

Multiple Choice Questions - Grades 10

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Multiple Choice Questions Grade Levels: 10 Number of Questions: 21

best answer for each question. Mark your answers clearly. Question 1 Based on Figure 5.21, what part of the *Pisum sativum* (pea) plant is indicated by the label (d)?
A. The entire flower
B. The arrangement of petals
C. The reproductive parts (stamens and pistil)
D. A longitudinal section of the carpel

Question 2 The text describes the pea flower as 'zygomorphic'. What does this term mean?
A. The flower can be divided into two identical halves in any plane.
B. The flower can be divided into two similar halves by only one particular vertical plane.
C. The flower has its floral parts arranged in whorls of four.
D. The flower lacks petals.

Question 3 The special arrangement of petals in the Fabaceae family, consisting of a posterior standard, two lateral wings, and two anterior keels, is called:
A. Valvate corolla
B. Twisted corolla
C. Papilionaceous corolla
D. Imbricate corolla

Question 4 In the floral formula for the Fabaceae family, $\text{K}(5) \text{C}_{1+2+(2)} \text{A}_{10}$ represent?
A. Ten stamens all fused into one bundle.
B. Ten stamens, with nine free and one fused.
C. Ten stamens arranged in two bundles, one of nine and one of one.
D. Nine stamens and one pistil.

Question 5 Which of the following common Indian pulses belongs to the family Fabaceae as mentioned in the text?
A. Rice
B. Wheat
C. Arhar (pigeon pea)
D. Maize

Question 6 The term 'diadelphous' is used to describe the androecium of the pea flower. What does it signify?
A. Stamens are united into a single group.
B. Stamens are all free from one another.
C. Stamens are attached to the petals.
D. Stamens are united into two distinct groups or bundles.

Question 7 According to the text, what type of fruit is characteristic of the Fabaceae family?
A. Berry
B. Drupe
C. Legume
D. Capsule

Question 8 The description 'gynoecium: ovary superior, monocarpellary' for Fabaceae means the flower has:
A. A single carpel positioned above the other floral parts.
B. Multiple carpels positioned below the other floral parts.
C. A single carpel fused with the stamens.
D. Multiple free carpels positioned above the other floral parts.

Question 9 Which plant from the Fabaceae family is mentioned as a source of edible oil, commonly known as 'moongphali' in India?
A. Soyabean
B. Groundnut
C. Lupin
D. Sunhemp

Question 10 What does the term 'non-endospermic' signify about the seeds of the pea plant?
A. The seed has a large, persistent endosperm.
B. The endosperm is completely consumed by the embryo during development.
C. The seed lacks an embryo.
D. The seed develops without fertilization.

Question 11 The floral diagram in Figure 5.21 (f) shows the outermost whorl of five fused parts. What does this represent?
A. A polypetalous corolla
B. A gamosepalous calyx
C. A polysepalous calyx
D. A gamopetalous corolla

Question 12 The arrangement of petals in a pea flower, where the large standard petal overlaps the two wings, which in turn overlap the keel, is known as:
A. Valvate aestivation
B. Twisted aestivation
C. Vexillary aestivation
D. Quincuncial aestivation

Question 13 Indigofera, a plant mentioned under 'Economic Importance', was historically significant in India for producing:
A. A strong fibre for ropes
B. A medicinal compound
C. Fodder for cattle
D. A natural blue dye

Question 14 The handwritten note on the page mentions that Solanaceae flowers are 'pentamerous'. What does this imply?
A. The floral parts are arranged in multiples of three.
B. The floral parts are arranged in multiples of four.
C. The floral parts are arranged in multiples of five.
D. The floral parts are arranged asymmetrically.

Question 15 Which of the following is NOT a characteristic feature of the family Fabaceae as described on the page?
A. Diadelphous stamens
B. Papilionaceous corolla
C. Superior ovary
D. Endospermic seeds

Question 16 The plant 'Mullathi', mentioned as having medicinal value, is the common name for:
A. Lupin
B. Trifolium
C. Glycyrrhiza (Licorice)
D. Sesbania

Question 17 A farmer is cultivating moong dal. Based on the characteristics of its family (Fabaceae), what kind of flower symmetry and fruit would the farmer observe?
A. Actinomorphic (radial) symmetry and a berry fruit.
B. Zygomorphic (bilateral) symmetry and a legume fruit.
C. Asymmetric and a capsule fruit.
D. Actinomorphic (radial) symmetry and a legume fruit.

Question 18 In the papilionaceous corolla, the 'keel' encloses the stamens and pistil. What is the most likely functional significance of this?
A. To attract pollinators with bright colors.
B. To produce nectar.
C. To protect the reproductive organs and facilitate a specific pollination mechanism.
D. To aid in seed dispersal by wind.

Question 19 Based on the handwritten notes, which of the following plants would have a fundamentally different leaf venation and root system compared to the pea plant?
A. Gram (chana)
B. Sugarcane
C. Soyabean
D. Groundnut

Question 20 The floral formula $\text{A}_{(9)+1} \text{G}_{1+1}$ provides a summary of the flower. What does the symbol 'G₁' with a line underneath it signify?
A. Inferior ovary with one carpel
B. Superior ovary with one carpel
C. Many free carpels
D. Syncarpous gynoecium.

Question 21 The family Solanaceae is commonly called the 'potato family'. Where is this family primarily distributed according to the text?
A. Only in arctic regions
B. Only in