Multiple Choice Questions - Grades 10

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best answer for each question. Mark your answers clearly. Question 1 According to the description of the family Fabaceae, what type of inflorescence is characteristic of the pea plant?A. CymoseB. RacemoseC. SolitaryD. Spike Question 2 The text states the flower of a pea plant is 'zygomorphic'. What does this term mean?A. The flower can be divided into two identical halves in any radial plane.B. The flower has no symmetry.C. The flower can be divided into two similar halves by only one particular vertical plane.D. The floral parts are arranged in a spiral. Question 3 The corolla of the pea flower is described as 'papilionaceous'. This unique structure is composed of a posterior standard, two lateral wings, and two anterior parts forming a:A. KeelB. TubeC. HoodD. Spur Question 4 The Androecium in the Fabaceae family is described as 'diadelphous'. What does this arrangement refer to?A. Ten stamens fused into a single bundle.B. Stamens are free from each other.C. Stamens are fused into two bundles.D. Stamens are attached to the petals. Question 5 In the floral formula for the pea family, % &¥ K(5) C1+2+(2) A(9)+1 G1, signify?A. Five free sepalsB. Five fused sepalsC. Five petalsD. Five carpels Question 6 Based on the text's description of the Gynoecium (G1), the pea plant has a:A. Superior ovary and is multicarpellaryB. Inferior ovary and is monocarpellaryC. Superior ovary and is monocarpellaryD. Inferior ovary and is multicarpellary Question 7 The Fabaceae family is a major source of pulses. Which of the following, commonly used in Indian dishes like dal, is mentioned as an example?A. WheatB. RiceC. MuliathiD. Arhar (Pigeon pea) Question 8 Besides pulses, plants like soyabean and groundnut from this family are important sources of:A. FibreB. Edible oilC. DyeD. Timber Question 9 What type of fruit is characteristic of the Fabaceae family, as seen in the pea plant?A. DrupeB. BerryC. CapsuleD. Legume Question 10 The text mentions that the seeds of the pea plant are 'non-endospermic'. This means that:A. The endosperm is not formed during fertilization.B. The endosperm is consumed by the embryo during development.C. The seed has a very large and persistent endosperm.D. The seed lacks an embryo. Question 11 Which plant from the Fabaceae family is mentioned as a source of blue dye?A. SesbaniaB. TrifoliumC. IndigoferaD. Lupin Question 12 The floral formula A(9)+1 describes the diadelphous condition. What does this specific arrangement entail?A. Nine stamens in one bundle and one stamen in a second bundle.B. Ten stamens arranged in a single circle.C. Nine stamens fused to the corolla and one free.D. Five long and five short stamens. Question 13 Muliathi (Liquorice), a common ingredient in traditional Indian medicine (Ayurveda), is mentioned as a medicinal plant belonging to which family?A. SolanaceaeB. LiliaceaeC. BrassicaceaeD. Fabaceae Question 14 What is the function of the keel in a papilionaceous corolla like that of a pea flower?A. To attract pollinators with its bright color.B. To produce nectar.C. To enclose the essential reproductive organs (stamens and pistil).D. To provide a landing platform for insects. Question 15 The handwritten note mentions Solanaceae as the 'potato family'. According to the text, this family is widely distributed in which climatic zones?A. Only Arctic zonesB. Only Desert zonesC. Tropics, subtropics and even temperate zonesD. Only Alpine regions Question 16 What type of aestivation, where the largest petal (standard) overlaps the two lateral petals (wings), which in turn overlap the two smallest anterior petals (keel), is found in the pea flower?A. ValvateB. TwistedC. ImbricateD. Vexillary Question 17 Based on the floral diagram (Figure 5.21 f), how are the ovules arranged inside the ovary?A. On a central axis (Axile placentation)B. At the base of the ovary (Basal placentation)C. Along the ridge of the ovary wall (Marginal placentation)D. On the outer wall of the ovary (Parietal placentation) Question 18 Sunhemp (*Crotalaria*) is an example of a plant from the Fabaceae family that is primarily grown for its:A. Edible seedsB. Sweet fruitC. FibresD. Medicinal roots Question 19 The handwritten note on the page contrasts a 'tetramerous' flower (like in Brassicaceae) with a 'pentamerous' flower (like in Solanaceae). How many petals does the pea flower (Fabaceae) have?A. ThreeB. FourC. FiveD. Ten Question 20 The symbol 'G1' with a line underneath it in the floral formula indicates that the gynoecium is:A. Inferior and composed of one carpelB. Superior and composed of many fused carpelsC. Superior and composed of one carpelD. Inferior and composed of many free carpels Question 21 Which part of the pea flower is 'polypetalous'?A. The calyx, as the sepals are free.B. The corolla, as the petals are free.C. The androecium, as the stamens are free.D. The gynoecium, as the carpels are free. Question 22 The handwritten notes list wheat, rice, and sugarcane as monocots. How does the pea plant, a dicot, fundamentally differ from these plants based on the information provided about its seed?A. Pea plants produce flowers, while monocots do not.B. Pea seeds store food in cotyledons (non-endospermic), while monocot seeds often store food in the