SEXUAL REPRODUCTION IN FLOWERING PLANTS

1. What would be the ploidy of cells of tetrad ?
(1) n (2) 2n (3) 3n (4) 4n

2. Which of the following statements are correct ?
(1) Pollen grains are rich in nutrients.
(2) In some cereals like rice and wheat pollen grains lose viability within 30 minutes of their release
(3) In some members of rosaceae, leguminosae and solanaceae, pollen grains maintain viability for months
(4) All of the above

3. The number of ovules in an ovary may be
(1) One (2) Many
(3) Two (4) One to many

4. Each ovule has one or two protective envelopes called
(1) Micropyle (2) Integuments
(3) Hilum (4) Chalaza

5. Chalaza represents the
(1) Tip of the ovule (2) Base of the ovule
(3) Both (1) & (2) (4) Stalk of the ovule

6. Ovules generally differentiate a single megaspore mother cell in the
(1) Micropylar region (2) Chalazal region
(3) Both 1 & 2 (4) Integument region

7. Polar nuclei are situated in the central cell
(1) Below the egg apparatus
(2) Above the egg apparatus
(3) Below the antipodals
(4) All of the above

8. In embryosac, three cells are grouped together at the micropylar end to constitute
(1) Antipodals (2) Synergids
(3) Egg apparatus (4) Polar nuclei

9. The synergids have special cellular thickening at the micropylar tip, called
(1) Antipodals (2) Filiform apparatus
(3) Obturators (4) Vascular tissue

10. An example of insect pollinated flower, in which flower provides safe place to lay eggs for insect is
(1) *Vallisneria* (2) *Salvia*
(3) *Amorphophallus* (4) Maize

11. Endosperm development precedes embryo development, because
(1) Embryo provides nutrition to developing endosperm
(2) Endosperm provides nutrition to developing embryo
(3) Endosperm development starts after embryo development
(4) All of the above

12. The portion of embryonal axis above the level of cotyledons is called
(1) Hypocotyl (2) Epicotyl
(3) Tigellum (4) Scutellum

13. The portion of embryonal axis below the level of cotyledons is called
(1) Hypocotyl (2) Epicotyl
(3) Tigellum (4) Scutellum

14. Genetically geitonogamy is
(1) Allogamy (2) Xenogamy
(3) Autogamy (4) Cleistogamy

15. Endosperm is completely consumed by developing embryo in
(1) Castor (2) Coconut
(3) Wheat (4) Pea

16. Endosperm may persist in mature seed in
(1) Pea (2) Castor
(3) Groundnut (4) Beans

17. Usually, How many embryosacs are present in an ovule?
(1) 1 (2) 2
(3) 3 (4) Many

18. What would be the genetic nature of apomictic embryo?
(1) n
(2) 3n
(3) 2n
(4) n or 2n like mother plants

19. What will be the ploidy of the cells of functional megaspore and female gametophyte respectively:
(1) n, n (2) 2n, 2n (3) n, 2n (4) 2n, n

20. In Castor plant :
(1) Autogamy is possible
(2) Geitonogamy is possible
(3) Both are possible
(4) Both are not possible

21. Each lobe of a typical anther in angiosperm having two theca it is called :

(1) Monothecous (2) Dithecous

(3) Monosporangiate (4) Tetrasporangiate

22. Which of the following part of the flower serves as a landing platform for pollen grain ?

(1) Stigma (2) Ovary

(3) Style (4) Ovule

23. Enclosed within the integuments is a mass of cells called

(1) Micropyle (2) Nucellus

(3) Chalaza (4) Embryosac

24. Example of plants, which contains cleistogamous flowers :

(1) *Oxalis*

(2) *Commelina*

(3) *Viola* (Common pansy)

(4) All of the above

25. Cleistogamous flowers are invariably :

(1) Autogamous (2) Xenogamous

(3) Geitonogamous (4) All are possible

26. Wind pollinated flowers often have.....ovule in each ovary.

(1) Many (2) Two (3) One (4) Three

27. Pollen tube enters into the embryosac through :

(1) Chalaza (2) Integument

(3) Filiform apparatus (4) Funiculus

28. Syngamy results in the formation of :

(1) Zygote

(2) Primary endosperm nucleus

(3) Endosperm

(4) Fruit

29. Embryo develops at which end of embryosac?

(1) Micropylar end

(2) Chalazal end

(3) Funiculus

(4) Outside the ovary

30. The microsporangia develop further and become pollen sacs. In anther these pollen sacs extends

(1) Transverslly

(2) Longitudinally

(3) Obliquely

(4) Sometimes transversaly and some times longitudinally

31. From outer to inner what is the sequence of wall layers in anther lobes?

(1) Epidermis, middle layers, tapetum, endothecium

(2) Epidermis, endothecium, tapetum, middle layers

(3) Epidermis, endothecium, middle layer, tapetum

(4) Tapetum, middle layers, endothecium, epidermis

32. Due to which of the following chemical deposition pollen grains are well preserved as fossils

(1) Pollenkitt (2) Callose

(3) Sporopollenin (4) Pectocellulose

33. Which of the following pollen structure exhibits a fascinating array of patterns and designs (Sculpturing pattern)?

(1) Germpores (2) Exine

(3) Intine (4) Tapetum

34. Regarding to formation of pollen grain from microspore which of the following statement is incorrect

(1) Generative cell is bigger

(2) Vegetative cell possess irregularly shaped nucleus

(3) Generative cell floats in cytoplasm of vegetative cell

(4) Vacuole is present in vegetative cell

35. Which of the following is not a pollen grain caused disease?

(1) Asthma (2) Bronchitis

(3) Hayfever (4) Malaria

36. Regarding to number of ovules in ovary select out the odd one

(1) Wheat (2) Orchids

(3) Paddy (4) Mango

37. Nucellus, the mass of cells enclosed within the integuments, provide nutrition to

(1) Embryosac (2) Embryo

(3) Seed (4) Ovule

38. During embryo sac formation how many nuclei out of eight nucleus go through cytokinesis or wall formation?

(1) All eight (2) Two

(3) Six (4) Four

39. Geitonogamy is the transfer of pollen grains from anther to stigma of another flower of the same plant is :-

(1) Functionally cross pollination

(2) Genetically self pollination

(3) Ecologically cross pollination

(4) All the above

40. Regarding to cross pollination which of the following statement is incorrect?

(1) Plants use two abiotic and one biotic agent

(2) Majority of plants use abiotic agents for pollination

(3) Production of enormous amount of pollen grains is concerned to compensate uncertainity and loss of pollens

(4) Pollination by wind is more common among abiotic pollinations

41. About wind pollination which of the following is incorrect?

(1) Light and non sticky pollengrains

(2) Well exposed stamens

(3) Feathery stigma

(4) Highly scented flowers

42. Which of the following is probable reason of limited distribution of bryophytes and pteridophytes?

(1) Jacketed multicellular sex organs

(2) Absence of roots

(3) Absence of seeds

(4) Need of water for transfer of male gametes

43. Regarding to type of pollination which of the following is odd one

(1) *Vallisneria* (2) *Hydrilla*

(3) Water lily (4) *Zostera*

44. The genetic mechanism which inhibit pollen germination or pollentube growth in pistil so that self pollination can be prevented is known as

(1) Inbreeding depression

(2) Self incompatibility

(3) Inter specific incompatibility

(4) Heterosis

45. In which of the following plants both autogamy and geitonogamy is absent

(1) Maize (2) Mango

(3) Papaya (4) Castor

46. Perisperm is present in

(1) Mango (2) Guava

(3) Black pepper (4) Pea

47. Which of the following is not involved in post fertilisation events

(1) Endosperm and embryo development

(2) Maturation of ovules into seed

(3) Maturation of ovary into fruit

(4) Degeneration of nucellus

48. The structure in which few leaf primordia and shoot apex of monocot embryo remain enclosed is

(1) Coleoptile (2) Coleorhiza

(3) Epiblast (4) Epicotyl

49. In mature seed how much amount of moisture is present

(1) 5-10 percent

(2) 10-15 percent

(3) 15-20 percent

(4) 20-25 percent

50. Seed is the basis of our agriculture. Which of the following is/are crucial for storage of seeds, so that they can be used as food through out the year and also to raise crop in the next season

(1) Dehydration (2) Dormancy

(3) Vermiculture (4) Both 1 and 2

ANSWERS KEY

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