

Class 12 - Biology

Section A

1. **(a)** All of these
Explanation: All of these
2. **(a)** Soil fertility
Explanation: Crop rotation is the method of agriculture in which leguminous plants are grown between two cereal crops. The root nodule of this bacterium fix the atmospheric nitrogen and increase the fertility of the soil.
3. **(c)** Behavioural attribute
Explanation: The organisms move away temporarily from stressful habitat to a more suitable habitat is called migration. Migration adaptation is a behavioral attribute.
4. **(d)** Organic farming
Explanation: Organic farming is the practice of agriculture in which no chemical substance is used as fertilizers, pesticides, or insecticides. Biofertilizers are used to provide nutrients.
5. **(b)** Panda
Explanation: Panda
6. **(b)** Menstrual
Explanation: Menstrual
7. **(d)** One normal: one albino
Explanation: One normal: one albino
8. **(b)** Reduction division occurs in the megaspore mother cells
Explanation: Reduction division occurs in the megaspore mother cells
9. **(c)** only iv
Explanation: Francois Jacob and Jacques Monod - Lac operon
10. **(d)** The anticoagulant hirudin is being produced from transgenic Brassica napus seeds.
Explanation: The anticoagulant hirudin is being produced from transgenic Brassica napus seeds.
11. **(b)** Carry amino acids to ribosome
Explanation: Carry amino acids to the ribosome.
12. **(a)** Saccharomyces cerevisiae
Explanation: Saccharomyces cerevisiae
13. **(b)** Both A and R are true but R is not the correct explanation of A.
Explanation: Mendel chose garden pea as plant material for his experiments, since it had the following advantages:
 - i. well defined characters
 - ii. bisexual flowers
 - iii. predominantly self-fertilisation
 - iv. easy hybridisationGarden pea having following characteristics proved a very good experimental material. But it was not the only reason for Mendel's success.
Main reason was preparation and selection of pure lines by own work and proper statistical analysis of large number of samples, of one character at a time.
14. **(c)** A is true but R is false.
Explanation: Duck-billed Platypus bears hair and mammary-glands mammalian characters, but also possess some of the reptilian characters such as laying of eggs, presence of cloaca and some skeletal similarities. Thus, it is a connecting link between reptiles and mammals.
15. **(a)** Both A and R are true and R is the correct explanation of A.
Explanation: Oncogenic viruses produce chemicals that bring about uncontrolled growth and division of cells by either direct effect on cellular oncogene or through transposons. Cancer is a group of diseases characterised by uncontrolled growth of cell

