

GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION YEAR 2017

SUBJECT : BIOLOGY
TIME : 1 ½ HOURS

CLASS : VIII
MARKS : 80

All answers to be written in the answer booklet. Be neat in your work. Do not waste paper. Attempt all questions

SECTION -A

Q.I. Name the following:- [10]

1. A specialized shoot in which the leaves are modified into floral structures.
2. Non-green undifferentiated petals and sepals.
3. The manner in which ovules are attached to the wall of the ovary.
4. A mass of food laden cells of ovule.
5. Water pollinated flowers. (not an example)
6. Self pollination when pollen of the flower falls on its own stigma
7. Type of seed having two cotyledons.
8. Pollinating agent of Rafflesia flowers.
9. The process by which glucose is converted to pyruvate.
10. Endospermic seeds having thin and membranous cotyledons. (not an example)

Q.II. A. Differentiate between the following on the basis of what is given in brackets.

Answer in tabular form. [6]

1. Bean seed and Maize grain (size of embryo)
2. Insect pollinated and wind pollinated flowers (size of stigma)
3. Anabolism and catabolism (type of process)
4. Pollen grain and Ovule (protective coverings)
5. Entomophilous and anemophilous (pollinating agent)
6. Pea and Sonneratia (type of germination)

B) Given below is a box of jumbled items. Study them carefully and rewrite the correct pairs. [4]

Eg. zoology – animal study

Zoology, corolla, androecium, calyx, gynoecium, sepals, animal study, petals, pistils, stamens

Q.III. Give scientific reasons for the following: [10]

1. Nature favours cross pollination (2 points)
2. Seeds sown very deep in the soil fail to germinate.
3. Mitochondria is called the powerhouse of the cell whereas ATP is called the currency of the cell.
4. Double fertilization is seen in flowers.
5. Respiration is compared with burning of coal.

Q.IV. A. Match the following:

[5]

COLUMN A

- 1) Heterostyly
- 2) Herkogamy
- 3) Self sterility
- 4) Dichogamy
- 5) unisexuality

COLUMN B

- a) Sweet pea
- b) Orchid
- c) Papaya
- d) primrose
- e) bougainvillea
- f) iris

B) State whether true or false. If false correct the statement by changing only the underlined word.

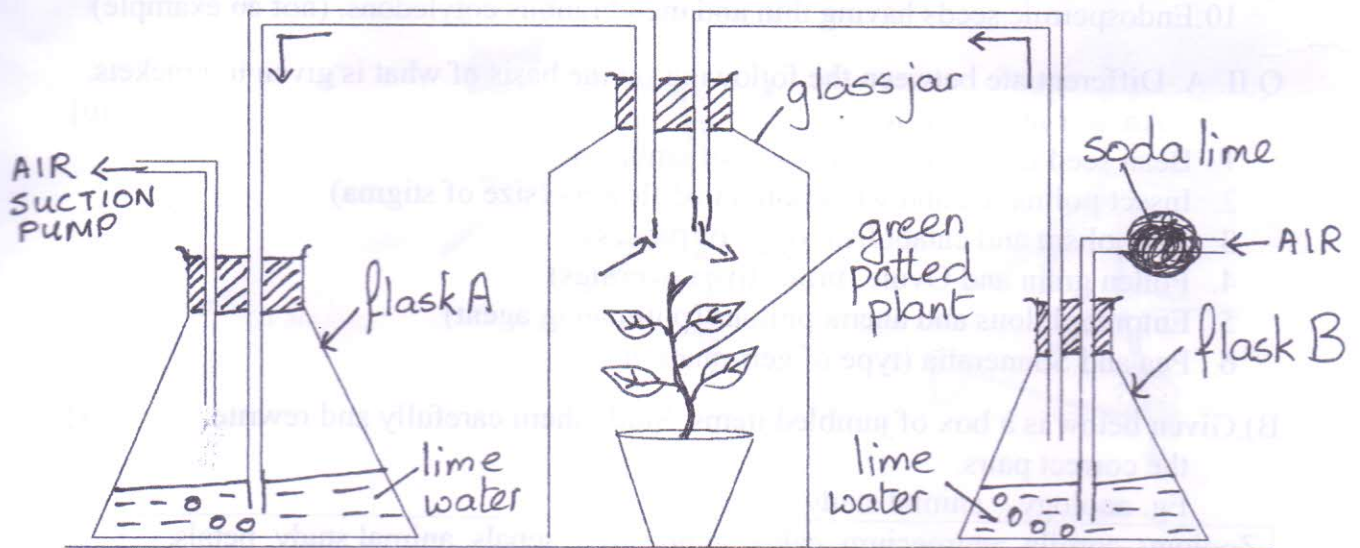
[5]

1. The stamen is missing in a hermaphrodite flower.
2. Flowers pollinated by birds are said to be ornithophilous.
3. The bean seed has no endosperm.
4. Wheat is said to be a grain and not a seed.
5. Anoxybiotic is another name for aerobic respiration.

SECTION - B

Q.V. A

[5]



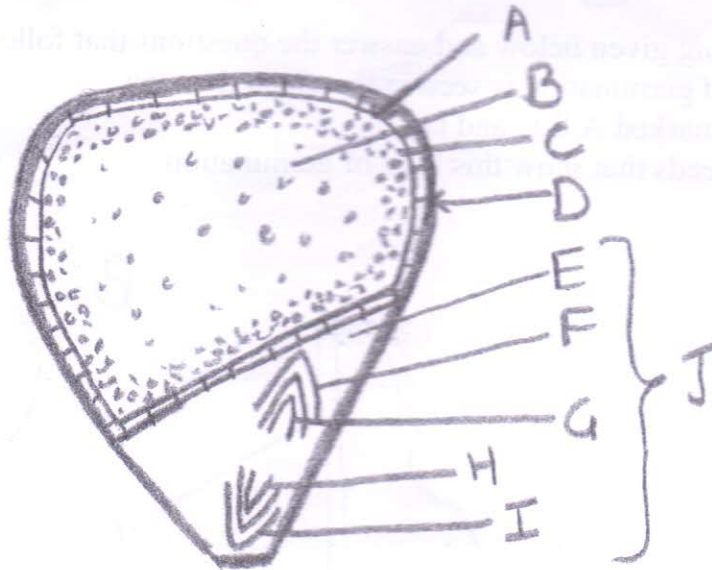
Look at the above experimental set up and answer the questions given below.

1. What would be the colour of the lime water in flask A and B after a few hours.
2. What is the aim of the above experiment.
3. Why is the set up kept in a dark room?
4. What is the use of soda lime?
5. Rim of glass jar as well as all other connections are vaselined. Give reasons.

B.

- 1) Write balanced chemical equations to show aerobic and anaerobic respiration. [2]
- 2) How does a plant obtain oxygen from the atmosphere. [3]

Q.VI. Look at the longitudinal section of maize grain and answer the questions that follow. [10]



- 1) Why is maize called a grain and not a seed?
- 2) Name the parts labelled A, B, C, D, E & J.
- 3) State the functions of parts labelled B and I.
- 4) Using letters F, G, H or I write the part which develops into
(a) shoot system (b) root system .
- 5) What type of germination is seen in maize grain. Give 2 reasons to support your answer.
- 6) Name the root system seen in maize plant.

Q.VII.

A) Fill in the blanks:-

[5]

- 1) An embryo sac contains _____ cells
- 2) A distinct whitish scar on the concave side of the bean seed is called the _____
- 3) Breakdown of pyruvate in the mitochondria is called the _____ cycle.
- 4) In anaerobic respiration in plants, the end products are _____ and carbon dioxide instead of _____ in animals.

B) State the fate of the following parts of the ovary after fertilization.

[5]

- 1) Ovary wall
- 2) Ovule
- 3) Antipodal cells
- 4) Integuments
- 5) Egg cell

Q.VIII. A) Write the functions of the following

[6]

- 1) Micropyle of the seed
- 2) Ray floret of sunflower
- 3) Sepals of a flower
- 4) Tube nucleus of a pollen grain.

B) Study the drawing given below and answer the questions that follow:

[4]

- 1) What kind of germination is seen in the given drawing .
- 2) Label parts marked A,B,C and D.
- 3) Name two seeds that show this kind of germination.

