

## Botany

### Chapterwise Practise Problems (CPP) for NEET

#### Chapter - Reproduction in Organisms

- Find the **incorrect** match from the following (with respect to the structures involved in vegetative propagation)
  - Bulbils – *Agave*
  - Leaf Buds – *Begonia*
  - Roots – *Chrysanthemum*
  - Aerial shoot – Sugarcane
- Mark the **incorrect** statement with respect to sexual reproduction
  - It can be uniparental or biparental
  - Organisms produced are called offsprings
  - It produces variations in offsprings
  - It is a fast but complex process
- Find the **correct** match from the following
  - Juvenile phase – Flowering
  - Polycarpic plant – *Bambusa tulda*
  - Senescent – Pre-reproductive phase
  - Monocarpic plants – Presence of inter flowering phase
- A. The two main pre-fertilization events are gametogenesis and gamete transfer

B. Haploid organisms multiply by meiotic cell division only

C. Meiocytes are product of gametes

D. External fertilization usually occurs in aquatic organisms

Which of the above statements is/are **incorrect**?

  - A and B
  - B and C
  - Only B
  - B and D
- How many of the following are monocarpic plants?
 

Wheat, Mango, Rice, Orange, Marigold, Carrot, Henbane

  - Two
  - Four
  - Five
  - Three
- Which one is **not** a correct statement?
  - Fusing gametes are morphologically different in homogametes
  - Isogamy is found in *Cladophora* and *Rhizopus*
  - Morphologically distinct fusing gametes are called heterogametes
  - Fusion of occurs antherozoid and egg occurs in *Chara*
- Match the following columns and select the **correct** option
 

Column - I	Column - II
A. Binary fission	(i) <i>Spirogyra</i>
B. Budding	(ii) <i>Chlamydomonas</i>
C. Fragmentation	(iii) <i>Amoeba</i>
D. Motile spores	(iv) Yeast

  - A (iii), B (iv), C (i), D (ii)
  - A (iii), B (iv), C (ii), D (i)
  - A (i), B (iv), C (ii), D (iii)
  - A (ii), B (i), C (iii), D (iv)
- In haploid organism meiosis is \_\_\_\_ **A** \_\_\_\_

In most diploid organism meiosis is \_\_\_\_ **B** \_\_\_\_

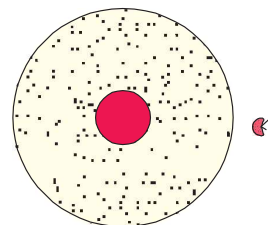
Select the option to fill in the blanks A and B

  - A – Gametic, B – Zygotic
  - A – Gametic, B – Gametic
  - A – Zygotic, B – Gametic
  - A – Zygotic, B – Zygotic
- In polycarpic plants the period between two flowering phase is used for building up resources hence called
  - Interphase
  - Recovery phase
  - Aeging phase
  - Senescent phase
- Zoospores are
  - Formed under favourable conditions
  - Thick walled
  - Always diploid structures
  - Vital link between two successive generations

11. The plant also known as 'Terror of Bengal' can **not** be controlled easily due to
- Its rapid vegetative multiplication
  - Absence of its natural predator in India
  - Its oxygen scavenging activities from water bodies
  - Both (1) and (2)
12. Find the **odd** one with respect to ploidy level
- Sperm
  - Egg
  - Anthozoid
  - Zygote
13. Which one is haploid
- Oospore
  - Zygospore
  - Oosphera
  - Zygote
14. The vital link between organism of one generation to next is
- Egg
  - A haploid structure
  - Pollen grain
  - A diploid structure
15. Green, multicellular, asexual bud of *Marchantia* is
- Protonema
  - Bulbil
  - Gemma
  - Rhizoid
16. Adventitious buds on roots are means of vegetative propagation in
- Dahlia*
  - Potato
  - Ginger
  - Turmeric
17. Read the given statements and choose which is **correct** ?
- All annuals and biennials are monocarpic
  - Interflowering stage is desirable for all perennial plants
  - Strobilanthus kunthiana* flowers once in 12 months
  - Senescent phase is pre-reproductive phase
18. Inter flowering period in the life cycle of a plant is
- Juvenile phase
  - Post reproductive phase
  - Recovery phase
  - Senescent period
19. Read the following statements and state **True (T)** or **False (F)**
- All the species of *Chara* are monoecious
  - Chara* shows protandrous condition
  - Marchantia* is dioecious
  - Specialised male sex organ in *Chara* is nucule

	A	B	C	D
(1)	F	T	F	T
(2)	T	F	F	T
(3)	T	T	F	F
(4)	F	T	T	F

20. Select the **correct** statement w.r.t. angiosperms
- Both male and female gametes are motile
  - Male gamete is motile and female gamete is non-motile
  - Male gamete is non-motile and female gamete is motile
  - Both male and female gametes are non-motile
21. Gametogenesis in sexually reproducing organisms takes place by
- Meiosis
  - Amitosis
  - Mitosis
  - Both (1) and (3)
22. Which of the following perennial plants bears flowers throughout the year ?
- Mango
  - Apple
  - Orange
  - China rose
23. Select the features which is **not** true w.r.t budding?
- Division of cytoplasm is unequal
  - Occurs in only single celled organisms
  - Parent cell remains intact
  - Protuberance is present
24. Which amongst the following plants have the shortest life span ?
- Banyan
  - Rose
  - Banana
  - Peepal
25. Clear cut distinction between all the three phases in life cycle is absent in
- Rice
  - Cabbage
  - Mango
  - Radish
26. Find the **correct** option w.r.t. given diagram.



- Heterogametes of *Fucus*
- Isogametes of *Cladophora*
- Heterogametes of *Cladophora*
- Isogametes of *Fucus*

27. Read the following statement carefully  
 "A mango tree is similar in size to peepal tree but has much shorter life span than it".  
 This statement means–
- (1) No individual is immortal except unicellular organisms
  - (2) Reproduction enables the continuity of species generation to generation
  - (3) There is large diversity in the biological world
  - (4) Life span of organisms is not necessarily correlated with their sizes
28. Zoospores
- (1) Are always haploid
  - (2) Are borne inside zoosporangium
  - (3) Germinates in unfavourable conditions generally
  - (4) More than one option is correct
29. Which of the following undergoes internal fertilisation ?
- (1) Algae only
  - (2) Bryophytes and pteridophytes only
  - (3) Pteridophytes only
  - (4) Bryophytes, pteridophytes, gymnosperms and angiosperms
30. Which of the following green alga has multicelled and jacketed sex organ ?
- (1) *Chara*
  - (2) *Spirogyra*
  - (3) *Cladophora*
  - (4) More than one option is correct
31. The cells undergoing meiosis are called
- (1) Meiocyte
  - (2) Gamete mother cell
  - (3) Meiospore
  - (4) Both (1) and (2)
32. Interflowering phase is absent in
- (1) *Melocanna bambusoides*
  - (2) Apple
  - (3) Orange
  - (4) Jackfruit
33. Sexual reproduction has following characteristics, **except**
- (1) Produces variations
  - (2) Usually biparental
  - (3) Rapid and complex process
  - (4) Syngamy present
34. Which of the following asexual reproduction occurs only in single celled organisms
- (1) Budding
  - (2) Binary fission
  - (3) Fragmentation
  - (4) Sporulation
35. Mark the **odd one** regarding water hyacinth
- (1) Introduced in India because of beautiful flowers and shape of leaves
  - (2) It turned out to be highly invasive aquatic weed
  - (3) Grows in flowing water
  - (4) Introduced in India, where its natural predator is absent
36. Mark the vegetative propagule with its example correctly
- (1) Tuber
  - (2) Bulbil
  - (3) Leaf buds
  - (4) Rhizome
  - (a) Ginger
  - (b) *Bryophyllum*
  - (c) *Agave*
  - (d) Banana
37. State **True** or **False**
- (i) Mango and peepal have similar life span because they are almost equal in size.
  - (ii) Unicellular organisms are immortal.
  - (iii) Clones are morphologically and genetically similar.
  - (iv) Gametes are not produced in sexual reproduction.
- (1) F,T,T,F
  - (2) T,F,T,F
  - (3) F,F,T,T
  - (4) F,T,F,T
38. From the given below organisms in box, how many can show vegetative propagule formation ?
- |   |
|---|
| Ginger, <i>Agave</i> , Potato, <i>Amoeba</i> ,<br><i>Penicillium</i> , Onion, <i>Eichhornia</i> |
|---|
- (1) Four
  - (2) Seven
  - (3) Five
  - (4) Three
39. Progenitor of next generation in seed is
- (1) Zygote
  - (2) Embryo
  - (3) Endosperm
  - (4) Perisperm
40. Which of the following shows clear cut vegetative, reproductive and senescent phases ?
- (1) Annuals only
  - (2) Annuals and biennials
  - (3) All perennials
  - (4) All flowering plants

41. Choose the wrong statement
- (1) Zygotic meiosis occurs in algae
  - (2) *Drosophila* possess four chromosomes in its meiocyte
  - (3) Bryophytes and pteridophytes require water for fertilization
  - (4) Angiosperms possess heterogametes
42. Select the **incorrect** statement :
- (1) Zygote formation occurs universally in all sexually reproducing organisms
  - (2) Syngamy occurs in sexually reproducing organisms only
  - (3) Flowering plants are heterogametic
  - (4) Higher plants and animals reproduce by sexual reproduction only
43. Choose the monoecious plant
- (1) *Vallisneria*                      (2) *Zea mays*
  - (3) *Carica papaya*                (4) *Phoenix*
44. In how many of the following, oogamous reproduction is found ?
- Chlamydomonas, Funaria, Fucus, Ulothrix, Volvox, Spirogyra*
- (1) 5                                      (2) 4
  - (3) 3                                      (4) 6
45. How many of the following statements are **true** ?
- (a) Cell division and cell differentiation are the stages of embryogenesis
  - (b) Water hyacinth drains O<sub>2</sub> from the water
  - (c) Monocarpic plants are not perennial
  - (d) Sexual reproduction is complex, elaborate and fast process
- (1) 3                                      (2) 4
  - (3) 2                                      (4) 1
46. Which of the following is **not** a post fertilisation stage ?
- (1) Maturation of ovule into seed
  - (2) Formation of zygote
  - (3) Formation of endosperm
  - (4) Maturation of ovary into fruit
47. Choose the **correct** statements from the following
- (i) *Chara* is monoecious
  - (ii) Meiocytes may be haploid or diploid and undergo meiosis
  - (iii) Wheat, Rice and Marigold are monocarpic annuals
  - (iv) In all perennial plants, juvenile, reproductive and senescent phases are distinct
- (1) i, ii, iii
  - (2) i, iii, iv
  - (3) i and iii
  - (4) iii and iv
48. Choose the **odd** one with respect to flowering pattern
- (1) Peepal, Mango
  - (2) Jackfruit, Orange
  - (3) *Bambusa*, Neelakuranji
  - (4) *Mangifera*, Apple
49. Which one is correct ?
- (1) *Pistia* is called Terror of Bengal
  - (2) All annuals and biennials are monocarpic
  - (3) Sexual reproduction can never be uniparental
  - (4) Asexual reproduction is always biparental
50. Vegetative reproduction
- (1) Involves gamete formation
  - (2) Involves spore formation
  - (3) Occurs with the help of asexual spores
  - (4) Is a type of asexual reproduction
51. *Bambusa*
- (1) Is a polycarpic plant
  - (2) Lacks interflowing phase
  - (3) Is a biannual plant
  - (4) Propagates vegetatively only

## ANSWERS

- |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|
| 1. (3)  | 2. (4)  | 3. (2)  | 4. (2)  | 5. (3)  | 6. (1)  | 7. (1)  |
| 8. (3)  | 9. (2)  | 10. (1) | 11. (4) | 12. (4) | 13. (3) | 14. (4) |
| 15. (3) | 16. (1) | 17. (4) | 18. (3) | 19. (4) | 20. (4) | 21. (4) |
| 22. (4) | 23. (2) | 24. (2) | 25. (3) | 26. (1) | 27. (4) | 28. (2) |
| 29. (4) | 30. (1) | 31. (4) | 32. (1) | 33. (3) | 34. (2) | 35. (3) |
| 36. (4) | 37. (1) | 38. (3) | 39. (2) | 40. (2) | 41. (2) | 42. (4) |
| 43. (2) | 44. (2) | 45. (3) | 46. (2) | 47. (3) | 48. (3) | 49. (2) |
| 50. (4) | 51. (2) |         |         |         |         |         |

