

Sexual Reproduction In Flowering Plant

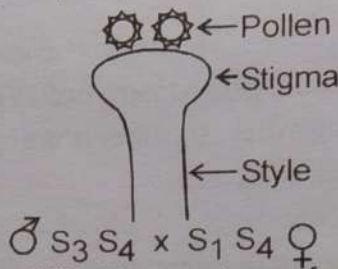
91. Self-incompatibility –

- (a) works the same-way in all plants
- (b) Does not have potential agricultural applications
- (c) Maintains variation
- (d) On the same mechanism of transplant rejection seen in animal

92. A plant that is self-incompatible has a genotype of S_5S_4 for S-locus. It receives pollen from a plant that is S_3S_1 . Which of the following is most likely to occur?

- (a) All of the pollen will germinate, forming pollen tubes
- (b) None of the pollen will germinate
- (c) About half of the pollen will germinate
- (d) Fertilization will occur in about pollinated plant

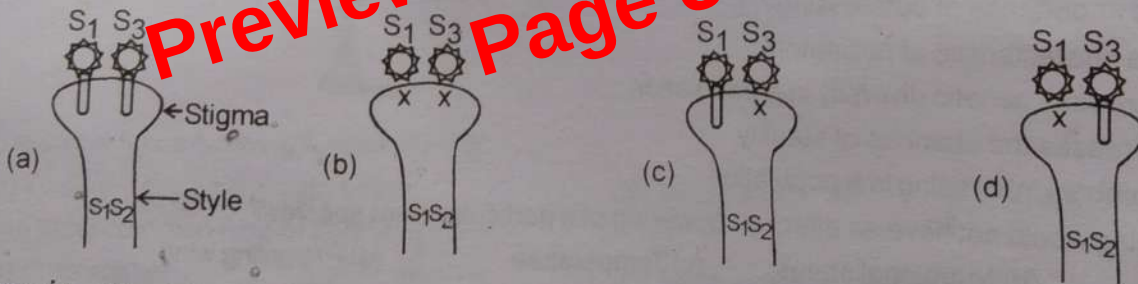
93.



The above diagram refers the self-incompatibility. The genotypes of embryo and endosperms are –

	Embryo	Endosperm
(a)	S_1S_3, S_3S_4	$S_3S_4S_4$
(b)	S_4S_4	$S_3S_4S_4, S_1S_1S_3$
(c)	S_1S_3, S_3S_4	$S_1S_1S_3, S_4S_4S_3$
(d)	S_1S_1	$S_1S_3S_4$

94. Considering the genetic basis of self-incompatibility, which of the following options is correct. Male plant is S_1S_3 and female plant is S_1S_2 .



95. Which of the following options is correct?

- (a) Pollination gives the guarantee of the promotion of post-pollination events that lead to fertilization
- (b) The events — “from pollen deposition on stigma until pollen tubes enter the ovule” are together referred to as pollen-pistil interaction.
- (c) Pollen-pistil interaction is a dynamic process involving pollen recognition followed by only promotion (not rejection) of the pollen.
- (d) Pistil has no ability to recognise the pollen, whether right or wrong type.

96. The ability of the pistil to recognise the pollen followed by its acceptance or rejection is the result of a continuous dialogue between pollen grain and the pistil.

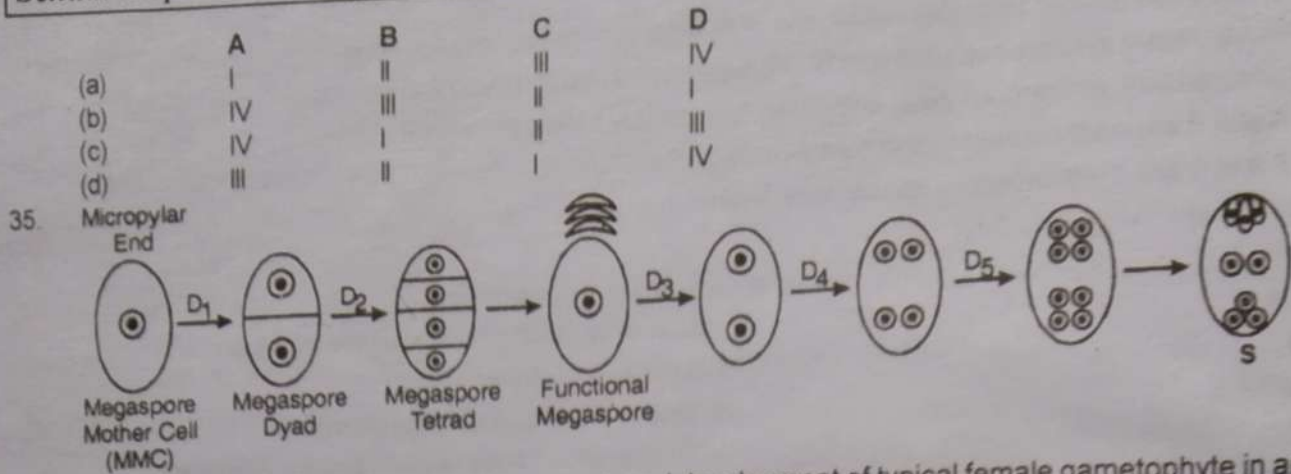
This dialogue is mediated by chemical components of the pollen interacting with those of the pistil. Which of the following chemicals mainly takes part in the interaction –

- (a) Nucleotides
- (b) Proteins
- (c) Minerals
- (d) Lipid or inulin

97. Which of the following is correct?

- (a) Double fertilization – characteristic of angiosperms

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The diagram above shows megasporogenesis and development of typical female gametophyte in angiosperms. In which of the following options all divisions (D₁ to D₅) and structure (S) are correctly identified?

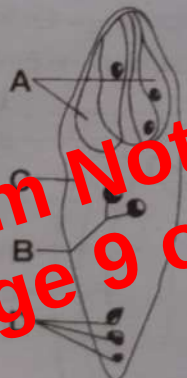
	D ₁	D ₂	D ₃	D ₄	D ₅	S
(a)	Meiosis I	Meiosis II	Mitosis	Mitosis	Mitosis	Microgametophyte
(b)	Meiosis I	Meiosis II	Mitosis	Mitosis	Mitosis	Embryo
(c)	Meiosis I	Meiosis II	Mitosis	Mitosis	Mitosis	Embryo sac
(d)	Mitosis	Meiosis	Mitosis	Mitosis	Mitosis	Embryo sac

36. For the formation of embryo sac, the megaspore mother cell undergoes –

- (a) Two meiotic and two mitotic divisions
(b) One meiotic and three mitotic divisions
(c) Two meiotic divisions
(d) One meiotic and two mitotic divisions

37.

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Identify A, B, C and D structures shown in above diagram of female gametophyte –

	A	B	C	D
(a)	Synergid	Polar nuclei	Central cell	Antipodal cells
(b)	Antipodal cells	Polar nuclei	Central cell	Synergids
(c)	Antipodal cells	Polar nuclei	Megaspore mother cell	Synergids
(d)	Filiform apparatus	Polar nuclei	Central cell	Antipodal cell

38.

