

NEET SEXUAL REPRODUCTION IN FLOWERING PLANTS — THE PISTIL, MEGASPORANGIUM (OVULE) AND EMBRYO SAC (MEGASPOROGENESIS) — PYQS

Max. Marks: 88

Questions: 22

Section A (MCQ) — 22 questions

Q.1 Which of the following in female gametophyte of an angiosperm helps in guiding the pollen tube for fertilizing the eggs? [RE-NEET (UG) 2026]

- (1) Polar nucleus (2) Antipodals
(3) Synergids (4) Central cells

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full solution



Q.2 Given below are two statements : One is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): A typical unfertilised, angiosperm embryo sac at maturity is 8 nucleate and 7-celled.

Reason (R): The egg apparatus has 2 polar nuclei.

In the light of the above statements, choose the correct 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.3 How many meiotic and mitotic divisions need to occur for the development of a mature female gametophyte from the megaspore mother cell in an angiosperm plant? [NEET (UG) 2025]

- (1) 1 Meiosis and 3 Mitosis
(2) No Meiosis and 2 Mitosis
(3) 2 Meiosis and 3 Mitosis
(4) 1 Meiosis and 2 Mitosis

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Q.4 Megasporangium is equivalent to [NEET 2013]

- (1) nucellus (2) ovule
(3) embryo sac (4) fruit.

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Q.5 Which part of the ovule stores reserve food materials? [RE-NEET (UG) 2024]

- (1) Nucellus (2) Integument
(3) Placenta (4) Funicle

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Q.6 In general the egg apparatus of embryo sac in angiosperm consists of [NEET (UG) 2022 (Phase 2)]

- (1) One egg cell, two synergids, two antipodal cells, two Polar nuclei
(2) One egg cell, two synergids, three antipodal cells, two Polar nuclei
(3) One egg cell, two synergids, two antipodal cells, three Polar nuclei
(4) One egg cell, three synergids, two antipodal cells, two Polar nuclei

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Q.7 A typical angiosperm embryo sac at maturity is :

[NEET (UG) 2021]

- (1) 8-nucleate and 8-celled
(2) 8-nucleate and 7-celled
(3) 7-nucleate and 8-celled
(4) 7-nucleate and 7-celled

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Q.8 The body of the ovule is fused with the funicle at

[NEET (UG) 2020]

- (1) Chalaza (2) Hilum
(3) Micropyle (4) Nucellus

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Q.9 Functional megaspore in an angiosperm develops into an [NEET 2017]

- (1) endosperm (2) embryo sac
(3) embryo (4) ovule.

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full solution



Q.10 In majority of angiosperms [NEET 2016 (Phase 2)]

- (1) egg has a filiform apparatus
- (2) there are numerous antipodal cells
- (3) reduction division occurs in the megaspore mother cells
- (4) a small central cell is present in that embryo sac.

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Q.11 The ovule of an angiosperm is technically equivalent to [NEET 2016 (Phase 2)]

- (1) megasporangium
- (2) megasporophyll
- (3) megaspore mother cell
- (4) megaspore.

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Q.12 Filiform apparatus is characteristic feature of

[AIPMT 2015]

- (1) aleurone cell
- (2) synergids
- (3) generative cell
- (4) nucellar embryo.

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Q.13 Function of filiform apparatus is to [AIPMT 2014]

- (1) recognize the suitable pollen at stigma
- (2) stimulate division of generative cell
- (3) produce nectar
- (4) guide the entry of pollen tube.

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Q.14 Megaspores are produced from the megaspore mother cells after [NEET 2013 (Karnataka)]

- (1) mitotic division
- (2) formation of thick wall
- (3) differentiation
- (4) meiotic division.

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Q.15 In angiosperms, functional megaspore develops into [AIPMT 2011 (Mains)]

- (1) embryo sac
- (2) ovule
- (3) endosperm
- (4) pollen sac.

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Q.16 Filiform apparatus is a characteristic feature of

[AIPMT 2011 (Prelims)]

- (1) suspensor
- (2) egg
- (3) synergid
- (4) zygote.

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Q.17 Which one of the following pairs of plant structures has haploid number of chromosomes?

[AIPMT 2008]

- (1) Nucellus and antipodal cells
- (2) Egg nucleus and secondary nucleus
- (3) Megaspore mother cell and antipodal cells
- (4) Egg cell and antipodal cells

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Q.18 The arrangement of the nuclei in a normal embryo sac in the dicot plants is [AIPMT 2006]

- (1) 3 + 3 + 2
- (2) 2 + 4 + 2
- (3) 3 + 2 + 3
- (4) 2 + 3 + 3

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Q.19 Which one of the following represents an ovule, where the embryo sac becomes horse-shoe shaped and the funiculus and micropyle are close to each other? [AIPMT 2005]

- (1) Amphitropous
- (2) Circinotropous
- (3) Atropous
- (4) Anatropous

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Q.20 An ovule which becomes curved so that the nucellus and embryo sac lie at right angles to the funicle is [AIPMT 2004]

- (1) hemitropous
- (2) campylotropous
- (3) anatropous
- (4) orthotropous.

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Q.21 What is the direction of micropyle in anatropous ovule? [AIPMT 2002]

- (1) Upwards
- (2) Downward
- (3) Right
- (4) Left

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Q.22 Eight nucleated embryo sac is [AIPMT 2000]

- (1) only monosporic
- (2) only bisporic
- (3) only tetrasporic
- (4) any of these.

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ANSWER KEY

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