



Holidays Home Work

Summer Break 2018

Class XII B

Subject : Biology

REPRODUCTION IN ORGANISMS

1. What is a clone?
2. What are vegetative propagules?
3. What are the vegetative propagules in eichhornic, potato, onion, ginger, penicillium, sponge
4. Name the plant which flowers once in 12 yrs.
5. Explain embryogenesis in plants
6. Explain embryogenesis in animals.
7. Disadvantages of external fertilization
8. Differentiate Zoospore and Zygote
9. Explain why meiosis and embryogenesis are interlinked.
10. What is sporulation?
11. What do you mean by the term uniparental?
12. A moss plant produces a large no. of antherozoids but a few egg cells. Why?
13. What is parthenogenesis? Give few examples from animals.
14. Amoeba is immortal. Explain.
15. What is a fruit, seed and embryo?
16. The number of chromosomes in the shoot tip cells of maize plant is 20. What will be the number of chromosomes in the gametes and microspore mother cells of the same plant?
17. Explain the events of sexual reproduction.
18. What do you mean by seasonal breeders.

19. Name 2 plant groups with diploid plant body.
20. Mention a characteristic feature and a function of Zoospores in some algae.
21. Mention the site where syngamy takes place in amphibians and reptiles respectively.
22. List 2 main pre-fertilisation events.
23. Technical term to denote unisexual condition
24. Differentiate parthenogenesis and parthenocarpy.
25. Name 2 plant groups having haploid body

Human Reproduction – worksheet- 2- XII

VSA (1 MARK)

1. Failure of testes to descend into scrotal sacs leads to sterility. Why?
 2. Both vaccine and colostrum produce immunity. Name type of immunity produced by these.
 3. How many sperms will be produced from 10 primary spermatocytes and how many eggs will be produced from 10 primary oocytes?
 4. The spermatogonial cell has 46 chromosomes in human male. Give the number of chromosomes in –
(a) Primary spermatocyte (b) Spermatid
 5. In ovary which structure transforms as corpus luteum and name the hormone secreted by corpus luteum?
 6. “ Each and every coitus does not results in fertilisation and pregnancy” . Justify the statement.
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1. Do the life spans of organisms necessarily correlated with their sizes? Give example.
2. *Why do we say there is no natural death in single-celled organisms?*
3. Name any two factors responsible for how an organism reproduces.
4. Name the vegetative propagules in the following-
 - Potato
 - Ginger
 - Agave
 - Bryophyllum
 - Water hyacinth
5. *Is vegetative reproduction also a type of asexual reproduction? Why do you say so? Is the term clone applicable to the offspring formed by vegetative reproduction?*
6. Why is Water Hyacinth called as 'terror of Bengal' ?
7. How do plants like potato, sugarcane, banana, ginger, dahlia cultivated? What is the site of origin of new plantlets in these plants ?
8. Define Juvenile and Vegetative phase .
9. Explain the unusual flowering phenomenon in Bamboo and **Strobilanthus kunthiana**.
10. When does Meiosis occur in organisms who are Haploid (Haplontic L.C.)?
11. Differentiate between Oogonium and Antheridium.
12. Write the sexuality of :
 - Chara
 - Marchantia
 - Cockroach
 - Earthworm
 - Sweet potato
 - Papaya
 - Date palm
 - Cucumber
 - Cucurbits

13. Meiocyte of Butterfly has 380 chromosomes. What will be the no. of chromosomes in its gamete?
 14. Why are male gametes produced in thousands as compared to female gametes?
 15. What kind of shell covers the birds' eggs?
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Chapter – 2

Unit- VI

1. What is Floriculture?
2. How would a Biologist define a Flower?
3. What is a typical flower? Name the whorls/parts of a typical flower and their functions.
4. Arrange in ascending order- flower, floral buds, floral primordium and inflorescence.
5. Angiosperm anther is ditheous. Explain.
6. Explain structure and function of Tapetum. How do Tapetal cells become Bi-nucleated?
7. How are the microspore tetrads formed? Comment on their ploidy.
8. Why are microspore cells called as Pollen/ microspore mother cells?
9. What is dehiscence? Why does it happen?
10. Why do you think the exine should be hard? What is the function of germ pore?
11. Explain and draw the structure of a mature pollen grain[wrt generative cell structure]
12. Pollen grains bring about fertilization, as they contain male gametes in them. What other advantages and disadvantages do pollens have towards humans ?
13. For how long do pollen grains retain viability? Can we store pollens for longer durations? How?
14. What does Gynoecium consist of? Discuss its various conditions with examples.
15. What is Locule? What is located in it?
16. What is an Anatropous ovule?
17. Male gametophyte = _____
Female gametophyte = _____
18. A single megaspore mother cell get differentiated in an ovule generally. What is the structure of such MMC and where is it located ?
19. **What is monosporic** development? What will be the ploidy of the cells of the nucellus, MMC, the functional megaspore and female gametophyte?
20. What is a Central Cell?
21. Why is Geitonogamy called genetically similar to self pollination, although it is a type of cross pollination?
22. What are the tassels in a corn-cob?
23. Comment upon 'pollination by water in angiosperms'.
24. Give examples of water pollinated plants.

25. How do following aquatic plants pollinate –
 - Vallisneria
 - Seagrasses
 - Water hyacinth and water lily
26. How do pollens are protected from wetting in water pollinated species?
27. What are the Floral rewards? Discuss the case of moth and Yucca .
28. Who are pollen / Nectar Robbers?
29. What is the sexuality of Castor and maize? Which condition will prevent autogamy and geitonogamy?
- 30.
31. What are the two conditions in which fertilization will not happen even after a successful pollination has taken place.
32. List the events under pollen-Pistil Interaction.
33. A plant breeder has to make sure that contamination (undesired pollens falling on stigma) should not take place , while developing any crop with desired traits. How would a plant breeder obtain commercially superior crop varieties [high yielding and a large number]?
34. What is the coconut water and its white kernel ? also tell the ploidy .
35. What is Scutellum and where is it situated?
36. Differentiate between –
 - Epicotyls and Hypocotyl
 - Coleorrhiza and Coleoptile
 - Exalbuminous and Albuminous
 - False fruit and True fruit
37. Define by giving suitable examples-
 - Perisperm
 - Micropyle and its two important functions
 - Dormancy and its significance
 - Pericarp
38. Define Parthenocarpy and its significance
39. How are the seeds advantageous?
40. What two features of seed are important for their storage without getting germinated?
41. In a few species the seeds lose viability within a few months. Seeds of a large number of species live for several years. Some seeds can remain alive for hundreds of years even. Give two examples of such oldest seeds.

Worksheet – 3- XII

1. Offsprings produced by asexual reproduction are referred to as clones. Why?
2. Name the most invasive aquatic plant weed which is called as ‘ Terror of Bengal’ .
3. How does Zygote usually differ from Zoospore in terms of ploidy?
4. Mention the main difference between the offspring produced by asexual reproduction and progeny produced by sexual reproduction.

5. Which characteristic property of Bryophyllum is exploited by gardeners and farmers?
6. Higher organism have resorted to sexual reproduction inspite of its complexity. Why?
7. Tapeworms posses both male and female reproductive organs. What is the name given to such organism? Give two more examples of such organisms.
8. Study the relationship between first two words and suggest a suitable word for fourth place.
 - (a) Male flower : Stamens :: Female Flower :
 - (b) Birds : oviparous :: Primates :
 - (c) Chlamydomonas : Zoospores :: Penicillium :
 - (d) Ginger : Rhizome :: Agave :
9. Bryophytes and Pteridophytes produce a large number of male gametes but relatively very few female gametes. Why?
10. Mention the site of zygote formation in the ovule of a flowering plant. What happens to sepals, petals and stamens after fertilisation? State the fate of zygote, ovule and ovary in these plants.
11. Distinguish between gametogenesis and embryogenesis.

Worksheet – 4- XII

Note : refer to net for some of the qns given below.

1. Give the term for prenatal diagnostic technique aimed to know the sex of developing foetus and to detect congenital disorders.
2. After a successful in vitro fertilisation, the fertilised egg begins to divide. Where is this egg transferred before it reaches the 8-celled stage and what is this technique called?
3. Give the term for rapid population growth.
4. Name the fluid from which foetal cells are extracted for chromosomal analysis.

5. Give technical name of female used to bring up in vitro fertilized egg to maturity.
6. Name the oral contraceptive developed by CDRI, Lucknow.

SA-II (2 MARKS)

7. Lactational Amenorrhea is a method of contraception Justify. What is the maximum effectiveness of this method in terms of period/duration?
8. How are non medicated IUD' S different from hormone releasing IUD' S? Give examples.
9. What are implants? How do they help in preventing fertilisation?
10. Briefly explain two natural barriers for birth control.
11. Enlist any four possible reasons for infertility in human beings.

SA-1 (3 MARKS)

12. Give another name for sexually transmitted diseases. Name two sexually transmitted diseases which are curable and two diseases which are not curable.
 13. Differentiate between Vasectomy and Tubectomy.
 14. Name the techniques which are employed in following cases :(a) Transfer of an ovum collected from a donor into the fallopian tube of another female who cannot produce ova but can provide suitable environment for fertilisation and development.
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Note –

- Complete your Bio Practical files as discussed.
 - Make your Project as per the topics discussed in class.
 - Revise whatever has been done in the class so far.
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