Grade 10 - Science

Unit 14 – Continuity of life

Produce new offspring or new generation from an existing generation is referred to as " Reproduction "

1. What are the two types of reproduction methods.
2. Tabulate the difference in between Sexual and Asexual (Vegetative) Reproduction.
3. Producing new plants from underground or aerial parts of a mother plantis called as Vegetative reproductive methods.

Natural Vegetative reproduction.

1. Write down the examples for the instance given below.

Natural Vegetative reproduction.	examples
1. By roots 2. By leaves 3. Suckers 4. Runners 5. Bulbils 6. Underground stem a) Rhizome b) Come c) Bulb d) Stem tuber e)	

2. Name four methods of artificial reproduction.
3. Name two types of layeringmethods and draw the diagrams to show the types of layering methods with examples.
4. State 2 advantage of layering.
5. What the grafting .write down the characteristics that should be shown by a stock and scion.
   Define the stok and scion
6. Mention 2 main grafting methods.
7. Write down 2 advantages and 2 dis advantages of grafting
8. What is the tissues culture and define the term " Clone "
9. Name 03 places that the tissues are taken for tissue culture.
10. Which substances are included in the culture medium.
11. Which conditions should be practiced for the success of tissue culture.

12. Note down the principle steps followed in tissue culture.what is callus.
13. Name some advantages of tissue culture.
14. Point out the advantages and dis advantages of tissue culture.

Sexual reproduction of plants

1. The structure that the bears sexual parts of a plant is a fiower. What are the four principle parts of a flower.
2. Draw the longitudinal section of a typical flower and name the parts of it.
3. Complete the table given below.

Part of a flower	function
Calyx	
Corolla	
Androecium / stamen	
Gynoecium/ pistil	

4. Explain the unisexual flowers and bisexual fiowers with examples.
5. Explain the term monoecious plants and Dioecious plants with examples.
6. What is pollination.
7. Explain two types of pollination methods
8. Some flowers are adapted to avoid self – pollination and promote cross- pollination list out the above adaptations.
9. What are the Agent of pollination.
   Name main three principle agent of pollination.
10. Complete the table given below.

Type of flower	Adaptation for pollination	example
Zoo philous flowers		
Aerophilous anemophilous flowers		
Hydrophilous flowe		

11. What is artificial pollination?
12. Explain the fertilization.
13. Write down the steps that taken from fertilizantionof gametes up to formation of seeds of plants.

Dispersal of fruits seeds

1. Hat is meant by dispersal of fruits and seeds.
2. Which requirements are fulfill by the dispersal of fruits and seeds
3. Mention the methods of dispersal of fruits and seeds

4. Complete the table given below.

Methods of dispersal of seed	adptation	examples
By animals – By wind - By water - By explosive Mechanism -		

5. Explain what is " germination of seeds "
6. Name the factors essential for germination of seeds.
7. Mention main two ways of seed germination.

Hypogeal germination	Epigeal germination

8. What is dormancy of seeds and name the factors affect for dormancy of seeds.

Bioshphere – Unit 13

1. Explain what is " Classification of organisms".
2. What are the Significance of Classification of organisms.
3. The methods of Classification of organisms Explain.
4. Who introduced the three domain system of Classification.
5. Complete the table given below.

	Kingdom Archaea	Bacteria	Eukarya
Characteristic Features			
Examples			

6. Several harmful and useful effects of bacteria to human are given below.

Uses	Harmful effect

7. Name four kigdoms belongto Eukarya domain.
8. Complete the tables.

Kingdom Protista

Characteristic Features	Organisms belong	uses	Harmful effect

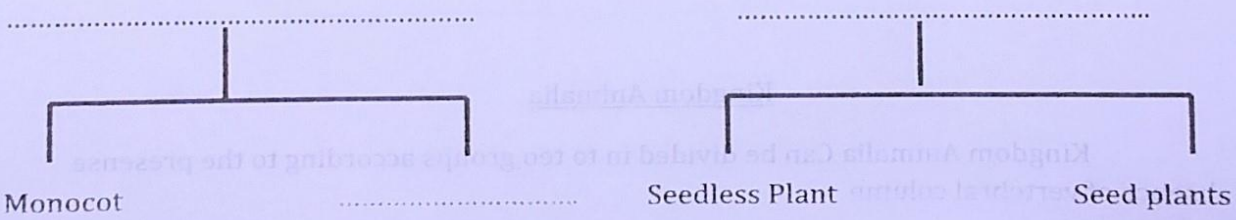
Kingdom fungi

Characteristic Features	Organisms	uses	Harmful effect

9. Compare the kingdom fungi and Protista in domain Eucarya with domain Bacteria

	Bacteria	protista	fungi
Structure			
Shape			
Nutrition			
Reproduction			
Distribution			

Kingdom plantae



10.

Features	Non flowering seed plant	Non –floering seedless plant
Structure		
Shape		
Nutrition		
Reproduction		
Distribution		
Example		

11. Flowering plants can be divided in to two groups according to the number of cotyledons in the seed

	Monocotyledone	dicotyledone
No.of seed leaves		
Stem		
Roof		
Venation		
Flower		
Secondry growth examples		

Kingdom Animalia

Kingdom Animalia Can be divided in to teo groups according to the presense or absence of vertebral column.

a) Invertebrate
b) Vertebrate

- Invertebrate groups and charactenistics features.

Features	Cnidaria	Annelida	Mollusca	Arthrapoda	echinodam ata

- Vertebratesare divided in to five groups based on structural features

Characteristics feature	pisces	Amphibia	Reptilia	Ares.	Mammalia
- Living environment - Nature of body covering - Respiratory organ - Locomotive organ - Chambers in heart - Cold blooded or warm blooded					

Classification of organisms

1. What is binomial nomenclature?
2. Name the scientist who introduced the binomial nomenclature?
3. State 5 rules of binomial nomenclature?
4. Write scientific names of 5 organisms according to the above mentioned rules?