V I B G Y O R H I G H

Second Term Examination

AY 2019-2020

BIOLOGY

Grade: VIII **Max. Marks : 80**

Date : 26 /03/2020 **Time Allowed: 2 hour**

INSTRUCTIONS:

- **Answers to this paper must be written on the paper provided 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.**
- **The intended marks for the questions or parts of questions are given alongside the questions.**
- **Attempt all questions from Section I and any four from Section II.**

SECTION I (40 marks)
Attempt all questions from this section.

Question 1. **[5]**

a) **Name the following.**

i. Group of nectar secreting cells in a flower. [1]
ii. Region of axis below the cotyledons. [1]
iii. A common phase in both aerobic and anaerobic respiration. [1]
iv. Compound formed by combination of carbon dioxide with haemoglobin. [1]
v. Type of asexual reproduction seen in Amoeba. [1]

b) **State True or False and correct the false statement by changing the first/last word only.** **[5]**

i. Stamens of Petunia flower are polyadelphous. [1]
ii. Self-pollination occurs when anther and stigma of a flower mature at the same time. [1]
iii. Coleorhiza is the protective covering of the radicle in maize grain. [1]
iv. End product of anaerobic respiration in plants is lactic acid. [1]
v. Scavengers feed on dead animal and plant material. [1]

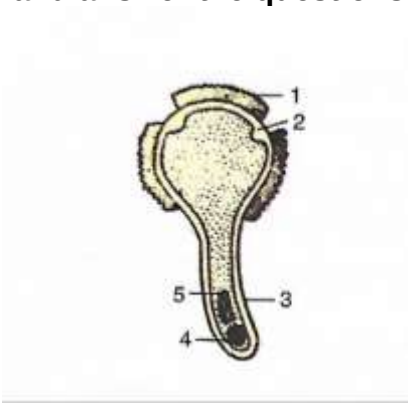
c) Match the columns. **[5]**

1.	Ovule	i) Fallopian tube	[1]
2.	Carbolic acid	ii) C- shaped rings	[1]
3.	Lungs	iii) Absorbs oxygen	[1]
4.	Trachea	iv) Seed	[1]
5.	Sperm	v)Thoracic cavity	[1]
		vi)Testes	
		vii) Prevent bacterial decay	

d) Choose the odd one out. **[5]**

i. Dahlia, Sweet pea, Maize, China rose [1]
ii. Seed coat, Coleorhiza, Embryo, Coleoptile [1]
iii. Stomata, Lenticels, Petals, Root surface. [1]
iv. Cowper's gland, Uterus, Seminal vesicles, Prostate gland. [1]
v. Plants, Microorganism, Animals, Soil. [1]

e) Observe the diagram and answer the questions that follow. **[5]**



i. Name the above structure shown in the figure. Name the part of the flower on which the above structure is found at this stage. [1]
ii. Label 1, 3, 4 and 5. [2]
iii. What is the function of the part labelled 4? [1]
iv. What happens to the part labelled 5 during the process? [1]

f) Choose the correct alternative from the choices given. **[5]**

i. Transfer of pollen from the anther to stigma of another flower of the same plant is known as *(geitonogamy / autogamy).* [1]
ii. Chemical used to absorb oxygen is *(soda lime / pyrogallic acid).* [1]
iii. The entrance to the trachea is guarded by *(epiglottis / pharynx).* [1]
iv. The sperm and the egg fuse to form *(embryo / zygote).* [1]
v. Lichens provide a good example of *(parasitism / symbiosis)* [1]

g) Rearrange and rewrite in a logical sequence. **[5]**

i. Ovary, Style, Stigma, Anther, Pollen sac. [1]
ii. Cotyledons pushed above the ground, Radicle grows downwards, Seed coat bursts, Hypocotyl elongates. [1]
iii. Pyruvate, 38 ATP, Krebs cycle, Glycolysis [1]
iv. Implantation, Fertilisation, Gestation Differentiation. [1]
v. Snake, Plant, Peacock, Rat. [1]

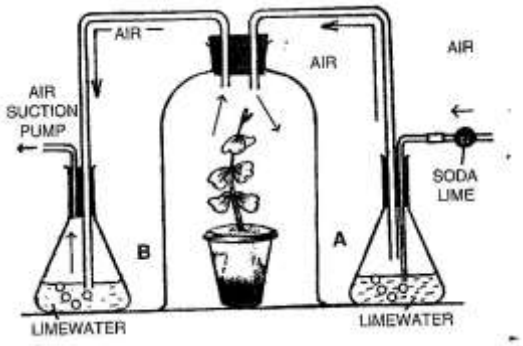
h) **State the function of the following:** **[5]**

i Corolla [1]
ii Egg cell [1]
iii Cotyledons [1]
iv Pleural fluid [1]
v Prostate gland [1]

SECTION II (40 marks)
Attempt *any four* questions from this section

Question 2.

a) **Study the diagram and answer the questions that follow.** **[5]**



i. What is the function of soda lime in the given setup? [1]
ii. Why is lime water placed in bottle 'A'? [1]
iii. What change will you expect to observe in bottle 'B'? [1]
iv. Name the physiological process being studied through the setup and give the chemical equation for the process. [2]

b) **Differentiate between the following pairs on the basis of what is given in the bracket.** **[5]**

i. Staminate flower and pistillate flower (Parts of floral structure) [1]
ii. Epigeal germination and hypogeal germination (Location of cotyledons) [1]
iii. Aerobic respiration and anaerobic respiration (ATP released) [1]
iv. Inspiration and Expiration (Shape of diaphragm) [1]
v. Sexual and asexual reproduction.(Creation of offspring) [1]

Question 3.

a) **Answer the following questions.** **[5]**

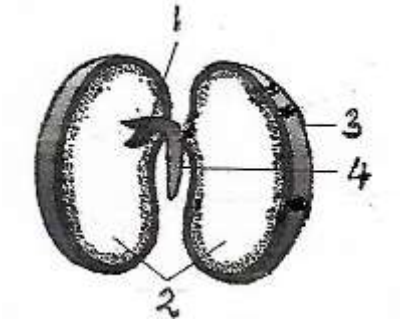
i. What are monoecious plants? [1]
ii. State how temperature affects the germination of a seed. [1]
iii. How is the respiratory passage kept free of dust particles? [1]
iv. Why do the testes lie outside the abdomen in the scrotum? [1]
v. Define the term flora and fauna of an ecosystem. [1]

b) **Briefly answer the following questions.** **[5]**

i. Name and explain the role of two abiotic components in an ecosystem. [2]
ii. Why does a person feel breathlessness at higher altitudes. [2]
iii. Define diadelphous condition. Give one example. [1]

Question 4

a) Study the diagram and answer the questions that follow. **[5]**



i. Label parts 1,2,3,4 [2]
ii. Give the function of plumule and radicle in a seed. [1]
iii. What is the role of micropyle in germination of seed? [1]
iv. What type of seed is depicted in the diagram? [1]

b) Draw a neat well labelled diagram of a bisexual flower and answer the questions that follow. **[5]**

[3]
i. Define placentation. [1]
ii. Why are the Ray florets of Sunflower called neuter flowers? [1]

Question 5.

a) Study the diagram and answer the questions that follow. **[5]**

i. Give the function of the part labelled ‘A’. [1]
ii. Name the part where fertilization occurs. [1]
iii. Give the function of the part labelled ‘B’. [1]
iv. Define gestation. How long does it last for in humans? [2]

b) Explain the terms. **[5]**

i. Ornithophily [1]
ii. Epicotyl [1]
iii. Catabolism [1]
iv. Budding [1]
v. Parasitism [1]

Question 6

a) Give biological term : **[5]**

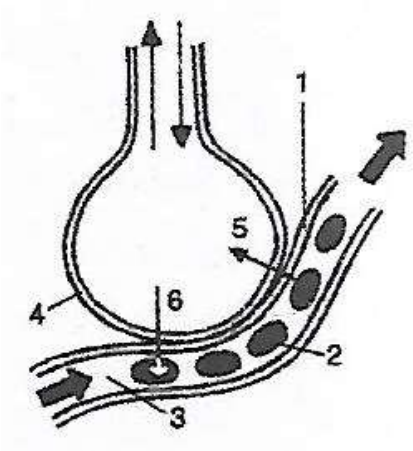
i. The protective coverings of the ovules. [1]
ii. The outermost layer of endosperm in maize grain. [1]

iii. The setup in which the condition under study is missing. [1]
iv. The process of generating lost parts.. [1]
v. Organisms that obtain nutrition by absorbing nutrients from dead organic matter. [1]

b) Draw a neat well labelled diagram of a human sperm and answer the following questions. **[5]**
[2]
i. What is the location and function of the seminal vesicles ? [2]
ii. Why is it important that a very large number of sperms should be present in the semen.. [1]

Question 7.

a) Study the diagram given below and answer the questions that follow. **[5]**



i. Label the parts numbered 1-4. [2]
ii. What do the arrows 5 and 6 indicate? [1]
iii. Name the organ where the above process occurs? [1]
iv. Name the process by which gaseous exchange occurs in this part. [1]

b) Give reason for the following **[5]**
i. Stigma is covered with hair or glandular papillae [1]
ii. Seeds sown very deep in soil fail to germinate. [1]
iii. In experiments on respiration in green plants, the jar is covered with a black cloth. [1]
iv. Gaseous exchange continue in the lungs even during expiration. [1]
v. No ecosystem can survive without light. [1]

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