DIRECTORATE OF SCHOOL EDUCATION TAMILNADU

12NPCB07 (2023-24)	NEET PRACTICE QUESTIONS (TEST-7)	Class : XII Time : 1.15 hrs Total Marks : 240

Answer key

12th – BOTANY

31. Ans : D

A sudden change in the genetic material of an organisms is called 'Mutation'. The term 'Mutation' was introduced by Hugo de Vries and he also proposed 'Mutation Theory'.

32. Ans : B

Sharbati Sonora developed from Mexican Variety (Sonora 64) by irradiating of gamma rays. This was done by M.S. Swaminathan (Father of Indian green revolution) and his teem.

33. Ans : C

34. Ans : C

Loss of a pair of homologous chromosomes or two pairs of homologous chromosomes from the diploid set are called Nullisomy ($2n – 2$).

35. Ans : B

36. Ans : C

The factors which cause genetic mutation are called mutagenic agents or mutagens. Radioactive isotopes, neutron are example of Physical mutagens.

37. Ans : B

Triticale is a Hexaploidy (Cross between tetraploid wheat Triticum durum (macaroni wheal) and diploid secale cereale (rye) hybrid plant. It has high protein content of wheat with rye's high content of the amino acid lysine.

38. Ans A

39. Ans : C

Fabaceae stamens are united in two bundles i.e., diadelphous. Anther is dithecous i.e, each lope of anther having two theca. Monoadelphous and epipetalous stamen is found in solanaceae family.
Epiphyllous stamen is found in Liliaceae family.

40. Ans : B

41. Ans : C

Members of Liliaceae possess Tricarpellary, Syncarpous with superior ovary. The ovary is trilocular with two to many ovules in each Loculus.

42. Ans : A

43. Ans : B

Chilli is the member of Solanaceae, in which flowers are bisexual actinomorphic ($\oplus$), calyx – 5 and gamopetalous, corolla – 5 and gamopetalous, androecium – 5 free, epipetalous basifixed, inferior, gynoecium – bicarpellary, Syncarpous and ovary superior. So floral formula of chilli is

44. Ans :C

The plants belonging to the family Fabaceae such as soybean, pea, sem, moong, gram etc, have the floral formula % $\male \female\ K_{(5)} C_{1+2+(2)} A_{(9)+1} \underline{G}_1$

45. Ans : B

Flowers in pea have diadelphous stamens. The floral formula for Solanaceae is $\oplus \male \female\ K_{(5)}\ C_{(5)}\ A_5 \underline{G}_{(2)}$

Answer key

11th – BOTANY

31. Ans : C

Fabaceae stamens are united in two bundles i.e., diadelphous. Anther is dithecous i.e, each lope of anther having two theca. Monoadelphous and epipetalous stamen is found in solanaceae family.
Epiphyllous stamen is found in Liliaceae family.

32. Ans : B

33. Ans : C

Members of Liliaceae possess Tricarpellary, Syncarpous with superior ovary. The ovary is trilocular with two to many ovules in each Loculus.

34. Ans : A

Vexillary aestivation is a characteristic of family Fabaceae. In it, the posterior largest petal (standard) overlaps two lateral petals (wings) which in turn overlap two anterior petals (keel). It is also called Papilionaceous corolla.

35. Ans : B

Chilli is the member of Solanaceae, in which flowers are bisexual actinomorphic ($\oplus$), calyx – 5 and gamopetalous, corolla – 5 and gamopetalous, androecium – 5 free, epipetalous basifixed, inferior, gynoecium – bicarpellary, Syncarpous and ovary superior. So floral formula of chilli is $\oplus \male K_{(5)} C_{(5)} A_5 \underline{G}_{(2)}$

36. Ans :C

The plants belonging to the family Fabaceae such as soybean, pea, sem, moong, gram etc, have the floral formula $\% \; \male \; K_{(5)} C_{1+2+(2)} A_{(9)+1} \underline{G}_1$

37. Ans : B

Flowers in pea have diadelphous stamens. The floral formula for Solanaceae is $\oplus \male K_{(5)} \; C_{(5)} \; A_5 \underline{G}_{(2)}$

38. Ans : C

The Gynoecium of Allium cepa is Tricarpellary and Syncarpous. Ovary superior, trilocular with two ovules in each locyule on axile placentation.

39. Ans : B

40. Ans : D

Taxonomic hierarchy was introduced by Carolus Linnaeus. It is the arrangement of various taxonomic levels in descending order starting from Kingdom up to species.

41. Ans : A:

Botanical nomenclature is 'independent' of Zoological and bacteridogical nomenclature.

42. Ans : C

Statement I is correct. Statement II is not correct, because Thalami florae, Disc florae and Calyciflorae are series of polypetalae (sub-class I) The 3 sub – classes of Dicotyledonous is polypetaloe, Gamopetalae and Monochlamydeal.

43. Ans : D

44. Ans :A

Herbarium specimen is defined as a pressed and dried plant sample that is permanently glued or strapped to a sheet of paper along with a documentation label.

45. Ans : B