

CLASS XII ; (SUBJECT: BIOLOGY)

Worksheet of Chapter 2: Sexual Reproduction in Flowering Plants

Answer the following questions:

1. Draw a labelled diagram of the followings:
 - (a) T.S. of Anther and Pollen grain tetrad.
 - (b) Mature pollen grain (Microspore)
 - (c) 8 nuclei and 7 celled Ovary
 - (d) Anatropous Ovary (Megasporangium)
 - (e) Double fertilisation in Plant
 - (f) Embryogenesis in dicot plant
 - (g) Dicot seed and Monocot seed
2. Differentiate between (Three points each):
 - (i) Cleistogamous flower and Chasmogamous flower
 - (ii) Microsporogenesis and Megasporesis
 - (iii) Autogamy and Allogamy
 - (iv) Globular embryo and heart-shaped embryo
 - (v) Coleorhiza and Coleoptera
 - (vi) Testa and Tegmen
 - (vii) Albuminous and Non-albuminous
 - (viii) Apomixis and Polyembryony
 - (ix) Parthenocarp and Apomixis
 - (x) Pericarp and Perisperm
 - (xi) Hypocotyl and Epicotyl
3. Why pollen grains are used as nutritional supplements?
4. Name the chemical which makes the exine of pollen grain hard.
5. Name the pore in pollen grain where sporopollenin is absent.
6. Write a note on the allergic nature of Parthenium.
7. How an anther consist of 2 lobes but four sacs?
8. Write the function of Tapetum, Sporogenous cells, Microsporangium.
9. How Microspore (pollen grain) forms from Pollen Mother Cell/PMC (Microsporogenesis)?
10. Write the function of Generative cell and Vegetative cell. Expand MMC, PEC & PEN.
11. Name the technique to preserve pollen grain in liquid nitrogen at -196°C ?
12. How functional Megaspore forms from Megaspore Mother Cell/MMC (Megasporesis)?
13. Write the type of pollination in Zostera and Vallisneria.
14. Write three characteristic features of the pollen grains and the flower of each of the following mode of pollination:
 - (a) Hydrophily; (b) Anemophily; (c) Entomophily
15. Describe the two steps of Artificial Hybridisation.
16. Write a note on free nuclear endosperm, dormancy and scutellum.
17. Describe double fertilisation in Plant.
18. Why is geitonogamy also referred to as genetical autogamy?
19. Mention any four ways to prevent self pollination (inbreeding depression).
20. Number of chromosomes in shoot tip cells of maize plant is 20. What will be the no. of chromosomes in the gametes and Microspore Mother Cells of the same plant.



NORTH POINT SENIOR SECONDARY BOARDING SCHOOL; RAJARHAT
CLASS: XII
SUBJECT: BIOLOGY

Worksheet of Chapter 1: Reproduction in Organisms

Answer the following questions:-

1. Define the term clone.
2. Why the daughter cells in asexual reproduction is considered as clones?
3. Why do we say that there is no natural death in unicellular organisms?
4. Name two Kingdoms where the organisms are mostly reproducing asexually.
5. What do you mean by Gemmules in Sponge?
6. Give one example each of External budding and Internal budding.
7. Write the Reproductive Units (Reproductive Propagules) of the following organisms: Chlamydomonas; Penicillium; Spongilla; Agave, Onion; Garlic; Potato; Bryophyllum; Water Hyacinth (Terror of Bengal); Ginger.
8. Write the scientific name of Terror of Bengal.
9. Why the new buds grow from the nodes and not from internodes?
10. Write the Flowering pattern in Bamboo and in Neelakuranji.
11. Mention the scientific name of Neelakuranji.
12. Name the male and female Reproductive organs of:
(a) Monoecious plant (Chara); (b) Dioecious plant (Marchantia)
13. Name the pre-reproductive phases of Animal as well as of Plant.
14. What are three phases of an organisms?
15. Give one example from Algae each of Homogametes and Heterogametes.
16. What are the three events in sexual reproduction? Briefly describe each of the three events.
17. Define the term Meiocyte. How many chromosomes are present in our Meiocyte?
18. How the zygote gets nutrition during embryogenesis in:
(a) Oviparous and (b) Viviparous
19. Write the Ploidy status (haploid, diploid or triploid) of the followings:
(i) Gametes; (ii) Gamete Mother Cell; (iii) Meiocyte; (iv) Zygote; (v) Endosperm.
20. Differentiate between (Three points each):
(a) Vegetative phase and Juvenile phase
(b) Encystation and Sporulation
(c) Oestrus Cycle and Menstrual Cycle
(d) Homogametes (Isogametes) and Heterogametes
(e) Staminate and Pistillate
(f) Homothallic (Monoecious) and Heterothallic (Dioecious)
(g) External Fertilisation and Internal Fertilisation
(h) Oviparous and Viviparous
(i) Seasonal Breeder and Continuous Breeder.
(j) Zoospore and Zygote

