

Quarterly Examination 2017-2018

Std. : IX
Subject : Biology

Full Marks : 80
Time : 2hrs.+15 min.

Section A [40 marks] (Attempt all questions)

Q.1 (a) Name the following :—

[8]

- (i) Slight constriction between the root and the crown of a tooth.
- (ii) Arrangement of flowers on a twig or stem.
- (iii) Tissue that attaches the ovule to the wall of the ovary.
- (iv) Non-green perianth.
- (v) The process of removing the anther in young flower.
- (vi) The largest gland of the human body.
- (vii) The conversion of the absorbed digested food into body material.
- (viii) The structure where flower arises in the axil of a leaf like structure.

(b) Fill in the blanks :

[8]

- (i) The _____ are fine powdery particles of different shapes.
- (ii) Different timings for maturation of gynoecium and androecium, is called_____.
- (iii) When filaments are united in several groups it is called_____.
- (iv) For self pollination the flowers need not be _____ and _____.
- (v) Any excess amino acids are broken down in the liver by a process called _____.
- (vi) _____ is a vestigial organ projected from the blind end of caecum.
- (vii) _____ is the terminal knob like part of pistil covered with hair like structures.
- (viii) Liver stores glucose as _____.

(c) Mention whether the following statements are true or false, if false rewrite the correct statement. [8]

- (i) The expulsion of the undigested food remains from the alimentary canal is called secretion.
- (ii) Each ovule has one or two protective coverings called embryo sac.
- (iii) Intine is the outer wall of the pollen grain.
- (iv) The anus is surrounded by circular muscles.
- (v) Large intestine secretes no enzyme.
- (vi) Trypsinogen is first secreted as inactive trypsin to acts on proteins and poly peptides.

(vii) Papaya is a monoecious plant.

(viii) In some flower, there is second series of sepals called epicalyx.

(d) Match the following and rewrite the pairs.

[8]

- | | |
|---------------------|-----------------------------|
| (i) Ovary wall | (a) Nectaries |
| (ii) Anemophilous | (b) Flower produce nectar. |
| (iii) Saliva | (c) Pericarp |
| (iv) Nasturtium | (d) Pepsin |
| (v) Elephophily | (e) Ptyalin |
| (vi) Stomach | (f) feathery stigma hanging |
| (vii) Entomophilous | (g) Amino acid |
| (viii) Liver | (h) Rafflesia |

(e) State the location of the following :

[4]

- | | |
|---------------|---------------|
| (i) Placenta | (ii) Thalamus |
| (iii) Stomach | (iv) Laryun |

(f) Draw a labelled diagram to show the internal structure of a mammalian tooth with two roots.

[4]

Section B [40 marks]
(Attempt any four questions)

Q.2 (a) The figure depicts an intestinal villus.

- (i) Lable from A to F [3]
- (ii) What is the location and function of villi ?
- (iii) What is the importance of part labelled A ?

(b) Give one example for each of the following.

[4]

- | | |
|----------------------|-----------------------------|
| (i) Monoecious Plant | (ii) Ornithophilous flower. |
| (iii) Diadelphous | (iv) Heterostyly. |

Q.3 (a) Differentiate between : (one difference)

[5]

- (i) Assimilation and deamination
- (ii) Incisors and canines
- (iii) Monoecious and dioecious plant
- (iv) Protandry and protogyny
- (v) Staminate and Pistillate flower

(b) Given alongside is a diagrammatic sketch of the sectional view of a plant part relating to reproduction.

- (i) Identify the plant part as a whole. [½]
- (ii) Name the structural parts numbered (1—5) [2½]
- (iii) Where would it be found as a stage as shown ? [½]
- (iv) What is the function of part 4 ? [1]
- (v) What happens to the part labelled '5' during the process ? [½]

Q.4 (a) Why is fertilization in plants known as double fertilization ? [2]

(b) What happens to the followings after fertilization. [4]

- (a) Ovules (b) Calyx (c) Petals (d) Stamens.

(c) Mention the kind of teeth and number of teeth present in the following dental formula :- [2]

(i) $\frac{2, 1, 2, 3}{2, 1, 2, 3}$ (ii) $\frac{2, 1, 2, 0}{2, 1, 2, 0}$

(d) Given below is the jumbled sequence of the different parts of the human alimentary canal. Rewrite them in correct sequence :- stomach, gullet, Large intestine, epiglottis, small intestine, Pharynx. [2]

Q.5 (i) Name the chief pollinating agent of the following plants :- [2]

- (a) Maize (b) Sweet pea (c) Vallisneria (d) Dahlia

(ii) Give reasons :- [4]

- (i) Cross pollination is less economical as compared to self pollination.
- (ii) Cleistogamous flowers reproduce only by self pollination.
- (iii) Plants with heterostyly do not achieve self pollination.
- (iv) Salvia sepals are petaloid.

(iii) Name the enzyme involved in the following reactions along with the region where these reactions take place : [4]

- (a) Proteins \longrightarrow Peptides
- (b) Casein \longrightarrow Paracasein
- (c) Proteins \longrightarrow Peptides + Amino acids
- (d) Lactose \longrightarrow Glucose + Galactose

Q.6 (i) Define the following terms :- [2]

- (a) Peristalsis
- (b) Fertilization

- (ii) What are the advantages of the following in the flower to the plant concerned ? [4]
- (a) long and feathery stigma.
 - (b) brightly coloured petals.
 - (c) smooth and light pollens.
 - (d) Protruding and easily movable anthers.
- (iii) Draw a labelled diagram of mature ovule showing the embryo sac in it. [4]

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