



Corporate Office: Aakash Tower, 8, Pusa Road, New Delhi-110005, Ph.011-47623456

## CONCEPT STRENGTHENING SHEET

### CSS-01

### BOTANY

#### AIATS-01-(OYM+CF)-Q.132

**Topic: Sexual Reproduction in Flowering Plants: Post Fertilisation: Structures and Events**

Read the below given statements and select the **correct** option.

**Statement A:** When the seed gets mature its water content reduces to 10-15% by mass.

**Statement B:** A large number of seeds can remain alive for hundreds of years.

- (1) Only statement A is correct
- (2) Only statement B is correct
- (3) Both statements A and B are correct
- (4) Both statements A and B are incorrect

Scan/Click



Solution

#### Practice Questions:

1. The seed may enter in a state of dormancy when its moisture content decreases and reaches
  - (1) 30 – 50%
  - (2) 20 – 30%
  - (3) 10 – 15%
  - (4) 20 – 40%
2. Select the **incorrect** statement w.r.t seed viability
  - (1) The period of seed viability varies greatly
  - (2) In a few species, the seeds lose viability within a few months
  - (3) Some seeds can remain alive for hundreds of years
  - (4) Seeds of a few species only live for several years

3. Choose the **correct** pair of plants whose seeds reported to be viable for thousands of years.

- (1) *Lupinus* and *Orchids*
- (2) *Orobanch* and *Striga*
- (3) *Lupinus arcticus* and *Phoenix dactylifera*
- (4) *Orobanch* and *Lupinus arcticus*

#### AIATS-01-(OYM+CF)-Q.115

**Topic: Sexual Reproduction in Flowering Plants: Pre-fertilisation – Structures and Events**

A mature pollen grain

- a. Contains a bigger generative cell and smaller vegetative cell
- b. Is two celled
- c. Lacks germ pores

Choose the **incorrect** one(s) w.r.t. a typical angiospermic plant.

- (1) a and b
- (2) b only
- (3) a and c
- (4) c only

Scan/Click



Solution



Underlying Concept

#### Practice Questions:

1. The generative cell of a mature pollen grain is \_\_\_\_\_ to/than the vegetative cell.
  - (1) Bigger
  - (2) Smaller
  - (3) Equal in size
  - (4) Similar
2. How many cells are present in a mature male gametophyte?
  - (1) Two
  - (2) One
  - (3) Three
  - (4) Eight

3. In a pollen grain, germ pores are present in

- (1) Intine (2) Tapetum  
(3) Exine (4) Endothecium

#### AIATS-01-(OYM+CF)-Q.111

#### Topic: Reproduction in Organisms: Events in Sexual Reproduction

Read the statements A and B and select the correct option.

**Statement A:** In algae and bryophytes, number of male gametes produced is several thousand times the number of female gametes.

**Statement B:** In algae and bryophytes male gametes are transferred to the female gametes through external medium.

- (1) Only statement A is correct  
(2) Both statements A and B are correct and B is correct explanation of A  
(3) Both statements A and B are correct but B is not correct explanation of A  
(4) Both the statements are incorrect

Scan/Click



Solution

#### Practice Questions:

- The medium of transfer of male gamete to female gamete in algae and bryophytes is
  - Air
  - Water
  - Insects
  - Animals
- The fertilisation in majority of algae and bryophytes, is
  - Internal and external respectively
  - Internal in both
  - External in both
  - External and internal respectively
- Read the following statements and choose the correct option.
 

(A) In algae and bryophytes, a large number of male gametes fail to reach the female gamete.

(B) The male gamete in all the algae and bryophytes is non-motile.

  - A – true , B - true
  - A – false , B - false
  - A – true , B - false
  - A – false , B – true

#### AIATS-01-(OYM+CF)-Q.104

#### Topic: Reproduction in Organisms: Asexual Reproduction

Match the following columns and select the correct option.

	Column I		Column II
a.	<i>Amoeba</i>	(i)	Conidia
b.	<i>Chlamydomonas</i>	(ii)	Budding
c.	<i>Penicillium</i>	(iii)	Binary fission
d.	Yeast	(iv)	Zoospore

- a      b      c      d
- (1) (ii) (iv) (iii) (i)  
(2) (iii) (iv) (i) (ii)  
(3) (i) (iii) (ii) (iv)  
(4) (iv) (ii) (iii) (i)

Scan/Click



Solution

#### Practice Questions:

- A single celled organism, *Amoeba* reproduces by
  - Zoospores
  - Conidia
  - Binary fission
  - Oospores
- Which among the following reproduce asexually through zoospores?
  - All member of ascomycetes
  - Paramoecium*
  - A green alga, *Chlamydomonas*
  - Hydra*
- A member of ascomycetes, which can asexually reproduce through conidia is
  - Rhizopus*
  - Penicillium*
  - Paramoecium*
  - Amoeba*
- Select the organism which produce bud that remain attached initially to the parent cell which eventually gets separated and mature into new organism.
  - Chlamydomonas*
  - Paramoecium*
  - Sponges
  - Yeast

## AIATS 01 –(OYM+CF) – Q.118

**Topic: Sexual Reproduction in Flowering Plants: Pre-fertilisation – Structure and Events**

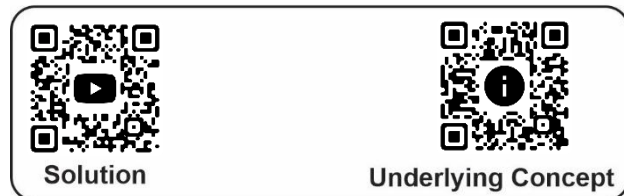
Read the below given features of flowers of a plant.

- Flowers are small and clustered into inflorescence.
- Flowers are fragrant.
- White coloured flowers.
- Flowers contain nectar.

How many of the above feature(s) is/are seen in flowers pollinated by insects?

- All 4
- Only 1
- Only 2
- Only 3

Scan/Click

**Practice Questions:**

- Floral rewards for insects that pollinate a flower can be
  - Safe place to lay eggs

- Nectar
- Various colours of petals
- Pollen

The **correct** ones are

- All (a), (b), (c) and (d)
  - All except (c)
  - Only (a) and (b)
  - Only (b) and (d)
- The flowers which are pollinated by insects
    - Cannot be colourful
    - Cannot be white in colour
    - Do not produce sticky pollen grains
    - Can be small sized
  - White coloured flowers of *Yucca* are pollinated by
    - An insect
    - Wind
    - Water current
    - A mammal
  - Night blooming flowers which are pollinated by insects usually
    - Do not produce nectar
    - Are fragrance-free
    - Are foul-odoured
    - Are white in colour



Based on  
AIATS-01 (OYM+CF)

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## CONCEPT STRENGTHENING SHEET

### CSS-01(Botany)

### Answer Key

#### AIATS-01-(OYM+CF)-Q.132

Topic: Sexual Reproduction in Flowering Plants:  
Post Fertilisation : Structures and Events

1. (3)
2. (4)
3. (3)

#### AIATS-01-(OYM+CF)-Q.115

Topic: Sexual Reproduction in Flowering Plants: Pre-  
fertilisation – Structures and Events

1. (2)
2. (1)
3. (3)

#### AIATS-01-(OYM+CF)-Q.111

Topic: Reproduction in Organisms: Events in Sexual  
Reproduction

1. (2)
2. (4)
3. (3)

#### AIATS-01-(OYM+CF)-Q.104

Topic: Reproduction in Organisms: Asexual  
Reproduction

1. (3)
2. (3)
3. (2)
4. (4)

#### AIATS 01 –(OYM+CF) – Q.118

Topic: Sexual Reproduction in Flowering Plants:  
Pre-fertilisation – Structure and Events

1. (2)
2. (4)
3. (1)
4. (4)

