

ANNUAL EXAMINATION 2018-2019

BIOLOGY

SCIENCE Paper -- 3

STD 1X

(Two hours)

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

You will **not** be allowed to write during the first 15 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 I and any four questions from Section II

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

SECTION I (40 marks)

Attempt all questions from this section.

Question I

- a. Name the following. [5]
- (1) The kind of flower in which both male and female reproductive parts are absent
 - (2) The hole at the back of the cranium through which spinal cord arises
 - (3) Two types of devices used to remove the particulate pollutants from the air
 - (4) Causative organism of AIDS
 - (5) The wave of constriction caused by the circular movements of the gut
- b. Define the following (5)
- (1) Incubation period
 - (2) Double fertilisation
 - (3) Deamination
 - (4) Serum
 - (5) Immunisation
- c. Give the exact location of each of the following. [5]
- (1) Centrosome
 - (2) Hypocotyl
 - (3) Synergids
 - (4) Ceruminous glands.
 - (5) Style

d. Give the exact functions of the following

- (1) Ribosomes
- (2) Pyloric sphincter
- (3) Nucellus
- (4) Ptyalin
- (5) Stratum corneum

e. Differentiate between the following on the basis of what is given in brackets. [5]

- (1) Vasoconstriction and Vasodilation (Definition)
- (2) Hinge joints and Pivot joint (Example)
- (3) Mammary gland and Ceruminous gland (Gland from which it is modified)
- (4) Leucoderma and Albinism (Cause)
- (5) Sporadic and Pandemic (Extend of occurrence)

f. Given below are five sets of terms. In each case, arrange and rewrite each set as to be in a logical sequence. [5]

- (1) Ileum, Oesophagus, Duodenum, Caecum, Rectum.
- (2) Zygote, Embryo, Seed, Allogamy, Fusion of gametes
- (3) Alveoli, Nostril, Pharynx, Bronchi, Larynx
- (4) Maltose, Pepsin, Amylopsin, Salivary amylase
- (5) Spawning, Harvesting, Casing, Composting.

g. Given below are five sets of four terms each. In each set a term is odd one cannot be grouped in the same category to which the other three belong. Identify odd one in each set and name the category to which the remaining belong. [5]

No	Set	Odd one	Category
1	Filariasis, Dengue, Hepatitis, Chicken pox		
2	Oxyhaemoglobin, Carboxyhaemoglobin, Carbaminohaemoglobin, Hypoxia		
3	Rags, Glass, Plastic, Bagasse		
4	Night blindness, Rickets, Pellagra, Goitre		
5	Sucrase, Maltase, Lipase, Amylopsin		

h. Note the relationship between the first two words and suggest the suitable word or words for the fourth place. [5]

- (1) Hydra: Coelentrata:: Sea urchin :-----
- (2) Streptomycin: Antibiotic:: BCG :-----
- (3) Vitamin B: Beriberi:: Vitamin C:-----
- (4) Shoulder girdle: Glenoid cavity:: Hip girdle :-----
- (5) Cholera: Bacteria:: Malaria :-----

SECTION II (40 marks)

Attempt any **four** questions from this section

Question 2

a. (i) Draw a well labelled diagram of a plant cell [5]

(ii) Based on the diagram drawn in (i), answer the following

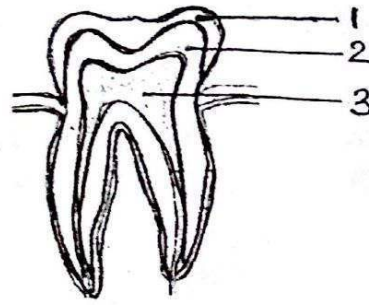
1. The power house of the cell
2. The structure that carry the hereditary units
3. The structure that is semi-permeable in nature
4. The suicidal bag of a cell.

b. Complete the following paragraph by filling the blanks with suitable the blank (i) to (x) with appropriate words. (5)

In insect pollinated sweat pea , the insects such as Bee , alight on the conspicuous (i)_____. The Bee thrusts its (ii)_____ in search of (iii)_____. In the struggle the (iv)_____ of the flowers are depressed. The (v)_____ along with the (vi)_____ are forced down and the (vii)_____ and stigma touch the underside of the body of the insect. If this insect has already visited another flower it may has (viii)_____ sticking on its body. The pollen is not transferred to the (ix)_____ of this new flower thus affecting (x)_____.

Question 3

a. Study the diagram given below and answer the questions that follow



(5)

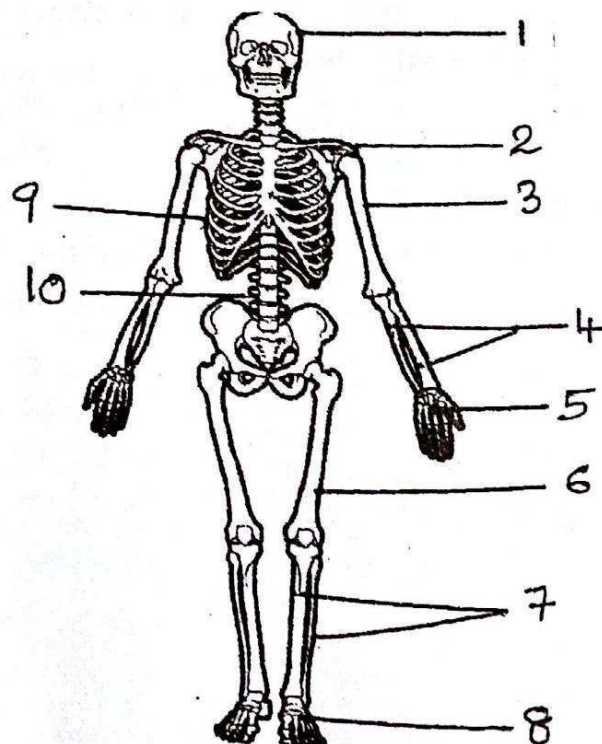
- (1) Name the parts labelled 1, 2 and 3
- (2) Identify the tooth and give a reason to support your answer
- (3) Give the dental formulae of an adult human being
- (4) Explain the term heterodont.
- (5) Name the three pairs of salivary glands present in man

- b.
- (1) Draw a labelled diagram of a neuron
 - (2) Write down the functions of the neuron
 - (3) What is a nerve?
 - (4) Name the kinds of tissues found in
 - (i). Heart
 - (ii) Inner lining of the wind pipe

(5)

Question 4

a. Given below is a diagram of human skeletal system. Name the bones number 1 to 10



(5)

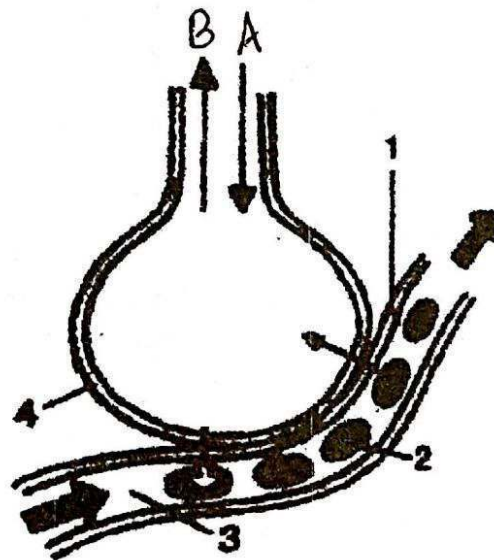
a. Complete the following table by filling the blanks.

(5)

Nutrient	Function	Deficiency disorder
(1)	Component of thyroxin hormone	(2)
Vitamin A	(3)	(4)
(5)	Helps the body to use calcium and phosphorous	(6)
(7)	(8)	Anaemia
Chlorine	(9)	(10)

Question 5.

a. Given below is a diagrammatic sketch of a process associated with respiration. Study it and answer the questions that follow (5)



- (1) Identify the process
- (2) Name the parts labelled 1 to 4.
- (3) How is the part labelled for specially adapted to do the above function?
- (4) What do arrows A & B indicate?
- (5) Write down the function of the pleural fluid.

b. Give reasons.

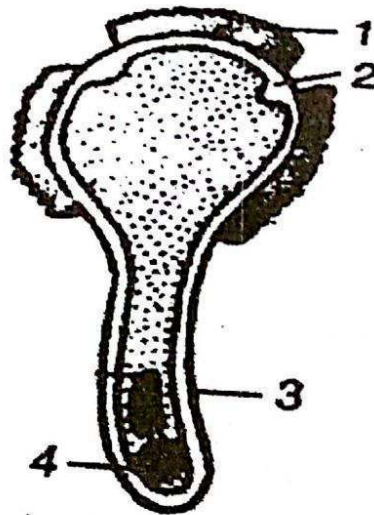
- (1) Scientific name of an organism is better than its common name.
- (2) Intestinal villi is well adapted for absorbing the digested food.
- (3) Breathing through nose is healthier than breathing through mouth.
- (4) Seeds sown very deep fail to germinate.
- (5) Respiration is the reverse of photosynthesis.

(5)

Question 6.

a. Given ahead is a diagrammatic sketch of the sectional view of a germinating grain. Study the same and then answer the questions that follow.

(5)



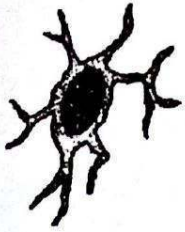
- (i) Name the parts labelled 1 to 4.
- (ii) Where does the germination of the pollengrain take place and how?
- (iii) Explain the following biological terms.
 - (a) Dichogamy
 - (b) Herkogamy

b. Explain briefly

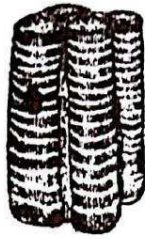
- (1) Bioweapons
- (2) Botulism
- (3) Piloerection
- (4) Synovial joint
- (5) Passive immunity

Question

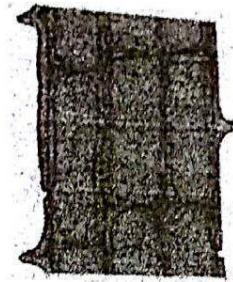
a. Given below are four living structures. Study the same and answer the questions that follow. (5)



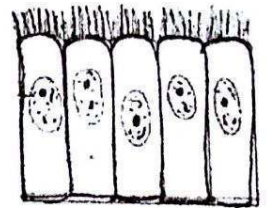
1



2



3



4

(i) Identify 1, 2, 3 & 4.

(ii) Give the technical terms for each of the following.

- The category of plant tissues that have lost their ability to multiply.
- Tissue found at the tip of the plant root.
- Cells responsible for increasing diameter of stem in dicot plants.
- Tissue responsible for downward movement of food in plants.

(iii) What are the functions of the lymph?

b. Answer the following questions. (5)

(i) State any two activities of Red Cross.

(ii) Write any two advantages of incineration.

(iii) What do you mean by placentation and inflorescence?

(IV) What is the role played by Hydro Chloric acid in the process of digestion?

(v) List any two ways by which AIDS gets transmitted from one person to another.