

2020

**MATRICULATION EXAMINATION**

**DEPARTMENT OF MYANMAR EXAMINATION**

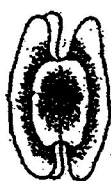
**BIOLOGY**

**Time Allowed: (3) Hours**

**WRITE YOUR ANSWERS IN YOUR ANSWER BOOKLET.**

**DO NOT COPY THE QUESTIONS.**

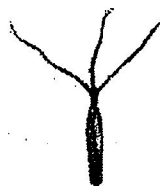
1. State **TRUE** or **FALSE** to the following statements. Do not copy the statements. (10 marks)
- Roots of most plants are usually grow beneath the surface of the soil.
  - Cross-pollination can only occur in bisexual flowers.
  - A fruit is a fertilized and mature ovule.
  - The female reproductive system consists of two small ovaries.
  - A leaf is composed of several distinct cell layers.
  - Food contains chemical energy.
  - Osmosis can be regarded as a special type of absorption.
  - Main effect of cytokinin is in increasing the rate of cell division in plants.
  - The vein carries only oxygenated blood from the placenta to the embryo.
  - Two types of cell division are recognized according to the behavior of the chromosomes.
2. Choose the correct answer for the following statements. Do not copy the statements. (10 marks)
- The banyan tree produces numerous (A. fibrous B. aerial C. lateral D. underground) roots.
  - All the centre of the embryo sac are (A. three B. two C. one D. four) polar nuclei.
  - Which diagram show the dispersal of seeds by wind.



A.



B.



C.



D.

**[P.T.O]**

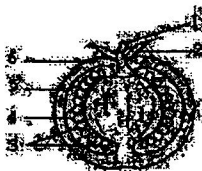
- iv. The pancreas is a (A. reddish B. purplish C. pinkish D. yellowish) body.
- v. Mineral (A. sugar B. glucose C. salts D. proteins) are present in the soil.
- vi. The energy released from (A. ADP B. ATP C. ADT D. ATT) can be used in different forms for many activities.
- vii. Without turgor pressure, plant cells would (A. strong B. weak C. long D. wilt).
- viii. Main stems are (A. positively B. negatively C. right angle D. laterally) geotropic.
- ix. The nucleus is the (A. largest B. smallest C. thinnest D. narrowest) organelle within the cell.
- x. The places where organisms live are termed as (A. habit B. ecology C. habited D. habitats).

3. Complete the following statements with appropriate words. Do not copy the statements. (10 marks)

- i. The underground root system consists of the main root and the ----- roots.
- ii. The pollen grains of ----- flowers are easily carried by wind.
- iii. In the first stage, a bean seed sown in ----- soil.
- iv. Rabbits live in groups in -----.
- v. Chlorophyll absorbs light ----- for the chemical change.
- vi. Animals including man can also ----- anaerobically.
- vii. Thrombocytes provide the substance needed for the ----- of blood.
- viii. Thyroid gland produces a hormone -----.
- ix. Mother's milk contains all the ----- of a balanced diet.
- x. The widespread use of chemical ----- cause pollution.

4. Answer ALL questions. (10 marks)

- a. Provide labels and caption to the given diagram. (Do not copy the diagram)



- b. State about the compartments of the coelom in rabbit.
- c. Write about the animal nutrition.
- d. Mention the transport of salts.

**OR**

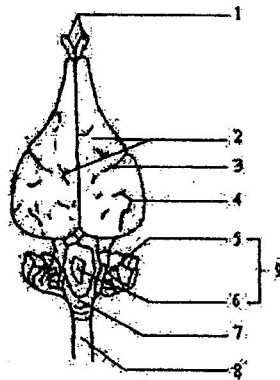
How do you understand cytokinin.

- e. Illustration to show the structure of egg as found in human.

**OR**

Define the primary consumers and secondary consumers.

5. Answer **ANY FOUR** questions. (20 marks)
- a. Give caption and diagram of head or capitulum and write short notes this flower.
  - b. Provide labels and caption to the given diagram and explain the prominent features of label no. 1 and no. 2. (Do not copy the diagram)



- c. Give fully account on dentition and function of teeth.
- d. Explain the stage of inspiration occur during the process of gaseous exchange in a mammal.

**OR**

Explain the plant hormones auxin and gibberellin.

- e. State the nature of placenta and amniotic fluid.

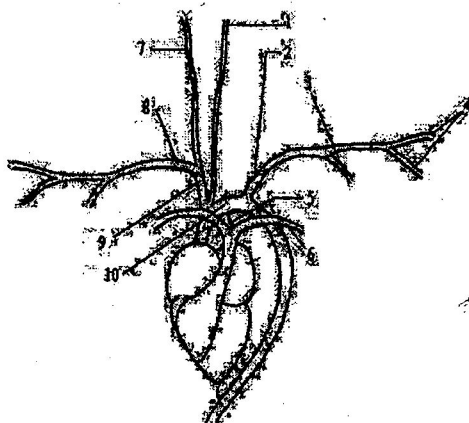
**OR**

Explain the mutation and alleles.

6. Answer **ANY FOUR** questions.

(40 marks)

- a. Describe the external structure of a bean seed with relevant diagram.
- b. Provide the labels to the given diagram and explain the circulatory system. (Do not copy the diagram)



- c. Tabulate the requirement and investigation to show the necessity in photosynthesis.
- d. Give a detailed account on transport in animals.
- e. Name the parts of the nervous system and state the nature of mammalian neurones including its types.

**OR**

Explain the process of birth in mammals and state the lactation and maternal care.

- f. Explain the sex chromosome mechanism and give a word diagram for XY method of sex determination.

**OR**

Explain the parasitism and commensalism with example.

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