



# BIOLOGY

## BOOKS - PSEB

# SEXUAL REPRODUCTION IN FLOWERING PLANTS

### Exercise

1. Write in brief development of female gametophyte in angiosperms.



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2. Differentiate between microsporogenesis and megasporogenesis. Which type of cell division occurs during these events? Name the structures formed at the end of these two events.



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3. Arrange the following terms in the correct developmental sequences: Pollen grain, sporogenous tissue, microspore tetrad, pollen mother cell. Male gametes.



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4. With a neat labelled diagram describe the parts of a typical angiosperm ovule.



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5. What is meant by Monosporic development of female gametophyte ? Explain the development of female gametophyte with well labelled diagrams.



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6. With a neat diagram explain the 7-celled, 8-nucleate nature of the female gametophyte.



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7. What are chasmogamous flowers? Can cross-pollination occur in cleistogamous flowers? Give reason for your answer.



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8. Mention two strategies evolved to prevent self-pollination in flowers.



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**9.** What is self-incompatibility? Why does self-pollination not lead to seed formation in self-incompatible species?



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**10.** What is bagging technique? How is it useful in a plant breeding programme?



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**11.** What is triple fusion ? Where and how does it take place ? Name the nuclei involved in triple fusion.



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**12.** Why do you think the zygote is dormant for sometime in a fertilised ovule?



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**13.** Differentiate between: hypocotyl and epicotyl



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**14.** Differentiate between: coleoptile and coleorrhiza



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**15.** Differentiate between: integument and testa



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**16.** Differentiate between: perisperm and pericarp



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**17.** Why is apple called a false fruit? Which part (s) of the flower forms the fruit?



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**18.** What is meant by emasculation? When and why does a plant breeder employ this technique?



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**19.** If one can induce parthenocarpy through the application of growth substances, which fruits would you select to induce parthenocarpy and why?



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**20.** Explain the role of tapetum in the formation of pollen-grain wall.



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**21. What is Apomixis ? What is its importance ?**



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