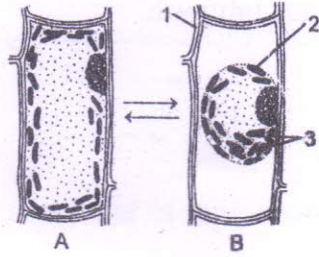
b) Give reasons for the following.

[5]

- (i) Some women may develop beard and masculine voice after menopause.
- (ii) Insulin is not taken orally.
- (i) Wind helps to increase the rate of transpiration.
- (iv) Plants are destarched before carrying out any experiment in photosynthesis.
- (v) A closed can of dried seeds bursts open if some water enters it.

Question 5.

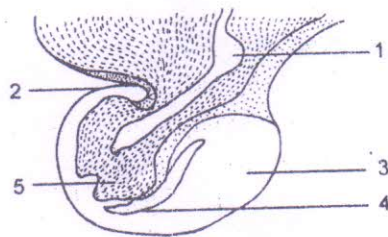
a) In the figure below, A shows a cell in the normal state and 'B' shows the same cell after it has placed in a certain solution for a few hours. [5]



- i) Give a reason for the change as seen.
- ii) Give the name for the cell in state A and state B
- iii) Define the process which leads to this condition
- iv) Define the solution in which the cell is placed.
- v) Name parts 1 and 2.
- vi) What do you observe when a sea water fish is placed in a river? Why?

b) i) Label parts 1 -5

[5]

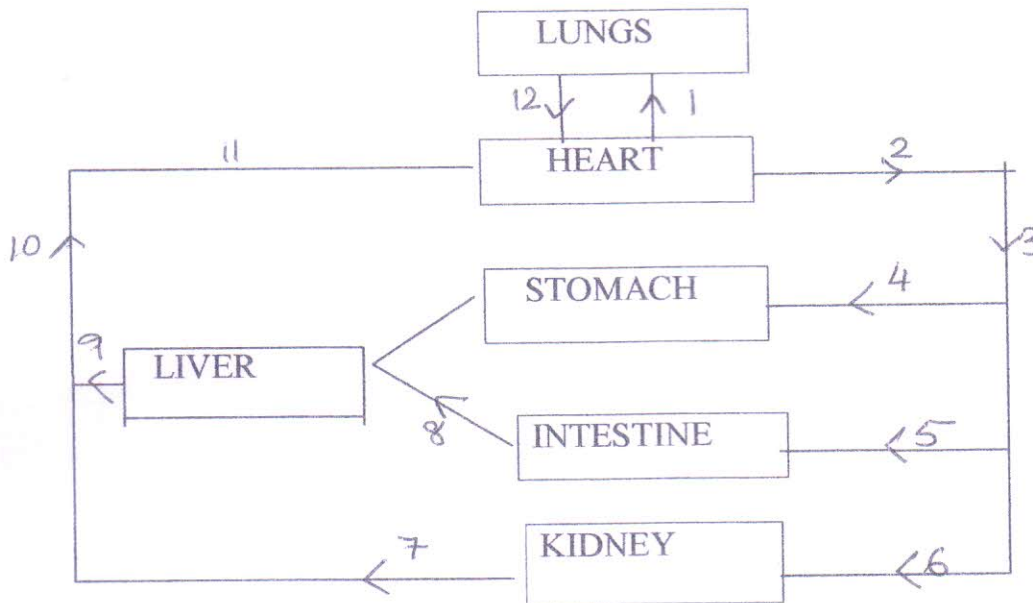


- ii) Identify the structure
- iii) Name 2 hormones produced by 3 and their effects.

Question 6.

a) Drawn below is a schematic diagram showing the circulatory system in mammals.

[5]

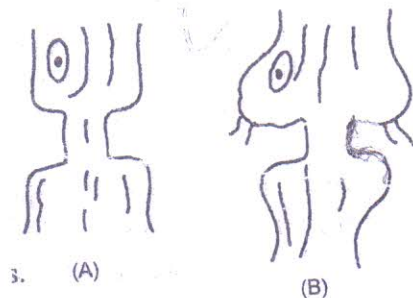


- Name blood vessel 3,5,9,10
- Give the importance of blood vessel 8.
- Give 1 structural and 1 functional difference between 6 and 7
- How are '1' and '12' different in composition.
- Name a hormone affecting the kidney.

b) A complete ring of bark was removed from a tree as shown in fig A.

[5]

The tree continued to live and after about a month appeared B

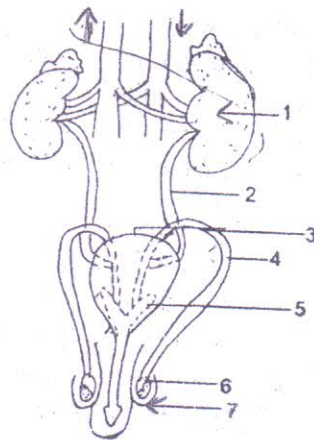


- account for the swelling in the bark above the ring
- Why do you see a shrinkage of the bark below the ring.

- iii) Name the tissue that distributes food in plants.
- iv) Define root pressure
- v) Give the difference between cell wall and cell membrane
- vi) List 2 factors which help roots to absorb water.

Question 7.

a) The diagram alongside represents certain organs in the abdominal region of man. [5]



- i) Label parts 1 & 7.
- ii) Name the organ systems shown in the diagram
- iii) Name 3 parts shown in the diagram but not marked.
- iv) Why is the ureter shown curved?
- v) Define micturation
- vi) Give 2 symptoms of Addison disease.

b) Complete the following.

[5]

- i) Female : XX : Male : _____
- ii) Embryo : Uterus :: Fertilization : _____
- iii) Anemia : Iron :: Goitre : _____
- iv) Penicillin : Antibiotic :: Iodine: _____
- v) Corticoids : Adrenal cortex :: Oxytocin : _____