

MAR THOMA RESIDENTIAL SCHOOL THIRUVALLA
SECOND TERMINAL EXAMINATION 2018-19
BIOLOGY

STD: IX

TIME: 2hrs
MAX. MARKS: 80

Question 1

- a. Name the following (5)
1. Part of the plumule above the embryonic axis of the seed.
 2. A chemical used in experiments, which absorbs oxygen.
 3. A plant which shows viviparous germination.
 4. A common phase in both aerobic and anaerobic respiration.
 5. The organ for locomotion in a star fish.
 6. The bacterium that converts nitrite to nitrate.
 7. The disease due to deficiency of iron.
 8. The mineral element required for the functioning of thyroid gland.
 9. The layer of endosperm of maize rich in protein.
 10. The carbohydrate that forms roughage.
- b. Define the following (5)
1. Antibiotics
 2. Species
 3. Vaccination
 4. Germination
 5. Serum
- c. Differentiate between the following terms on the basis of what is given in bracket (6)
1. Krebs cycle and Glycolysis (Site of occurrence)
 2. Epigeal germination and Hypogeal germination (Position of Cotyledons).
 3. Angiosperms and Gymnosperms (Nature of seed)
 4. Phylum Platyhelminthes and Phylum Annelida (Shape of the body)
 5. Kingdom Monera and Kingdom Protista (Type of nucleus)
 6. Thallophyta and Bryophyta (Examples)
- d. Give the location of the following (2)
1. Hilum
 2. Lenticels
- e. Write the functions of the following (5)
1. Micropyle
 2. Seed coat
 3. Stomata
 4. Anti-toxin
 5. Cotyledons

f. Given below is a table consisting of a set of items belonging to a common category. Complete the table by filling the common category and the odd one in the blanks.

SET	Category	Odd one
1. Testa, Tegmen, Endosperm, Placenta		
2. Star fish, Earthworm, Snail, Frog		
3. Beriberi, Rickets, Scurvy, Marasmus		
4. Bat, Sheep, Man, Lizard		
5. Poppy, Cereals, Millets, Mustard		

g. Arrange the following set of terms in an order so as to be in a logical sequence. Write in correct order.

- Seed coat burst, Hypocotyl elongates, radicle grows downwards, hypocotyl loop above the soil, epicotyl elongates
- Class, order, species, family, phylum, genus
- Cropping, composting, casing, spawning, preservation

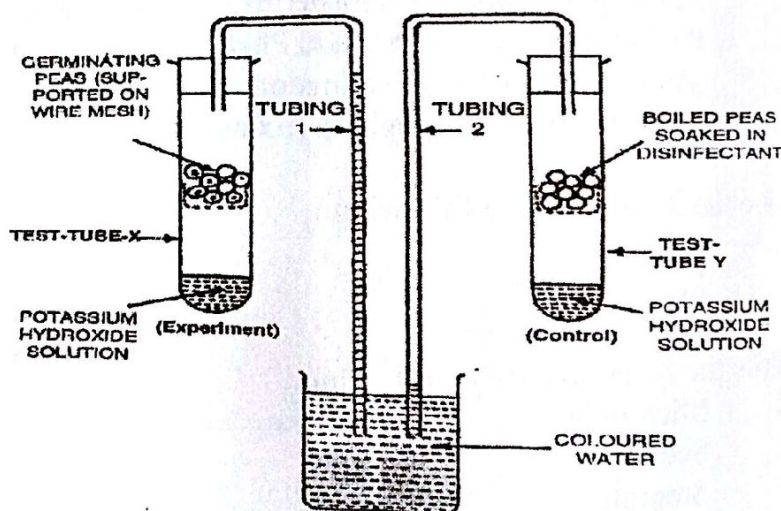
h. The following paragraph is related to the structure of a bean seed. Complete the paragraph by filling the blanks with appropriate words.

A bean seed has a seed coat with two layers. They are (a) _____ is the outermost layer and the (b) _____, the inner layer. Below the seed coat, the thick (c) _____. On carefully separating it the tiny (d) _____ can be seen. It has (e) _____ forming the root and (f) _____ forming the shoot. Bean seed is a typical (g) _____ seed with (h) _____ type of germination.

SECTION -2 (40 MARKS)

Question 2

a. The following diagram refers to an apparatus which is used to demonstrate a physiological process.

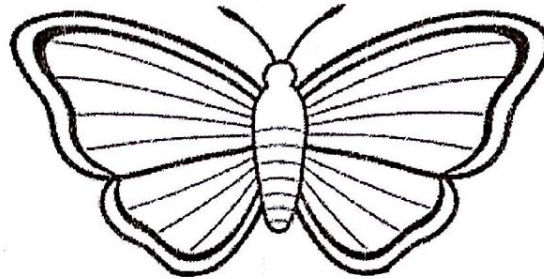


- What is the aim of the experiment?
- Explain the process under study
- What is the purpose of keeping potassium hydroxide solution in test tubes X and Y?
- Why has the coloured water risen in tubing 1?
- What is the purpose of keeping boiled peas soaked in disinfectant in test tube Y?

- b. Briefly explain the terms given below (5)
1. Viviparous germination.
 2. Vertebrates.
 3. Balanced diet
 4. Kwashiorkor
 5. Malnutrition.

Question 3

- a. The picture of an animal is given below. Study the animal and answer the question that follow. (5)

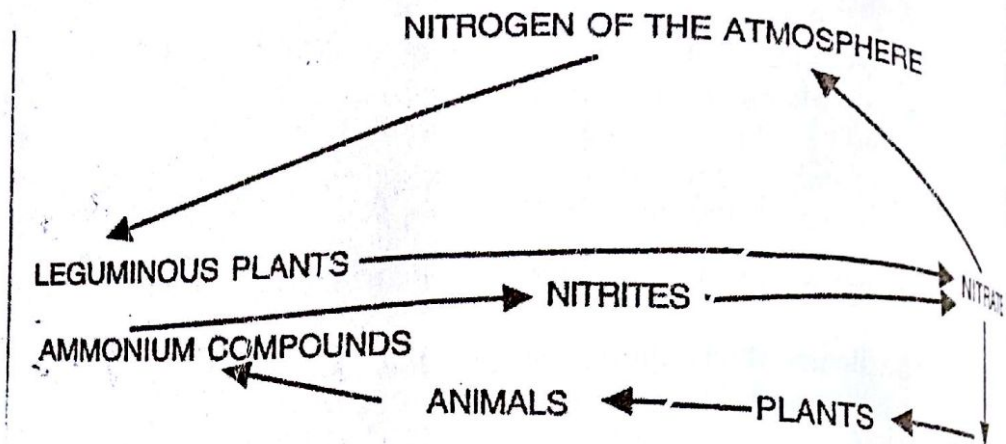


1. Name the phylum to which it belongs
 2. Is it a vertebrate or an invertebrate?
 3. Give any two characteristic of phylum to which it belongs.
 4. Assign the following animals to their respective phylum.
(a) Leech, (b) Hydra, (c) Liver fluke, (d) Snail
- b. Give reasons (5)
1. Aerobic respiration is more efficient than anaerobic respiration
 2. Seeds sown very deep fail to germinate.
 3. Scientific names of living beings are better than their common names
 4. Respiration is the reverse of photosynthesis
 5. Sleeping under a tree during hot mid-day is good

Question 4

- a. (5)
1. Draw a neat labelled diagram of a maize grain
 2. "Germinated grams are considered to be highly nutritive" Why?
 3. Why do we not use the term maize seed or maize fruit?
 4. Give the biological term for the period of rest undergone by an embryo.

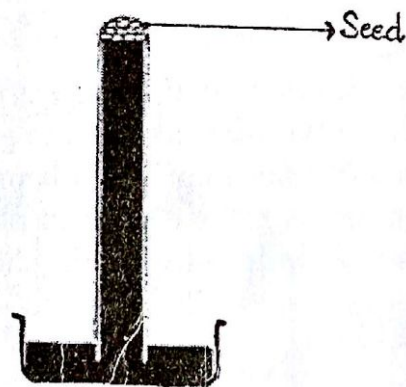
b. Study the diagram below and answer the questions that follow



1. Briefly describe how nitrogen of the atmosphere is converted to nitrates by leguminous plants
2. Name the bacterium that converts ammonium compounds into nitrites.
3. State how nitrogen in the soil is converted to nitrates
3. What role do plants and animals play in the formation of ammonium compounds
4. What is denitrifying bacteria?

Question 5

a. Give below is the beginning of an experiment. Study it carefully and answer the questions that follow



1. What is the aim of the experiment?
2. Why do we remove seed coat of the germinating seed used in this experiment?
3. Name the substance used to create a vacuum?
4. Why can't we use water instead of the above substance for creating vacuum?
5. Draw a diagram to show the end of the experiment

b. Answer the following.

1. What are the criteria essential for a good antibiotic?
2. Why do we say that a growing child needs more protein?
3. What are the drawbacks of two kingdom classification?
4. How does respiration in plants differ from that of an animal?
5. Why is it difficult to demonstrate respiration in green plants?