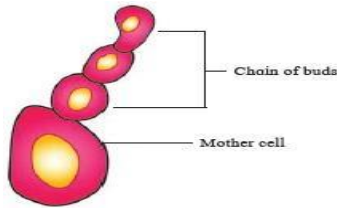


1. Reproduction in Lower and Higher Plants

- 1) _____ is a type of ovary having many numbers of ovules.
 (a) Uniovulate (b) multiovulate
 (c) Apocarpous (d) Anatropous
- 2) Each ovule is attached to the placenta by a small stalk called _____.
 (a) tissue (b) Funiculus
 (c) Hilum (d) Nucellus
- 3) Which of the following method is commonly practiced for vegetative reproduction?
 (a) fragmentation (b) budding
 (c) cutting (d) layering
- 4) In which of the following method two plants are joined in such a way that they grow as one plant.
 (a) cutting (b) Grafting
 (c) budding (d) Layering
- 5) Cutting is not a suitable method of reproduction for _____.
 (a) Bougainvillea (b) Rose
 (c) Blackberry (d) Apple
- 6) Helobial type of endosperm development occurs in _____ of monocotyledons.
 (a) Balsam (b) petunia
 (c) Asphodelus (d) Maize
- 7) From among the sets of terms given below, identify which is associated with the development of endosperm.
 (a) There are three types of endosperms based on mode of development.
 (b) The embryo and endosperm are seen to develop separately
 (c) It occurs in non angiospermic plant
 (d) The zygote divides to form pro embryo
- 8) _____ and triple fusion are two events of sexual reproduction in angiospermic flowering plant.
 (a) Hybridization (b) self-sterility
 (c) Syngamy (d) Embryogenesis
- 9) Among the terms listed below, which is not technically correct terms for double fertilization:
 (a) It was discovered by Nawaschin
 (b) It occurs in non angiospermic plant
 (c) Pollen tube enters ovule through the micropyle
 (d) Male and female gamete unite to form zygote
- 10) The ploidy level is NOT the same in
 (a) Integuments and nucellus
 (b) Root tip and shoot tip
 (c) Secondary nucleus and endosperm
 (d) Antipodals and synergids
- 11) Which of the following types require pollinator but result is genetically similar to autogamy?
 (a) Geitonogamy (b) Xenogamy
 (c) Apogamy (d) Cleistogamy
- 12) In angiosperms, endosperm is formed by/ due to
 (a) Free nuclear divisions of megaspore
 (b) polar nuclei
 (c) polar nuclei and male gamete
 (d) synergids and male gamete
- 13) Point out the odd one
 (a) Nucellus (b) Embryo sac
 (c) Micropyle (d) Pollen grain
- 14) _____ is the development of more than one embryo inside the seed.
 (a) Apomixis (b) Geitonogamy
 (c) polyembryony (d) Xenogamy
- 15) Parthenogenesis is a kind of _____.
 (a) Apomixis (b) Apogamy
 (c) polyembryony (d) Xenogamy
- 16) From among the statement below, choose the one which is suitable result for parthenocarpy.
 (a) fruit is developed without the process of fertilization.
 (b) Identical plants produced in this method
 (c) The fruit produced in this process are seeded plants
 (d) Parthenocarpy cannot be induced artificially
- 17) The kind of reproduction in yeast.



- (a) cutting (b) Budding
(c) Grafting (d) Spore formation

- 18) Asexual reproduction is the process which produces genetically _____ progeny from a single organism.
(a) identical (b) non identical
(c) different (d) similar
- 19) Point out the odd one
(a) Nucellus (b) Embryo sac
(c) Micropyle (d) Pollen grain
- 20) Budding type of asexual reproduction occurs in _____.
(a) spirogyra (b) paramecium
(c) yeast (d) penicillium
- 21) Binary fission is mainly occurring in _____.
(a) spirogyra (b) paramecium
(c) yeast (d) Amoeba
- 22) _____ is a condition when androecium matures earlier than the gynoecium.
(a) Protogyny (b) Heterostyly
(c) Protandry (d) Herkogamy
- 23) Epihydrophily is a condition when pollen grains reach to the stigma by means of _____.
(a) Air (b) Insects (c) Water (d) birds
- 24) _____ is a mechanical device to prevent self-pollination in a bisexual flower.
(a) Protogyny (b) Heterostyly
(c) Protandry (d) Herkogamy
- 25) _____ is a type of pollination in which bisexual flowers are pollinated by their own pollen grains present inside flower.
(a) Xenogamy (b) Autogamy
(c) Homogamy (d) Geitonogamy
- 26) Each monotheous anther contains _____ pollen sacs.
(a) two (b) three (c) one (d) four
- 27) The wall of mature anther consists of _____ layers.

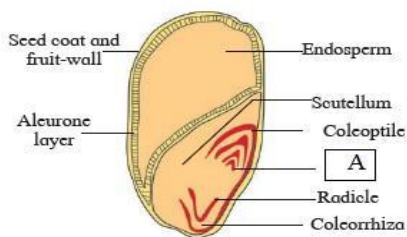
- (a) two (b) three (c) four (d) five

- 28) Each microspore mother cell divides _____ to form tetrad of haploid microspores.
(a) Mitotically (b) Meiotically
(c) Radically (d) longitudinally
- 29) An _____ stage of anther is represented by group of parenchymatous tissue surrounded by single layered epidermis.
(a) Formation (b) Mature
(c) immature (d) Division
- 30) choose the correct statement from the following
(a) Embryo develops into fruit.
(b) Apomixis is the phenomenon of formation of embryo.
(c) Fruit serves important propagating organ of a plant.
(d) Identical plants can be produced by polyembryony.
- 31) Which is NOT a correct statement for seed and fruit development:
(a) Pericarp is differentiated into fleshy fruit
(b) The integument gets transformed into the seed coat
(c) Fruit development is triggered by hormones
(d) pericarp is basically two layered.
- 32) In _____, the unreduced embryo sac is derived from the diploid megaspore mother cell.
(a) diplospory (b) Dormancy
(c) Apogamy (d) Apomixis
- 33) Find out the odd one.
(a) Scutellum protect the seeds in immature condition.
(b) Pericarp is three layered
(c) Ovule is transferred into the seed.
(d) the single shield shaped cotyledon is called scutellum.
- 34) Antipodal cells are group of cells located at the _____ end.
(a) Chalazal (b) placental
(c) Nucellus (d) Antipodal
- 35) Sucrose _____ pollen germination and tube growth.
(a) inhibit (b) induces
(c) reduces (d) Fuses

- 36) Hair like projections called----- which guide the pollen tube towards the egg.
 (a) Funicle (b) embryo sac
 (c) egg apparatus (d) filiform apparatus

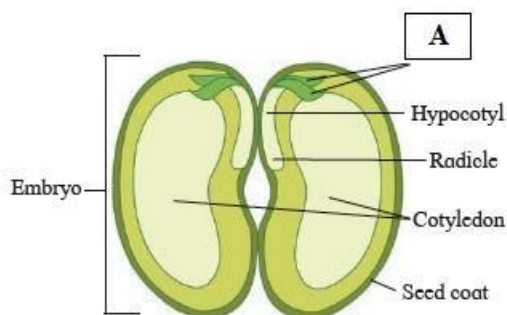
- 37) Sexual reproduction is characterised by ____ of the male and female gametes.
 (a) Fusion (b) Formation
 (c) cutting (d) production

- 38) Marked portion A indicate?



- (a) Embryo (b) Epicotyl
 (c) Endosperm (d) Plumule

- 39) Marked portion A indicate?



- (a) Embryo (b) Epicotyl
 (c) Endosperm (d) Plumule

- 40) Which type of reproduction does the given figure indicate?



- (a) Budding (b) Cutting
 (c) Grafting (d) Fragmentation

- 41) The single shield shaped cotyledon is called ____
 (a) coleoptiles (b) scutellum
 (c) perisperm (d) tegmen

- 42) The ploidy level is NOT the same in
 (a) Integuments and nucellus
 (b) Root tip and shoot tip
 (c) Secondary nucleus and endosperm
 (d) Antipodals and synergids

- 43) Insect pollinated flowers usually possess
 (a) Sticky pollens with rough surface
 (b) Large quantities of pollens
 (c) Dry pollens with smooth surface
 (d) Light coloured pollens

- 44) Which of the following types require pollinator but result is genetically similar to autogamy?
 (a) Geitonogamy (b) Xenogamy
 (c) Apogamy (d) Cleistogamy

- 45) If diploid chromosome number in a flowering plant is 12, then which one of the following will have 6 chromosomes?
 (a) Endosperm (b) Leaf cells
 (c) Cotyledons (d) Synergids

- 46) In ovule, meiosis occurs in
 (a) Integument
 (b) Nucellus
 (c) Megaspore
 (d) Megaspore mother cell

- 47) Match the column.

Column I Structure before seed formation	Column II Structure after seed formation
A. Funiculus	I. Hilum
B. Scar of Ovule	II. Tegmen
C. Zygote	III. Testa
D. Inner integument	IV. Stalk of seed
	V. Embryo

- (a) A - V, B - I, C - II, D - IV
 (b) A - III, B - IV, C - I, D - V
 (c) A - IV, B - I, C - V, D - II
 (d) A - IV, B - V, C - III, D - II

- 48) In angiosperms, endosperm is formed by/ due to
 (a) Free nuclear divisions of megaspore

- (b) polar nuclei
- (c) polar nuclei and male gamete
- (d) synergids and male gamete

49) For successful grafting the stock and scion are from _____ species.

- (a) different (b) same
- (c) identical (d) nonidentical

50) The lowermost cell of suspensor is known as:

- (a) Micropyle (b) Haustorium
- (c) Hypophysis (d) Chalaza cell

1. Reproduction in Lower and Higher Plants Keys

- 1) Ans. (b)**
- 2) Ans. (b)**
- 3) Ans. (c)**
- 4) Ans. (b)**
- 5) Ans. (d)**
- 6) Ans. (c)**
- 7) Ans. (a)**
- 8) Ans. (c)**
- 9) Ans. (b)**
- 10) Ans. (c)**
- 11) Ans. (a)**
- 12) Ans. (c)**
- 13) Ans. (d)**
- 14) Ans. (c)**
- 15) Ans. (b)**
- 16) Ans. (a)**
- 17) Ans. (b)**
- 18) Ans. (a)**
- 19) Ans. (d)**
- 20) Ans. (c)**
- 21) Ans. (d)**
- 22) Ans. (c)**
- 23) Ans. (c)**
- 24) Ans. (d)**
- 25) Ans. (b)**
- 26) Ans. (a)**

27) Ans. (c)

28) Ans. (b)

29) Ans. (c)

30) Ans. (b)

31) Ans. (d)

32) Ans. (a)

33) Ans. (a)

34) Ans. (a)

35) Ans. (b)

36) Ans. (d)

37) Ans. (a)

38) Ans. (d)

39) Ans. (b)

40) Ans. (c)

41) Ans. (b)

42) Ans. (c)

43) Ans. (a)

44) Ans. (a)

45) Ans. (d)

46) Ans. (d)

47) Ans. (c)

48) Ans. (c)

49) Ans. (b)

50) Ans. (c)