

NEET SEXUAL REPRODUCTION IN FLOWERING PLANTS — STAMEN, MICROSPORANGIUM AND POLLEN GRAIN (MICROSPOROGENESIS) — PYQS

Max. Marks: 92

Questions: 23

Section A (MCQ) — 23 questions

Q.1 Arrange the following in the correct developmental sequence related to microsporogenesis :

- A. Microspore tetrads B. Sporogenous tissue
C. Pollen grains D. Pollen mother cells

Choose the correct answer from the options given below :

[NEET (UG) 2026]

- (1) A, D, C, B (2) D, A, C, B
(3) B, D, C, A (4) B, D, A, C

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Q.2 How many thecae are present in each lobe of a typical bilobed angiosperm anther?

[RE-NEET (UG) 2026]

- (1) 12 (2) 2 (3) 6 (4) 8

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Q.3 Given below are two statements : One is labelled as **Assertion (A)** and other is labelled as **Reason (R)**.

Assertion (A): Cells of the tapetum possess dense cytoplasm and generally have more than one nucleus.

Reason (R): Presence of more than one nucleus in the tapetum increases the efficiency of nourishing the developing microspore mother cells.

In the light of the above statements, choose the most appropriate answer from the options given below:

[NEET (UG) 2025]

- (1) A is true but R is false
(2) A is false but R is true
(3) Both A and R are true and R is the correct explanation of A
(4) Both A and R are true but R is NOT the correct explanation of A

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Q.4 Winged pollen grains are present in [NEET 2018]

- (1) Mustard (2) *Cycas* (3) Mango (4) *Pinus*

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Q.5 Pollen grains remain preserved as fossils due to the presence of : [RE-NEET (UG) 2024]

- (1) Epidermal layer (2) Tapetum
(3) Exine layer (4) Intine layer

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Q.6 In some members of which of the following pairs of families, pollen grains retain their viability for months after release? [NEET (UG) 2021]

- (1) Rosaceae : Leguminosae
(2) Poaceae : Rosaceae
(3) Poaceae : Leguminosae
(4) Poaceae : Solanaceae

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Q.7 Which of the following has proved helpful in preserving pollen as fossils? [NEET 2018]

- (1) Pollenkitt (2) Cellulosic intine
(3) Oil content (4) Sporopollenin

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Q.8 Pollen grains can be stored for several years in liquid nitrogen having a temperature of [NEET 2018]

- (1) -120°C (2) -80°C (3) -196°C (4) -160°C

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Q.9 Which one of the following statements is not true? [NEET 2016 (Phase 1)]

- (1) Pollen grains of many species cause severe allergies.
(2) Stored pollen in liquid nitrogen can be used in the crop breeding programmes.
(3) Tapetum helps in the dehiscence of anther.
(4) Exine of pollen grains is made up of sporopollenin.

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Q.10 In angiosperms, microsporogenesis and megasporogenesis [AIPMT 2015]

- (1) involve meiosis
- (2) occur in ovule
- (3) occur in anther
- (4) form gametes without further divisions.

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Q.11 Male gametophyte in angiosperms produces

[AIPMT 2015]

- (1) single sperm and two vegetative cells
- (2) three sperms
- (3) two sperms and a vegetative cell
- (4) single sperm and a vegetative cell.

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Q.12 Pollen tablets are available in the market for

[AIPMT 2014]

- (1) in vitro fertilization
- (2) breeding programmes
- (3) supplementing food
- (4) ex situ conservation.

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Q.13 Which one of the following statements is correct?

[NEET 2013]

- (1) Endothecium produces the microspores.
- (2) Tapetum nourishes the developing pollen.
- (3) Hard outer layer of pollen is called intine.
- (4) Sporogenous tissue is haploid.

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Q.14 Which of the following statements is correct?

[NEET 2013 (Karnataka)]

- (1) Sporopollenin can be degraded by enzymes.
- (2) Sporopollenin is made up of inorganic materials.
- (3) Sporopollenin can withstand high temperatures as well as strong acids and alkalis.
- (4) Sporopollenin can withstand high temperatures but not strong acids.

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Q.15 What is the function of germ pore?

[AIPMT 2012 (Mains)]

- (1) Emergence of radicle
- (2) Absorption of water for seed germination
- (3) Initiation of pollen tube
- (4) Release of male gametes

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Q.16 Which one of the following statements is wrong?

[AIPMT 2012 (Mains)]

- (1) When pollen is shed at two-celled stage, double fertilization does not take place.
- (2) Vegetative cell is larger than generative cell.
- (3) Pollen grains in some plants remain viable for months.
- (4) Intine is made up of cellulose and pectin.

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Q.17 An organic substance that can withstand environmental extremes and cannot be degraded by any enzyme is

[AIPMT 2012 (Prelims)]

- (1) cuticle
- (2) sporopollenin
- (3) lignin
- (4) cellulose.

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Q.18 Which one of the following is resistant to enzyme action?

[AIPMT 2008]

- (1) Pollen exine
- (2) Leaf cuticle
- (3) Cork
- (4) Wood fibre

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Q.19 Male gametes in angiosperms are formed by the division of

[AIPMT 2007]

- (1) generative cell
- (2) vegetative cell
- (3) microspore mother cell
- (4) microspore

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Q.20 Which one of the following is surrounded by a callose wall?

[AIPMT 2007]

- (1) Male gamete
- (2) Egg
- (3) Pollen grain
- (4) Microspore mother cell

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Q.21 In a flowering plant, archesporium gives rise to

[AIPMT 2003]

- (1) only the wall of the sporangium
- (2) both wall and the sporogenous cells
- (3) wall and the tapetum
- (4) only tapetum and sporogenous cells.

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Q.22 In angiosperms all the four microspores of tetrad are covered by a layer which is formed by

[AIPMT 2002]

- (1) pectocellulose (2) callose
(3) cellulose (4) sporopollenin

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Q.23 In grasses what happens in microspore mother cell for the formation of mature pollen grains?

[AIPMT 2001]

- (1) One meiotic and two mitotic divisions
(2) One meiotic and one mitotic divisions
(3) One meiotic division
(4) One mitotic division

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	2	3	4	3	1	4	3	3	1	3
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	3	2	3	3	1	2	1	1	4	2	1
Ques.	23										
Ans.	2										