

2018

MATRICULATION EXAMINATION

DEPARTMENT OF MYANMAR EXAMINATION

BIOLOGY

Time Allowed: (3) Hours

WRITE YOUR ANSWERS IN YOUR ANSWER BOOKLET.

DO NOT COPY THE QUESTIONS.

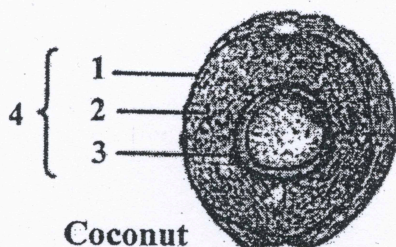
1. State **TRUE** or **FALSE** to the following statements. Do not copy the statements. (20 marks)
- i. Plants which have soft stems are all termed as herbs.
 - ii. The cactus stems perform both the functions of leaves and stems.
 - iii. The pollen grain bears the female reproductive cells.
 - iv. The petals of anemophilous flowers are generally brightly coloured.
 - v. In indehiscent fruits whose pericarp can split open when ripe.
 - vi. All monocotyledonous seeds are endospermic.
 - vii. In maize grain, the micropyle lies at the top of the grain.
 - viii. External ears of the rabbit are termed as vibrissae.
 - ix. Genital arteries are paired arteries and supply to the sex organs.
 - x. Cilia in the oral groove of *Paramecium* beat constantly.
 - xi. The intake of solid inorganic food is termed as holozoic nutrition.
 - xii. The lungs expand drawing in air through the alveoli.
 - xiii. Turgor pressure in plant cells supports leaves and herbaceous plant stems.
 - xiv. Plasma proteins are maintaining viscosity of the blood.
 - xv. Cytokinin is synthesized mainly where there are high levels of auxin.
 - xvi. Lens does not focus light rays onto the retina.
 - xvii. Scrotum is a sac in which a testis is located.
 - xviii. The nucleus is the smallest organelle within the cell.
 - xix. Genes normally occur in pairs, one of which may be dominant.
 - xx. The roots of the orchids obtain nutrients and water from the air.

2. Complete the following statements with appropriate words. Do not copy the statements. (20 marks)

- i. Plants which live for many years are termed as -----.
- ii. All green plants that can manufacture their own food are called -----.
- iii. The flower is borne on a short or long -----.
- iv. The body of the ovule is termed as the -----.
- v. Many edible fruits are of high ----- values.
- vi. A small pore at one end of the ----- of bean seed is the micropyle.
- vii. The maize grain is a single-seeded fruit called a -----.
- viii. Mammals are belonging to the class Mammalia of the phylum -----.
- ix. Cranial nerves include motor nerves to the eye and ----- muscles.
- x. Photosynthetic products are distributed by -----, to all other parts of the plant.
- xi. Food rolled into a ----- by the tongue is forced into the back of the pharynx.
- xii. The dead space can be distinguished into ----- and physiological dead spaces.
- xiii. Molecules are constantly in motion because of their ----- energy.
- xiv. Lymphatics are unlike veins in having swellings, the ----- nodes.
- xv. Rhizomes and runners grow at right angles to -----.
- xvi. A nerve is made up of a bundle of -----, surrounded by a sheath.
- xvii. Breast-feeding ensures close contact between mother and baby, and ----- care.
- xviii. Within the nucleus, there are masses of threads called -----.
- xix. A homozygote produces only one kind of -----.
- xx. Pollution can occur in the atmosphere, in the soil, in the sea or in -----.

3. Answer ALL questions. (12 marks)

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



- b. Mention the location of the anus, urogenital opening and perineal glands as found in the rabbit.
- c. State the role of carbohydrates and fats and water.

- d. Give chemical equation of anaerobic respiration in yeast.

OR

State the movement of dissolved substances in xylem and phloem.

- e. Write a brief account on the hormone abscissin.

OR

How do you understand by the term fission, budding and fragmentation?

- f. List the four stages of cell division and state what occur during interphase.

OR

Mention the symbiotic relationships and name its type.

4. Answer **ANY FOUR** questions. (16 marks)

- a. Clarify the function of the leaves.
- b. Describe the route of vas deferens in male reproductive system of a rabbit.
- c. Briefly explain the chlorophyll and chloroplast.

OR

Write the process of alcohol fermentation supported by a relevant equation.

- d. Give a labeled diagram concerning the demonstration of osmosis.

OR

State the structure and function of erector muscle, sebaceous gland and sweat glands of the human skin.

- e. Providing example, state the process of vegetative propagation in plants.

OR

Define the term variation and state what you understand of continuous and discontinuous variation.

OR

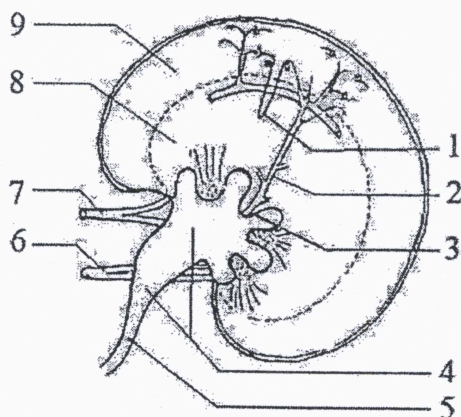
Describe the tertiary consumers, omnivores and decomposers.

[P.T.O]

5. Answer **ANY FOUR** questions.

(32 marks)

- Explain the nature of ginger and potato with labeled diagrams.
- Provide labels and caption to the given diagram, state the nature of malpighian body as found in rabbit.(**Do not copy the diagram**)



- Summarized the type of nutrition as found in green plants with a word diagram.
- Describe the anaerobic respiration and how this process takes place in animals including man.

OR

Define the diffusion and explain absorption of water and mineral salts by the plant.

- State the functions of iris, suspensory ligaments, ciliary muscles, aqueous humour, yellow spot, blind spot and optic nerve as found in human eye.

OR

Explain the processes of fertilization, implantation and menstrual cycle.

- Describe the structure and function of nucleus and its composition.

OR

Give a word diagram to show how nitrogen cycle takes place in nature.
