

## Competitive Exams: Botany MCQs (Practice-Test 16 of 104)

1. Legume root nodules contain leg hemoglobin. Its function is to regulate
  - a. Expression of nif genes
  - b. Dinitrogenase activity
  - c. Oxygen supply
  - d. Nodule growth
2. Dinitrophenol inhibits cell function by disrupting
  - a. Citric acid cycle
  - b. Oxidative phosphorylation
  - c. Glycolysis
  - d. Gluconeogenesis
3. Which one of the following mineral elements does NOT appear to be structurally bound in plants?
  - a. Nitrogen
  - b. Calcium
  - c. Phosphorus
  - d. Potassium
4. Match List I (Element) with List II (Process) and select the correct answer:

### List-I

- a. Molybdenum
- b. Manganese
- c. Sulphur
- d. Calcium

### List-II

- a. Photosynthesis
- b. Respiration
- c. Nitrate reduction
- d. Cell division
- e. Protein synthesis

- |    | <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> |
|----|----------|----------|----------|----------|
| a. | 5        | 2        | 3        | 1        |
| b. | 3        | 1        | 5        | 4        |
| c. | 2        | 1        | 4        | 5        |
| d. | 3        | 2        | 4        | 5        |

5. Urease is an enzyme that catalyses the hydrolysis of urea into  $\text{NH}_3$  and  $\text{CO}_2$ . The metallic cofactor of the enzyme is

- a. Ni
- b. Fe
- c. Mn
- d. Cu

6. Some antibiotics act ionospheres, which means that they

- a. Interfere directly with bacterial cell wall synthesis
- b. Increase cell membrane permeability to specific ions
- c. Inhibit both transcription and translation
- d. Inhibit electrophoresis separation of ions

7. The disease little leaf of fruit trees is caused by the deficiency of

- a. Copper
- b. Zinc
- c. Manganese
- d. Cobalt

8. Match List I with List II and select the correct answer:

List-I

- a. Field capacity
- b. Permanent wilting
- c. Water deficit
- d. Soil moisture tension

List-II

- a. Forces which hold water to the soil
- b. Combine effect of accelerated water loss and retarded water absorption
- c. Water content of a soil
- d. Loss of water from plant with little chance of regaining turgidity

    A    B    C    D

- a.   3  4  2  1
- b.   1  2  3  4
- c.   2  4  3  1
- d.   3  1  2  4

9. Which one of the following alterations in DNA is likely to be lethal?

- a. Substitution of adenine for cytosine
- b. Substitution of methyl cytosine for cytosine
- c. Deletion of three nucleotides
- d. Insertion of one nucleotide

10. Which one of the following statements about ribosome's is correct?

- a. They are an integral part of transcription
- b. They are found both free in the cytoplasm and bound to membranes
- c. They are composed of RNA, DNA and protein
- d. They are bound so tightly that they cannot dissociate under physiological conditions

11. An increased melting temperature for duplex DNA results from a high content of

- a. Adenine + guanine
- b. Cytosine + thymine
- c. Cytosine + guanine
- d. Adenine + cytosine

12. The post-translational processing of secretory proteins takes place in

- a. Plastids
- b. Golgi bodies
- c. Mitochondria
- d. Nucleus

13. The brief addition of a radioactive compound to the sample reaction mixture followed by its removal and its replacement by an excess of unlabelled compound during the study of a biosynthetic pathway is called

- a. Autoradiography
- b. Molecular hybridization
- c. Pulse-chase experiment
- d. Partial sequence analysis

14. Florigen is considered to be a combination of

- a. Gibberellin and cytokinin
- b. Gibberellin and anthesin
- c. Cytokinin and abscisic acid
- d. Cytokinin and anthesin

15. Organs such as stolons and rhizomes, which grow at right angles to the pull of gravity are called to be

- a. Plagiogravitropic
- b. Diagravitropic
- c. Agravitropic
- d. Semigravitropic