SEXUAL REPRODUCTION IN FLOWERING PLANTS



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Q-1 - 14272975

What is the function of filiform apparatus in an angiospermic embryo sac?

- (A) Brings about opening of the pollen tube
- (B) Guids the pollen tube into a synergid
- (C) Prevents entry of more than one pollen tube into a synergid
- (D) None of these

CORRECT ANSWER: B



Germ pore is the area where exine is

- (A) absent
- (B) thick
- (C) thick & uniform
- (D) uniform

CORRECT ANSWER: A

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Q-3 - 18244876

How many pollen grains are formed from 10 microspore mother cells by meiosis

(A) 80

(B) 40 (C) 20(D) 10 **CORRECT ANSWER: B** Watch Video Solution On Doubtnut App Q-4 - 55656358 Ovule is inverted (resupinates at 180) with body fused to funicle, micropyle lying close to hilum and side by side with funicle facing the placent and is most common in Angiosperms. It is (A) hemitropous (B) orthotropous (C) anatropous (D) campylotropous

CORRECT ANSWER: C

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Q-5 - 14272956

Read the given statements.

- (i) Outer exine is made up of sporopollenin.
- (ii) Inner intine is pecto-cellulosic in nature
- (iii) Generative cell is bigger and contains abundant food reserve
- (iv) Vegetative cell is small and floats in the cytoplasm of the generative cell.

Which of the given statements are not true regarding structure of pollen grain?

- (A) (i) and (ii)
- (B) (ii) and (iii)
- (C) (iii) and (iv)

(D) (i) and (iv)

CORRECT ANSWER: C

SOLUTION:

In a mature pollen grain, the generative cell is smaller and the tube (or vegetative) cell is larger. In the later stages of development of pollen grain, callose dissolves and the naked generative cell comes to lie freely in the cytoplasm of the tube cell. The tube cell has a cytoplasm which is rich in the food reserve (starch, protein, fat with mostly unsaturated fatty acids).

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Q-6 - 18244915

Which of the following is not fuctionally analogous with other in the group

(A) Archegonium (B) Oogonium (C) Antheridium (D) Ovule **CORRECT ANSWER: C** Watch Video Solution On Doubtnut App Q-7 - 55656324 Anthesis is a phenomenon which refers to (A) formation of pollen (B) development of anther (C) opening of flower bud (D) reception of pollen by stigma

CORRECT ANSWER: C

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Q-8 - 14272943

Callase enzyme which dissolved callose of pollen tetrads to separate four pollends is provided by

- (A) pollens
- (B) tapetum
- (C) middle layers
- (D) endothecium

CORRECT ANSWER: B

SOLUTION:

Tapetum secretes Ubisch bodies which get covered with

sporopollenin and so increase thickness of exine of pollen grain wall. Tapetum provides nourishment to developing microspores. It also secretes callase enzyme which dissolves callose substances by which four pollens of a pollen tetrad are united, hence sparating microspores or pollens of a tetrad.

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Q-9 - 18244908

Crassinucellate ovule shows

- (A) Absence of nucellus
- (B) Well development nucellus
- (C) Partially developed nucellus
- (D) III developed nucellus

CORRECT ANSWER: B

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Q-10 - 14283078

The expression 4x gives the perimeter of a square with a side length of x units. What is the perimeter of a square with a side length of 5/7 units?

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Q-11 - 55656342

The intine of a pollen grain is mainly made up of

- (A) cellulose and pectin
- (B) lipid and pectin
- (C) pectin and lignin

(D) lignin and cutin

CORRECT ANSWER: A

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Q-12 - 41273059

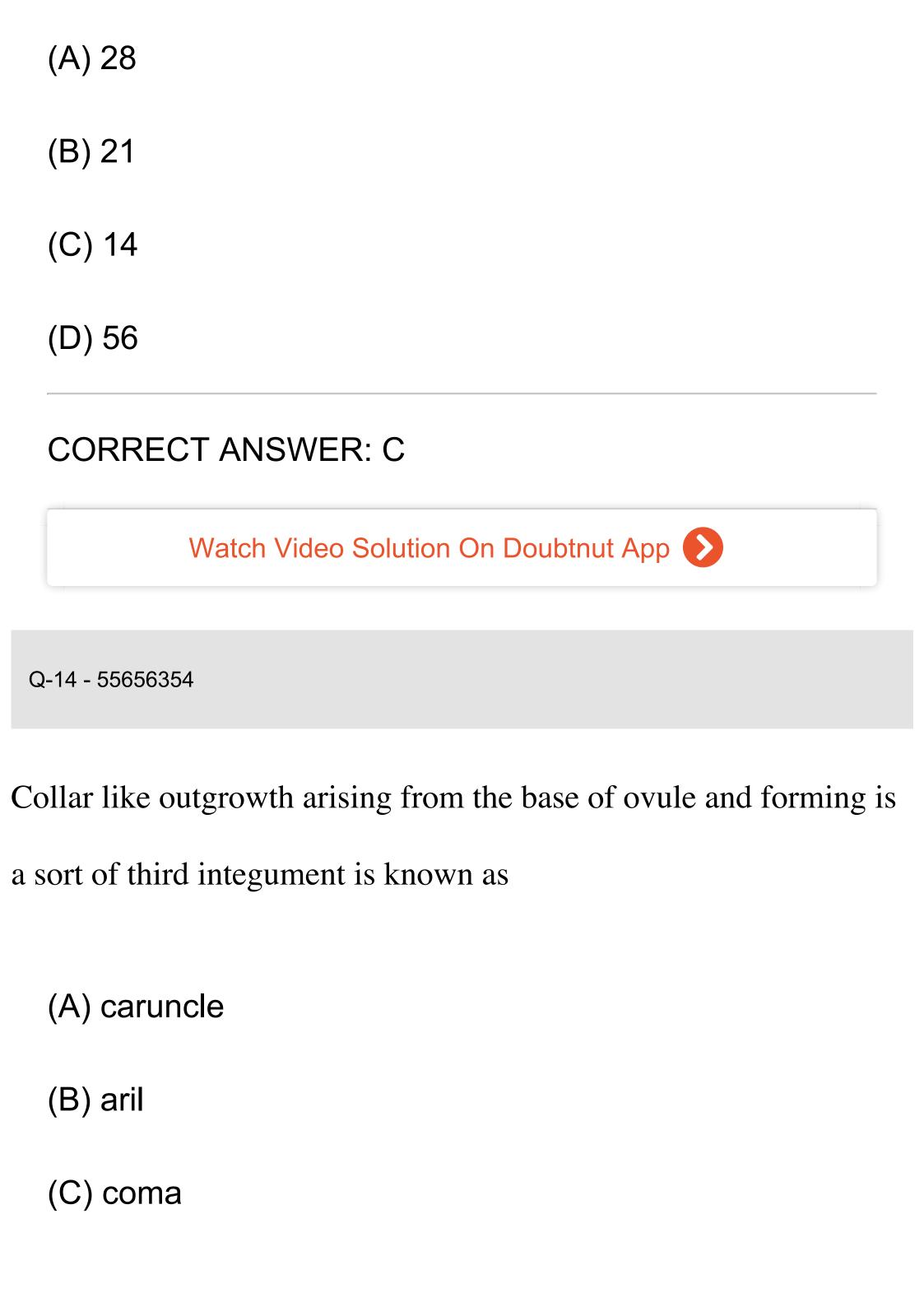
[EXAMPLE 10Find the equation of a circle which touch touch touches y-axis at a distance of 4units from the origin and cuts an intercept of 6 units along the position of xatiss.]

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Q-13 - 18244833

Pollen grains of a plant whose 2n = 28 are caltured to get callus by tissue culture method. What would be the number of chromosomes in the cells of the callus



(D) operculum

CORRECT ANSWER: B

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Q-15 - 14272946

Study of pollen grains is called

- (A) micrology
- (B) anthology
- (C) palynology
- (D) pomology

CORRECT ANSWER: C

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Sporollenin is chemically

- (A) Homopolysaccharide
- (B) Fatty substance
- (C) Protein
- (D) Heteropolysaccharide

CORRECT ANSWER: B

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Q-17 - 55656347

The exine of a pollen grain is composed of one of the most resistant biological matieral by which pollen grains are able to withstand extremes of temperature and dessication and cannot be degraded by any enzyme is

(A) lignocellulose (B) sporopollenin (C) cellulose and lignin (D) pectin and cellulose **CORRECT ANSWER: B** Watch Video Solution On Doubtnut App Q-18 - 14273048 In albuminous seeds, food is stored in _____ and in exalbuminous seeds, food is stored in_____. (A) endosperm, cotylendons (B) cotyledons, endosoerm (C) nuclleusm cotyledons

(D) endosperm, radicle **CORRECT ANSWER: A** Watch Video Solution On Doubtnut App Q-19 - 18244898 Perisperm is (A) Degenerate part of synergids (B) peripheral part of endosperm (C) Degenerate part secondary nucleus (D) Remnant of nucellus **CORRECT ANSWER: D**

SOLUTION:

After double fertilization the remnants of nucellus of

ovule in mature seed is called perisperm.

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Q-20 - 14272947

Several pollen grains form a unit designated as pollinium in Family

- (A) Asteraceae
- (B) Cucuribitaceae
- (C) Asclepiadaceae
- (D) Brassicaceae

CORRECT ANSWER: C

SOLUTION:

In Calotropis and related plants of Family

Asclepiadaceae, all the pollen grains of an anther lobe

remain united in a single sac called pollinium. Two pollinia of adjacent anthers are attached to produce a translator.

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Q-21 - 55656355

In tenuinucellate type of ovule

- (A) nucellus is small
- (B) nucellus is large
- (C) nucellus does not develop
- (D) ovule is vestigeal

CORRECT ANSWER: A

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- (A) Outer integument
- (B) Inner integument
- (C) Chalaza
- (D) Funicle

CORRECT ANSWER: B

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Q-23 - 14273050

Persistet nucellus is called as _____ and is found in

- (A) perispern, black pepper
- (B) perisperm, groundnut
- (C) endosperm, black pepper
- (D) endosperm, groundnut

CORRECT ANSWER: A

SOLUTION:

In some seeds, remains of nucellus persist. This residual nucellus which persists in the seed is called perisperm, e.g., black pepper, coffee, castor, cardamum, Nymphaea.

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Q-24 - 14273055

Select the correct statements regarding parthenocarpy.

- (A) Formation of fruits without fertilisation
- (B) Development of seedless fruits as in banane, graphs, nevel organge, etc.
- (C) Auxins and gibberellins are used to induce parthenocarpy in different plants.
- (D) All of these

CORRECT ANSWER: D

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Q-25 - 55656357

When ovule is straight with funiculus, embryo sac, chalaza and micropyle lying iin a straight vertical line, it is known as

- (A) orthotropous
- (B) anatropous

(C) campylotropous		
(D) amphitropous		
CORRECT ANSWER: A		
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Q-26 - 14272945		
In angiosperms various stages of reductional division can best be studied in		
(A) young anthers		
(B) mature antehrs		
(C) young ovules		
(D) endosperm cells		
CORRECT ANSWER: A		

SOLUTION:

Meiosis takes place in reproductive organs of plants and young anthers are the best material to study meiosis.

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Q-27 - 14272986

Male and femal flowers are present on different plants (dioecious) to ensure xenogamy, in

- (A) papaya
- (B) bottle gourd
- (C) maiza
- (D) all of these

CORRECT ANSWER: A

SOLUTION:

The plants in which male and female flowers are borne on separate individuals, are referred to as dioecious plants, e.g., papaya, data palm. Dioecious plants exhibit xenogamy.

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Q-28 - 55656331

Ubich bodies are connected with the development of

- (A) exine of pollen grain
- (B) endothecium
- (C) pollen tube
- (D) all of these

CORRECT ANSWER: A

Q-29 - 14273084

In an embryo sac, the cells that degenerate after fertilisation are

- (A) synergids and primary endosperm cell
- (B) synergids and antipodals
- (C) antipodals and primary endosperm cell
- (D) egg and antipodals

CORRECT ANSWER: B

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Q-30 - 18244841

Pollen grains are formed in

- (A) Anther
- (B) Stigma
- (C) Filament
- (D) Pollen sac

CORRECT ANSWER: D

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Q-31 - 14272944

Which function of tapetum is correc?

- (A) Helps in pollen wall formation
- (B) Transportation of nutrients to inner side of anther
- (C) Synthesis of callase enzyme for separation of microspore tetrads

(D) All of these

CORRECT ANSWER: D

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Q-32 - 55656326

Amphimixis is

- (A) reaction of antification and fretilizin
- (B) fusion of male and female pronuclei
- (C) formation of reception cone by ovum
- (D) pentration of sprm into ovum

CORRECT ANSWER: B

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Rarely among angiosperms in pollen grains influenced the endosperm this is called as

- (A) Metaxenia
- (B) Nemec phenomenon
- (C) Xenia
- (D) Mesogamy

CORRECT ANSWER: C

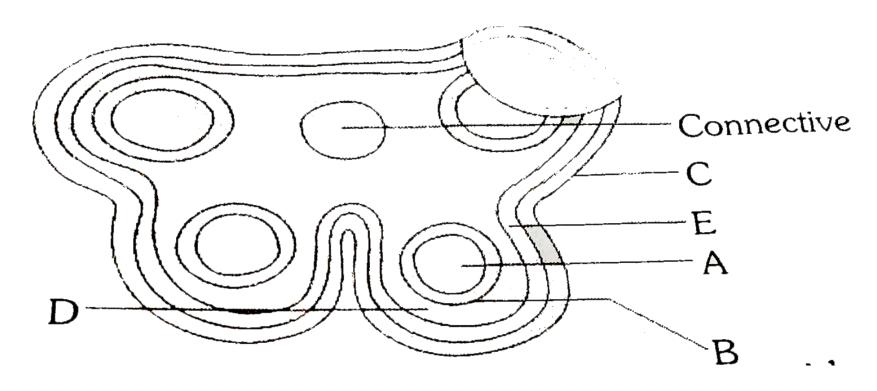
SOLUTION:

The transference of characters by a male gamete and its influence on endosperm is known as xenia.

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The given figure refers to a T.S of anther. Identify A to E respectively



- (A) Sporogenous tissue, tapetum, middle layer, epidermis, endothecium
- (B) Sporogenous tissue, epidermis, middle layer, tapetum, endothecium
- (C) Sporogenous tissue, epidermis, tapetum, middle layer, endothecium
- (D) Sporogenous tissue, tapetum, epidermis, middle layer, endothecium

CORRECT ANSWER: D

Q-35 - 14273102

Assertion: In angiosperms, endosperm development precedes embryo development.

Reason: Double fertilisation ensures that the nutritive tissue is formed before the zygotes starts cleaving so that the energy spent on the formation of endosperm does not get wasted.

- (A) If both assertion and reason are true and reason is the correct explanation of assertion
- (B) If both assertion and reason are true but reason is not the correct explanation of assertion
- (C) If assertion is true but reason is false
- (D) If both assertion and reason are false

CORRECT ANSWER: A

SOLUTION:

During double fertilisation in angiosperms, one male gamete fuses with the egg to form the diploid zygite (syngamy or generative fertilisation). The diploid zygote finally develops into embryo. The other male gamete fuses with the two polar nuclei (or secondary nucleus) to form the triploid primary endosperm nucleus, PEN (triple fusion or vegetative fertilisation). Double fertilisation ensures that the nutritive tissue is formed before the zygote starts cleaving so that the energy spent on the formation of endosperm does not go waste in case the fertilisation fails. Angiosperms are therefore, economical and more specialised as compared to gymnosperms where a large nutritive female gametophyte is formed long before fertilisation.

Q-36 - 14272978

Polyhonum type of embryo sac is

- (A) 8-nucleate, 7-celled
- (B) 8-nucleate, 8-celled
- (C) 7-nucleate, 7-celled
- (D) 4-nucleate, 3-celled

CORRECT ANSWER: A

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Q-37 - 55656336

A typical anther of an angiosperm is

- (A) haploid, bisporaniate
- (B) diploid, tetrasporangiate
- (C) diploid, bisporangiate
- (D) haploid, tetrasporangiate

CORRECT ANSWER: C

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Q-38 - 14273087

In the embryos of a typical dicot and a grass, true homologous structures are

- (A) coleorhiza and coleoptile
- (B) coleoptile and scutellum
- (C) cotyledons and scutellum

(D) hypoctoyl and radicle

CORRECT ANSWER: C

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Q-39 - 55656362

The female gametophyte (embryo sac(of a typical dicot

(Polygonum) at the time of fertilization is

- (A) 8-nucleated and 7-celled
- (B) 7-nucleated and 8-celled
- (C) 4-nucleated and 4-celled
- (D) 8-nucleated and 8-celled

CORRECT ANSWER: A

Feathery stigma occurs in

- (A) pea
- (B) wheat
- (C) Datura
- (D) Caesalpinia

CORRECT ANSWER: B

SOLUTION:

Wheat is an anemophilous plant. Its flowers are not very showy. They do not have petals or sepals. Each female flower consists of an ovar from which two styles emerge, finished with two feathery sticky stigmas to catch pollen.

Endothecium layer present below epidermis in anther bears fibrous thickings and helps in

- (A) dehiscenece of anthers
- (B) nutrition of spores
- (C) formation of sporopollenin
- (D) absorption of water

CORRECT ANSWER: A

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Q-42 - 18244874

Ubisch bodies found in tapetal cell help in formation of

- (A) Pollenkitt and pollinia
- (B) Exine
- (C) Sporopollenin
- (D) Intine and pollenkitt

CORRECT ANSWER: B

SOLUTION:

Ubisch bodies secreted by tapetum help in external thickening of exine as these bodies get coated with sporopollenin

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Q-43 - 14272994

Spiny or sticky pollen grains and large, attractively coloured flowers are associated with

- (A) hydrophily
- (B) entomphily
- (C) ornithophily
- (D) anemophily

CORRECT ANSWER: B

SOLUTION:

Entomophily type of pollination takes place through the agency of insects. The entomophilous flowers are brightly coloured and fragranted to attract the insects. Their pollen grains are sticky or spiny to easily get attached with the body of pollinators. When pollen granis, and when they fly and visit other flowers, they brush aganist the stigma which being sticky, at once receives the pollen grains from their body. Thus, cross-

pollination is achieved.

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Q-44 - 18244897

Caruncle is derived from

- (A) Cotyledons
- (B) Integument
- (C) Peduncle
- (D) None of the above

CORRECT ANSWER: B

SOLUTION:

In Aspodelus, the outer integument is curved so that this curved structure is known as caruncle

Q-45 - 55656341

Pollen tube is made up of

- (A) cutin
- (B) sporopollenin
- (C) pectocellulose
- (D) pectin

CORRECT ANSWER: C

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Q-46 - 14273004

Flowering plants have developed certain outbredding devices to discourage self-pollination and encourage cross-pollination. One of these is not an examples of such outbreeding device.

- (A) Dicliny
- (B) Dichongamy
- (C) Herkogamy
- (D) Cleistogamy

CORRECT ANSWER: D

SOLUTION:

Clesitogamous flowers are intersexual. They remain closed causing self pollination. Cleistogamy occurs late in the flowering season in some plants, e.g., Commelina, balsam, Oxalis, Viola. These plants possess both chamogamous and cleistogamous flowers. in cleistogamous flowers, the anthers dehisce inside closed flowers. Growth of style brings the pollen grains in

contact with stigma. cleistogamy ensures self-pollination.

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Q-47 - 55656359

Ovule of Opuntia is coiled and turn at more kthan 360 angle, is called

- (A) circinotropous
- (B) anatropous
- (C) hemitropous
- (D) amphitropous

CORRECT ANSWER: A



Pollen kitt is generally found in

- (A) anemophilous flowers
- (B) entomophilous flowers
- (C) ornithophilous flowers
- (D) malacophilous flowers

CORRECT ANSWER: B

SOLUTION:

In the pollen grains of an insect pollinated plant, the exine is covered by a yellowish, viscous, sticky and oily layer called pollen kitt. It is made up of lipids and carotenoids. Pollen kitt is secreted by tapetum.



What is the function of germ pore

- (A) Emergence of radicle
- (B) Absorption of water for seed germination
- (C) Initiation of pollen tube
- (D) Release of male gametes

CORRECT ANSWER: C

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Q-50 - 55656352

Ovule is technically equivalent to

- (A) megasporangium with one megaspore
- (B) integumated indehiscent megasporangium
- (C) megagametangium

(D) integumented female gameteophyte
CORRECT ANSWER: B
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Q-51 - 14272996
Fragrant flowers with cell developed nectaries are an adaptation for
(A) hydrophily
(B) anemophily
(C) entomophily
(D) none of these
CORRECT ANSWER: C
SOLUTION:
Entomophilous flowers produce an odour which may be

pleasant (e.g., jasmine) or foul (e.g., Aristolochia, Arum, Rafflesia). Small and nectar attract flies and other insects.

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Q-52 - 18244848

Pollinia is found in which of the following plant family

- (A) Asteraceae
- (B) Myrtaceae
- (C) Malvaceae
- (D) Asclepiadaceae

CORRECT ANSWER: D

SOLUTION:

In Asclepiadaceae family all microspores of a sporangium form a single body called pollinium.

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Q-53 - 55656350

A plant root has 16 chromosomes, so

- (A) gamate has 16 chromosomes
- (B) gamete has 8 chromosomes
- (C) endosperm has 8 chromosomes
- (D) endosperm has 16 chromosomes

CORRECT ANSWER: B



Choose the mismatched pair.
(A) Cannabis-Anemophily
(B) Zostera - Hydrophily
(C) Salvia-Entomophily
(D) Adansonia-Ornithophily
CORRECT ANSWER: D
SOLUTION:
In Adansonia cross pollination takes place through bat.
This type of pollination is called chiropterophily.
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Q-55 - 55656389

Anemophily is pollination through

(A) animals (B) air (C) birds (D) insects **CORRECT ANSWER: B** Watch Video Solution On Doubtnut App Q-56 - 18244895 An ovule which becomes curved so that the nucellus and embryo sac lie at right angles to the funicle is (A) Anatropous (B) Orthotropus (C) Hemitropous (D) Campylotropous

CORRECT ANSWER: C

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Q-57 - 55656329

The nutirtive layer of pollen sac/microsporangium is

- (A) gametangium
- (B) male gametophyte
- (C) male sporophyll
- (D) sporangium

CORRECT ANSWER: C



"What is the domain of the function $sin^{-1}(2x)$?

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Q-59 - 14272949

How many pollen mother cells should undergo meiotic division to produce 64 pollen grains?

- (A) 64
- (B) 32
- (C) 16
- (D) 8

CORRECT ANSWER: C

SOLUTION:

Each pollen mother cell (PMC), by a meiotic division,

gives rise to a group of four haploid microspores. Thus,

16 pollen mother cells undergo meiotic divisions to produce 64 pollen grains.

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Q-60 - 55656345

Which one is larger nucleus in pollen grain?

- (A) generative nucleus
- (B) vegetative nucleus
- (C) male gamete nucleus
- (D) prothallial nucleus

CORRECT ANSWER: B



Polyembryony commonly occurs in

- (A) banana
- (B) tomato
- (C) potato
- (D) citrus

CORRECT ANSWER: D

SOLUTION:

Polyembryony refers to the phenomenon of having more than one embryo in the same seed. In Citus, a seed has 2-40 embryos, one normal embryo and the rest adventitive embryos (mostly nucellar). In adventitive embryong, an embryo developsdirectly from a diploid

cell other than egg like that of nucellus and integument, e.g., Citrus, Opuntia.

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Q-62 - 55656353

Ovule is attached to the placenta by a stalk known as

- (A) funicle
- (B) petiole
- (C) pedicel
- (D) hilum



During the process of fertilisation the pollen tube of the pollen grain usuallt enters the embryo sac through

- (A) integument
- (B) nucellus
- (C) chalaza
- (D) micropyle

CORRECT ANSWER: D

SOLUTION:

After arriving at the wall of the ovary, the pollen tube enters the ovule either through the micropyle or by some other route. The entrance of the pollen tube through the micropyle is the normal condition and is known as porogamy. In some cases the pollen tube enters the ovule through the chalaza (chalazogamy e.g.

Casuarina), or through integuments (mesogamy e.g. Cucurbita).

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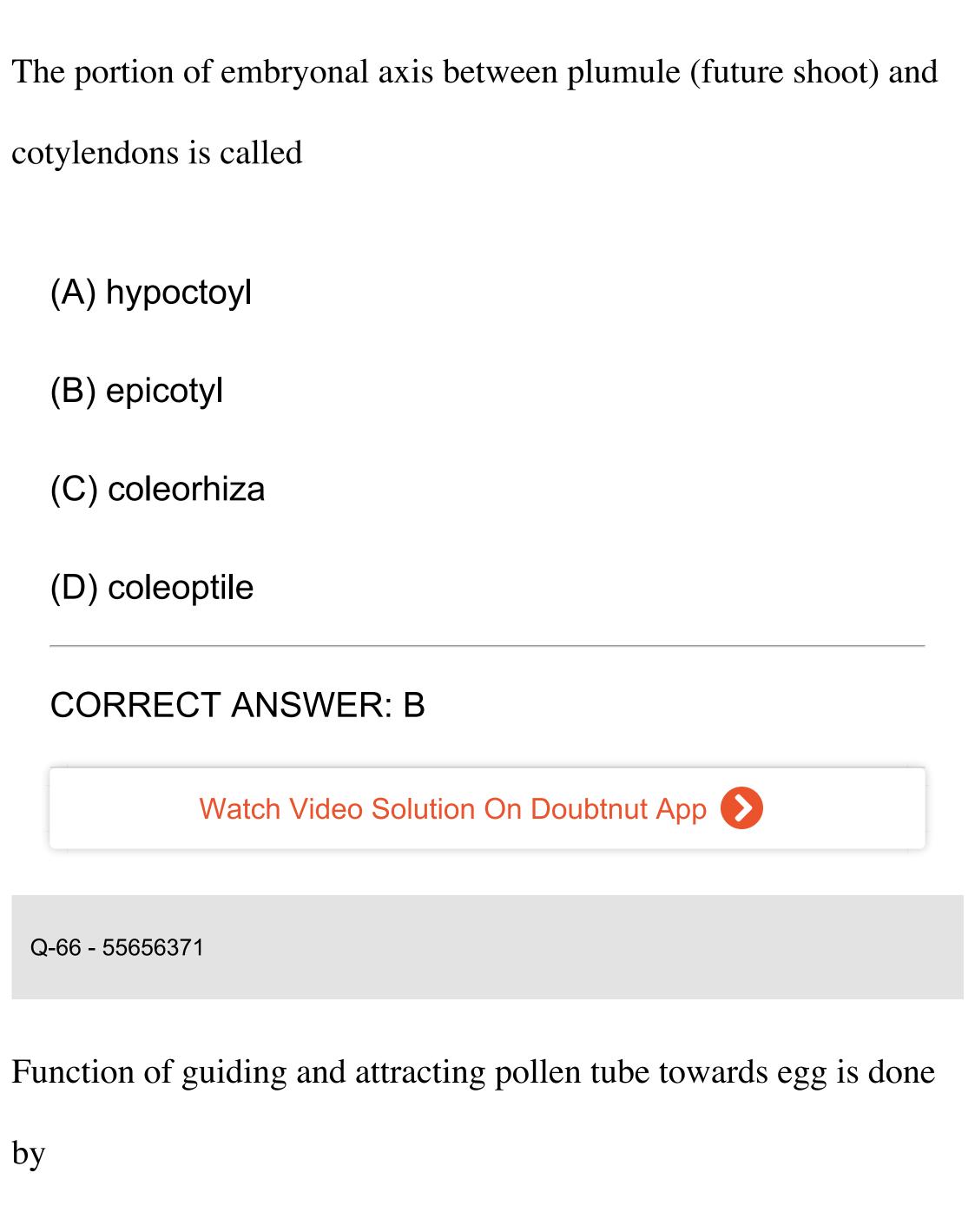
Q-64 - 55656375

The filiform apparatus is present in

- (A) synergids
- (B) egg
- (C) anther wall
- (D) antipodal cells

CORRECT ANSWER: A





(A) egg cell

(B) filiform apparatus (C) anitpodal cell (D) polar nuclei **CORRECT ANSWER: B** Watch Video Solution On Doubtnut App Q-67 - 14273027 Milk of tender coconut represents (i) and the surrounding white coconut meal represents (ii). (A) cellular endosperm free-nuclear endosperm (B) (i)(ii).cellular endosperm free-nuclear endosperm

(C)

(i)(ii).

helobial endoperm cellular endosperm

(D)

(i)(ii).

free-nuclear endosperm helobial endosperm

CORRECT ANSWER: B

SOLUTION:

In coconut (Cocos nucifera), the surrounding white kernel called coconut meal is cellular endosperm and the coconut water (also called coconut milk) in the centre is free nuclear endosperm made up of thousands of nuclei.

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Q-68 - 18244947

Match the following

Column II Column I

1. Pollination by birds Zoophily

Ornithophily 2. Pollination by insects В

Entomophily 3. Pollination by bats

Chiropterophily 4. Pollination by animals

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

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

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

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

CORRECT ANSWER: C

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Q-69 - 55656369

Embryo sac develops from megaspore mother cell through

(A) two meiotic and two mitosis divisions

(B) one meiotic and three mitosis divisions (C) two meitotic divisions (D) one meiosis and two mitotic divisions **CORRECT ANSWER: B** Watch Video Solution On Doubtnut App Q-70 - 14273035 The true embryo develops as a result of fusion of (A) two polar nuclei of embryo sac (B) egg cell and male gamete (C) synergid and male gamete (D) male gamete and antipodals **CORRECT ANSWER: B**

SOLUTION:

In double fertilisation out of the two male gametes one fues with egg of ossphere to perform generative fertilisation. Generative fertilisation is also called syngamy or true fertilisation. It given rise to a diploid zygote or osspore.

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Q-71 - 55656386

Increased asthmatic attacks in certain seasons are related to

- (A) inhalation of seasonal pollen
- (B) low temperature
- (C) hot and humid environment
- (D) eating fruits preserved in tin containers

CORRECT ANSWER: A

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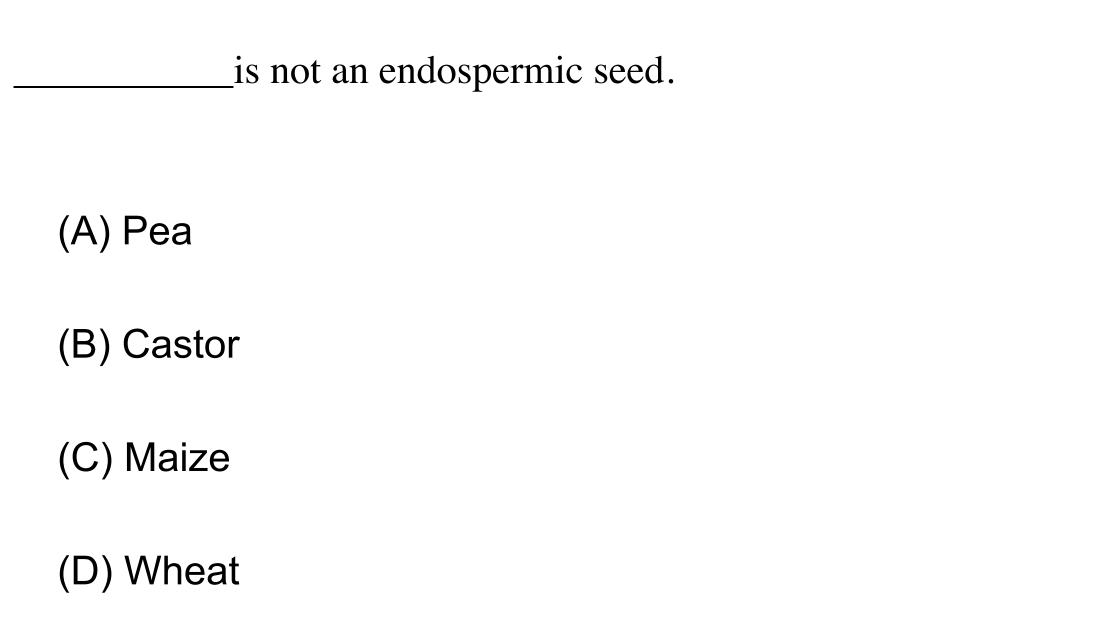
Q-72 - 55656381

The arrangement of the nuclei in a normal embryo sac in the dicot plants is

- (A) 3+3+2
- (B) 2+3+3
- (C) 3+2+3
- (D) 2+4+2

CORRECT ANSWER: C





CORRECT ANSWER: A

SOLUTION:

Endosperm represents the food storing tissue of a seed. It is produced as a result of double fertilisation in angiosperms. In most monocots and some dicot seeds, the food reserve remains in the endosperm. They are called endospermic or albuminous seeds. e.g., maize, wheat, castor bean, coconut, barley, rubber. However, in the majority of dicot seeds (e.g., pea, gram, bean,

mustard, groundnut) and some monocot seeds (e.g., orchids, Sagittaria), the endosperm is consumed during seed development and the food is stored in cotyledons and other regions. They are called nonedospermic or exalbuminous seeds.

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Q-74 - 14273021

Triple fusion in Capsella bursa pastoris is funsion of male gamete with

- (A) egg
- (B) synergid
- (C) secondary nucleus
- (D) antipodal

CORRECT ANSWER: C

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Q-75 - 55656365

Base of nucellus from which integument arises is

- (A) hilum
- (B) funicle
- (C) chalaza
- (D) micropyle

CORRECT ANSWER: C

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Q-76 - 14273036

Father of India embryology is

(A) P. Maheshwari (B) Swaminathan (C) R.Mistra (D) Butler **CORRECT ANSWER: A** Watch Video Solution On Doubtnut App Q-77 - 55656384 Male gametes in angiosperms are formed by the division of (A) vegetative cell (B) microspore mother cell (C) microspore (D) generative cell

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Q-78 - 18244931

Egg apparatus of angiosperm consists of

- (A) One egg cell and two synergids
- (B) One egg cell 2 synergids 3 antipodals
- (C) 3 antipodals only
- (D) Secondary nucleus and egg cell

CORRECT ANSWER: A

SOLUTION:

Egg apparatus of angiosperm is 3 celled it has one egg cell and two synegids on either side of egg cell 3

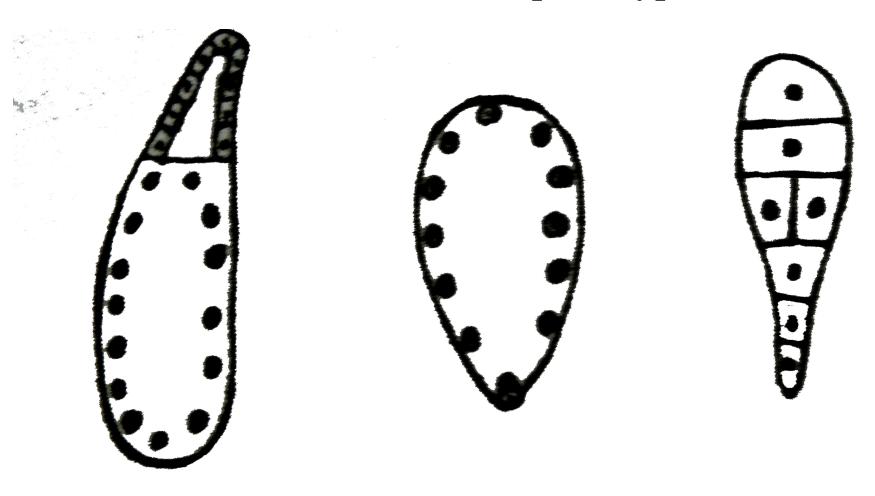
antiipodal are present on chalazal side. The secondary nucleus is binucleate, is present in the centre of embryo sac.

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Q-79 - 14273031

Select the correct order of endosperm types.



- (A) Cellular, helobial, free nuclear
- (B) Cellular, free nuclear, helobial
- (C) Helobial, free nuclear, cellular

(D) Free nuclear, cellular, helobial

CORRECT ANSWER: C

SOLUTION:

In free nuclear endosperm, the primary endosperm nucleus divides repeatedly without wall formation to produce a large number of free nuclei, e.g., maize, sunflower, Capsella, etc. in cellular endosperm every division of the primary endosperm nucleus is followed by cytokinesis. Therefore, endosperm becomes cellular from the very beginnning, e.g., Balsam, Dutura, Petunia. Helobial endosperm occurs in order Helobiales of monocots. The endosperm is of intermediate type between cellular and nuclear types e.g., Asphodelus.



What do you think is the correct sequence of the development of the embryo sac?

- (A) Archesporium \rightarrow megaspore mother cell \rightarrow megaspore \rightarrow embryo sac
- (B) Archesporium \rightarrow measpore \rightarrow megaspore mother cell \rightarrow embryo sac
- (C) Arcehsporium \rightarrow megasporangium \rightarrow embryo $\mathsf{sac} \, o \, \mathsf{embryo}$
- (D) Archesporium \rightarrow nucellus \rightarrow embryo sac \rightarrow megaspore

CORRECT ANSWER: A



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