

ANSWER KEY

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|---------|---------|---------|----------|---------|---------|
| 1. [C] | 2. [D] | 3. [A] | 4. [D] | 5. [B] | 6. [D] |
| 7. [C] | 8. [D] | 9. [B] | 10. [B] | 11. [A] | 12. [B] |
| 13. [C] | 14. [D] | 15. [C] | 16. [B] | 17. [A] | 18. [D] |
| 19. [B] | 20. [C] | 21. [C] | 22. [A] | 23. [B] | 24. [C] |
| 25. [D] | 26. [D] | 27. [D] | 28. [A] | 29. [C] | 30. [C] |
| 31. [A] | 32. [A] | 33. [D] | 34. [C] | 35. [B] | 36. [C] |
| 37. [C] | 38. [D] | 39. [A] | 40. [B] | 41. [B] | 42. [B] |
| 43. [D] | 44. [A] | 45. [C] | 46. [C] | 47. [C] | 48. [C] |
| 49. [D] | 50. [B] | 51. [C] | 52. [D] | 53. [B] | 54. [A] |
| 55. [A] | 56. [C] | 57. [B] | 58. [A] | 59. [B] | 60. [A] |
| 61. [C] | 62. [A] | 63. [C] | 64. [D] | 65. [A] | 66. [A] |
| 67. [B] | 68. [A] | 69. [C] | 70. [B] | 71. [D] | 72. [C] |
| 73. [A] | 74. [A] | 75. [A] | 76. [B] | 77. [D] | 78. [A] |
| 79. [A] | 80. [C] | 81. [A] | 82. [A] | 83. [B] | 84. [B] |
| 85. [A] | 86. [B] | 87. [B] | 88. [C] | 89. [D] | 90. [D] |
| 91. [B] | 92. [C] | 93. [B] | 94. [D] | 95. [A] | 96. [C] |
| 97. [C] | 98. [A] | 99. [C] | 100. [C] | | |

2. *Agrobacterium tumefaciens* is well known for its ability to transfer DNA between itself and plants and for this reason it has become an important tool for genetic engineering.
6. Alcohol is absorbed in the upper gastrointestinal tract by diffusion and then rapidly distributes to all organs. Alcohol is eliminated primarily by oxidation in the liver where it is degraded to acetaldehyde followed by acetate and then $\text{CO}_2 + \text{H}_2\text{O}$. There are three major pathways of alcohol metabolism and same enzymatic pathways exist in the brain. However, in the liver alcohol induced injury.
10. Apomixis in flowering plants means the asexual formation of a seed from the maternal tissues of the ovule, avoiding the processes of meiosis and fertilization, leading to embryo.
11. Scutellum is a small shield like structure in a modified cotyledon in the embryo. It is present in monocots. (especially members of grass family).
20. Plants have two different types of transport tissues, xylem and phloem. Xylem transports water and solutes from the roots to the leaves.
22. Endangered species of animal or plant that is seriously at the risk of extinction.
26. Characteristics of Anemophilous flowers are small and inconspicuous flowers, they do not develop nectarians nor are they scented, produce large quantities of pollen. The stigma are often large, feathery and very sticky, to extend well outside the flower. Thus the pollen is more likely to reach them.
31. Exponential phase / log phase is characterized by rapid growth in population which continues till enough food is available.
32. The guard cells are found in monocot plant are dumbbell shaped. Eg. Rice, Wheat, Corn, Sugar cane, Bamboo, Onion, Garlic.
42. The main role of iodine is in the production of hormone in the thyroid gland.
44. Coccyx is a tail bone. Vestigial organs are those which do not have any use in present form. The Coccyx is a remnant of the tail bone of our ancestors who used to have a tail. That means it was part of the tail. Other mammals find their tails useful for balance, but when humans learned to walk, the tail became useless and evolution converted it to just some fused vertebrae we call a coccyx.
50. Fruit flies share 75% of the genes that cause disease with humans, so scientists can learn about human genetics by studying fruit fly genetics.
60. Echolocation is a physiological process for locating distant or invisible objects (such as prey) by sound waves reflected back to the emitter (such as bat) from the objects.
84. Pneumatophores are an aerial root in mangroves etc specialized for gaseous exchange.

No reason needed for rest of the questions.