INDIAN SCHOOL NIZWA

BIOLOGY-WORKSHET 1

CH.1 REPRODUCTION IN ORGANISMS

DATE: _____ NAME:_____ CLASS: XII

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1. In yeast and amoeba the parent cell divides to give rise to new individual cells .How does the cell division differ in these two organisms?
2. Name an organism where cell division is itself a mode of reproduction,
3. Banana is a true fruit but it is a parthenocarpic fruit also. Give a reason
4. Name the group of organisms that produce non motile gametes. How do they reach the female gamete for fertilization?
5. Name the phenomenon and the cell responsible for the development of a new individual without fertilization as seen in honey bees.
6. Banana produces fruits but is propagated by vegetative means. Why is it so?
7. Papaver and Michelia both have multicarpellary ovaries. How do they differ from each other?
8. How many pollen grains and ovules are likely to be formed in the anther and in the ovary of an angiosperm bearing 25 microspore mother cells and 25 megaspore mother cells respectively?
9. How many megasporangia are present in a typical anther of an angiosperm?
10. How do flowers of vallisneria get pollinated?
11. How many microspore cells would be required to produce one hundred pollen grains in a pollen sac? And why?
12. Name the type of pollination as a result of which genetically different types of pollen grains of the same species land on the stigma.

Two marks question

13. The following statements seem to describe the water pollinated submerged plants. Which one is incorrect? I) the flowers do not produce nectar ii)the pollen grains have mucilaginous covering iii) the brightly coloured female flowers have long stalk to reach the surface.
14. The meiocyte of rice has 24 chromosomes. How many chromosomes are present in its endosperm?
15. Name the units of vegetative propagation in water hyacinth. Explain giving reasons why it has become the most invasive aquatic weed?
16. Why are mosses and liverworts unable to complete their sexual mode of reproduction in dry conditions?

17. Write the importance of bagging in unisexual flowers in crop improvement programme.
18. Why is emasculation in bisexual flower necessary in crop improvement programme?
19. Mention the similarity between autogamy and geitonogamy? How does geitonogamy differ from xenogamy.
20. Name the product of fertilization that forms the kernel of coconut. How does the kernel differ from the coconut water?
21. A list of three flowering plants is given below. Which one out of them are i) monoecious ii) bearing pistillate flowers? Date palm, cucurbits, pea
22. Why should a bisexual flower be emasculated and bagged prior to artificial pollination?
23. Why are papaya and datepalm said to be dioecious whereas cucurbits and coconut palms mooecious , inspite of all of them bearing unisexual flowers?
24. Explain giving two reasons why pollengrains can be the best preserved fossils.

Three marks questions

25. The TS of mature anther (TB page no.22 diagram 2,3 (a)) is given . identify "a" and "b"and mention their functions
26. (i)Identify the diagram (TB page no 34 diagram 2.13 (b) .
    ii) Name the initial cell from which this structure has developed.
    iii)Draw the next stage and label the parts.
27. Draw the sectional view of the transverse section of an apple and label the following parts along with their technical names. Edible part encloses the embryo, forms fruit wall.

Five marks question

28. How does microspore mother cell develop into mature pollen grain in angiosperms? Describe the structure of a mature pollen grain and draw labelled diagram of its two celled stage.
29. A)Draw a diagram of an enlarged view of TS of one microsporangium of an angiosperm and label the following parts . tapetum, middle layer, endothecium, MMCs
    b)mention the characteristic features and function of tapetum
    c)explain giving reasons i)pollengrains are well preserved fossils
    ii)pollen tablets are in use by people these days

30. A)Why is the process of fertilization in angiosperms termed as double fertilization ? Explain. B) Draw a diagram of angiospermic embryosac where fertilization is just completed. C) Draw a labelled diagram of globular embryonic stage of an angiosperm.
31. A)Explain the characterstic features of wind pollinated flowers. How are insect pollinated flowers different from them? B) Explain mutually rewarding relationship between Yucca and a species of moth.
32. (a)Name the structures which the parts “A” and “B” shown in the diagram below respectively develop into.(b) explain the process of development which “B” undergoes in albuminous and exalbuminous seeds. Give one example of each of these seeds.
33. Explain double fertilization and trace the post fertilization events in sequential order leading to seed formation in a typical dicot embryo.
34. (a)Draw a labelled diagram of a mature embryo sac of an angiosperm (b)Why does a pollengrain possesses two male gametes ? Explain