

Answer Key - Grades 10

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Explanation: The text explicitly states under 'Floral characters' of the family that the inflorescence is 'racemose'. Answer 2 Correct Answer: Not specified Explanation: Zygomorphic symmetry (bilateral symmetry) means a flower can be divided into two identical halves along only one vertical plane.

Actinomorphic (radial symmetry) flowers can be divided along any vertical plane. Answer 3 Correct Answer: Not specified Explanation: 'K' stands for Calyx (sepals). The number '5' indicates there are five sepals, and the parentheses '()' signify that they are fused (gamosepalous). Answer 4 Correct Answer: Not specified Explanation: The papilionaceous corolla consists of a large posterior

'standard' (vexillum), two lateral 'wings', and two anterior fused petals forming a boat-shaped 'keel' which encloses the essential organs (stamens and pistil). Answer 5 Correct Answer: Not specified Explanation: The term 'diadelphous' means the stamens are united into two groups or bundles. In

peas, the formula $A(9)+1$ specifically shows that nine stamens are fused to form a tube, while the tenth posterior stamen remains free. Answer 6 Correct Answer: Not specified Explanation: The text clearly states under the 'Fruit' section for the family Fabaceae that the characteristic fruit is a

'legume', which is a type of pod. Answer 7 Correct Answer: Not specified Explanation: The text lists 'arhar' as an example of a pulse obtained from the Fabaceae family. Wheat, rice, and millet are cereals and belong to the grass family (Poaceae). Answer 8 Correct Answer: Not specified

Explanation: In non-endospermic (or exalbuminous) seeds, the endosperm is consumed during embryo development, and the food reserves are transferred to and stored in the fleshy cotyledons. Answer 9 Correct Answer: Not specified Explanation: Under 'Economic Importance', the text lists

'dye (Indigofera)'. Indigofera tinctoria is the famous plant source for indigo dye. Answer 10 Correct Answer: Not specified Explanation: 'G' stands for Gynoecium. The number '1' indicates it is

monocarpellary (composed of a single carpel). The line underneath the G (G1) signifies that the ovary is superior. Answer 11 Correct Answer: Not specified Explanation: The text introduces

section 5.9.2 by stating, 'It is a large family, commonly called as the 'potato family'.' This refers to the family Solanaceae. Answer 12 Correct Answer: Not specified Explanation: The floral diagram

shows the large posterior petal (standard) overlapping the two lateral petals (wings), which in turn overlap the two fused anterior petals (keel). This specific descending imbricate arrangement is called vexillary aestivation. Answer 13 Correct Answer: Not specified Explanation: Under 'Economic

Importance', the text lists 'fodder (Sesbania, Trifolium)'. Trifolium is commonly known as clover, a widely used fodder crop. Answer 14 Correct Answer: Not specified Explanation: The text lists

'medicine (mullathi)'. Mullathi, also known as licorice (Glycyrrhiza glabra), is a well-known medicinal plant used in traditional Indian medicine (Ayurveda) for cough and throat ailments. Answer 15

Correct Answer: Not specified Explanation: This notation describes the papilionaceous corolla. C1 represents the single, large posterior standard petal. C2 represents the two free lateral wing petals. C(2) represents the two anterior petals that are fused to form the keel. Answer 16 Correct Answer:

Not specified Explanation: The term 'pentamerous' means that the floral appendages (like sepals, petals, stamens) are present in sets or multiples of five. This is a characteristic feature noted for the Solanaceae family. Answer 17 Correct Answer: Not specified Explanation: The text describes the

flower of Fabaceae as 'zygomorphic', not 'actinomorphic'. Actinomorphic flowers have radial symmetry, while zygomorphic flowers have bilateral symmetry. Answer 18 Correct Answer: Not

specified Explanation: The handwritten list of monocots includes 'Sugarcane'. Gram, Soyabean, and Pea are all dicots belonging to the Fabaceae family. Answer 19 Correct Answer: Not specified

Explanation: The L.S. of the carpel, also supported by the floral diagram (f), shows the ovules attached in rows along the ventral suture of the ovary wall. This arrangement is known as marginal

placentation. Answer 20 Correct Answer: Not specified Explanation: The section on 'Economic Importance' lists 'edible oil (soyabean, groundnut)', indicating these two plants are key sources of oil within the family. Answer 21 Correct Answer: Not specified Explanation: 'Gamo-' is a prefix

meaning fused or united. 'Sepalous' refers to the sepals. Therefore, 'gamosepalous' means the sepals are fused together, which is indicated by parentheses K(5) in the floral formula. Answer 22 Correct Answer: Not specified Explanation: The text explicitly states that the Solanaceae family 'is widely distributed in tropics, subtropics and even temperate zones.' Answer 23 Correct Answer: Not specified Explanation: All three listed characteristics (zygomorphic flowers, monocarpellary

gynoecium, diadelphous stamens) are key distinguishing features of the family Fabaceae as

described in the text. Answer 24 Correct Answer: Not specified Explanation: The term 'locular'

refers to the chambers or locules within an ovary. 'Uni-' means one. Therefore, a unilocular ovary is