

Competitive Exams: Agriculture MCQs (Practice-Test 42 of 56)

1. The unconsolidated material on the underlying rock called
 - a. regolith
 - b. Soil
 - c. Solum
 - d. Earth

2. If a soil has a bulk density of 1.50 mg/m³ and a particle density of 2.65 mg/m³ than the percentage por space of that soil will be
 - a. 35.0
 - b. 38.5
 - c. 53.4
 - d. 48.5

3. Active soil forming factor would include
 - a. Vegetation and to pography
 - b. Time, topography and climate
 - c. Time, and vegetation
 - d. Vegetation and climate

4. The black cotton soils of central India have been derived from
 - a. Granites
 - b. Grandiosities
 - c. Basalt
 - d. rhyolite

5. Which one of the following minerals is LEAST weather able in soil?
 - a. Olivine

b. Quartz

c. Calcite

d. Biotitic

6. The given diagram is that of soil textural triangle. A soil having 15% clay, 65% sand and 20% silt will be classified on the basis of the given diagram, as Figur (Triangle)

a. Sandy clay loam

b. Loam

c. Loamy sand

d. Sandy loam

7. Match List I (Microbial reaction) with List II (Soil organisms) and select the correct answer:

List-I

List-II

a. Sulphate reduction

a. Thiobacillus

b. Sulphite oxidation

b. Desulfotomaculum

c. Nitrate oxidation

c. rhodospirillum

d. Nitrogen fixation

d. Nitrobactor

A B C D

a. 1 2 3 4

b. 2 1 4 3

c. 2 1 3 4

d. 1 2 4 3

8. Properties of four different soils are given in the following table

- Soil property Soils Soil I Soil II Soil III Soil IV Organic matter (%)

- 3.1 0.8 2.0 0.4
- Clay (%) 38.1 10.0 30.2 12.0
- Sand (%) 51.2 74.0 50.1 70.0
- Type o clay (%) 2: 1 1: 1 2: 1 1: 1 pH 5.2 5.2 5.2 5.2

Which one of these soils will require the largest quantity of lime to raise its pH to 6.5?

- a. Soil I
- b. Soil II
- c. Soil III
- d. Soil IV

9. The given chart shows the classification of irrigation water: Irrigation water having $\text{Na}^+ = 15$ me/liter ($\text{Ca}^{2+} + \text{Mg}^{2+}$), = 8 me/liter and conductivity = $\text{EC} = 106 = 2300$ $\mu\text{mho}/\text{cm}$ can be classified as

- a. C4S2
- b. C3S3
- c. C4S3
- d. C1S1

10. The following figure shows the relationship between nutrient concentration in the plants and yield of crops: Which protein (s) of the curve fall (s) in hidden hunger zone?

- a. A and B
- b. B and C
- c. B and C
- d. A alone

11. The best estimate of the available P in phosphatic fertilizer is obtained from the

- a. Water soluble fraction
- b. Citrate-soluble fraction
- c. Citrate soluble fraction
- d. Water soluble and citrate soluble fractions

12. Given that $dy/dx > 1$ then increase of yield per unit of growth factor $A =$ maximum yield $Y =$ Yield without growth factor $C =$ a constant Mitcherlich equation for evaluation of soil fertility is given

- a. $dy (A y) C/dx = 2$
- b. $dy (Y A) C/dx = 1$
- c. $dy (A y)/dx < 1$
- d. $dy (A Y) C/dx > 1$

13. E-blue is

- a. Defined as the isotopic ally exchangeable P in the soil and soil solution as determined by crop uptake
- b. Defined as the isotopically exchangeable P in the soil as determined by ^{32}P
- c. The same as the L-lue
- d. The difference between A and L values

14. Consider the following statements: Vermicom post is considered to be better because

- a. It does not requir turning of compost material
- b. It needs less composting time
- c. It takes place at a comparatively low temperature
- d. It has higher enzymatic activity

Of these statements

- a. 1, 2, 3 and 4 are correct
- b. 1 and 2 are correct
- c. 2, 3 and 4 are correct
- d. 1, 3 and 4 are correct

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

List-I

List-II

- a. Gypsum
- b. 17: 17: 17

- a. Magnesium fertilizer
- b. Micronutrient fertilizer

- | | |
|---------------|--------------------------------|
| c. Serpentine | c. Calcium fertilizer |
| d. Chelates | d. Compound/complex fertilizer |

A B C D

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

16. Sulphate of Potash is preferable to Muriate of Potash (MOP) for tobacco because

- a. The chlorine in the MOP affects the burning quality of tobacco
- b. The chlorine in the MOP increases the nicotine content of tobacco
- c. The application of MOP results in the luxur consumption of potassium
- d. The sulphate iron helps to increase the availability of other nutrients

17. Match List I (reactants used for the preparation of fertilizers) with List II (Fertilizer produced) and select the correct answer:

List-I

- a. rock phosphate, phosphoric acid
- b. rock phosphate, phosphoric acid nitric acid, ammonia
- c. Ammonia, gypsum CO₂
- d. Ammonia CO₂

List-II

- a. Urea
- b. Ammonium sulphate
- c. Nitr phosphate
- d. Concentrated super phosphate

A B C D

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

18. Entr of potassium ions root hair in soils having a low potassium ion content in the soil is mediated through

- a. Ion exchange through
- b. Mass flow phenomenon
- c. Donnan equilibrium process
- d. Utilization of metabolic energy

19. Consider the following statements: According to cohesion theor for the ascent of sap, water moves from the roots through the stems to the leaves in tall trees because of

- a. Forces of root pressure.
- b. The gradient in decreasing water potentials from the soil, through the plant to the leaves.
- c. Forces of adhesion of water to cell walls, especially in the leaves.
- d. Forces of cohesion between water molecules.

Of these statements

- a. 1, 2 and 3 are correct
- b. 2, 3 and 4 are correct
- c. 1, 3 and 4 are correct
- d. 1, 2 and 4 are correct

20. Which one of the following physiological processes requires close coordination of three different organdies such as mitochondria, chloroplast and peroxisome?

- a. Photosynthesis
- b. Photorespiration
- c. respiration
- d. Protein synthesis

21. Which of the following are characteristic of C₄ plants?

- a. There are two CO₂ acceptors namely PEP and RuBP
- b. RuBP carboxylase is present in the mesophyll cells.
- c. The first stable product is a 4-carbon compound.
- d. Oxygen does not have any inhibitory effect on the process.

Select the correct answer using the codes given below:

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

22. Which one of the following is a set of high energy products of the light reaction of photosynthesis that are used in dark reaction?

- a. ATP and plastocyanin
- b. ATP and NADP
- c. ATP and (NADPH + H⁺)
- d. Plastoquinone and ferredoxin

23. Which of the following pair of hormones and bioassay techniques are correctly matched?

- a. Cytokinin—Radish cotyledon test
- b. Gibberellic acid—Rice second leaf test
- c. Indole—Acetic acid coleoptile curvature test

Select the correct answer using the codes given below:

- a. 2 and 3
- b. 1 and 2

c. 1 and 3

d. 1, 2 and 3

24. Which of the following statements about carotenoids are correct?

- a. Carotenoids present in coleoptile affect the destruction of auxin by light.
- b. Pollens generally carried by insects for pollination contains carotenes whereas carotenoid pigments are rarely detected in pollens of wind pollinated flowers.
- c. They cause a suitable drop in light intensity leading to a gradient of increasing auxin concentration from the lighted side to the darker side.
- d. They absorb blue light to produce phototropic curvature in oat coleoptiles in phycomyces and also in certain blue-green algae.

Select the correct answer using the codes given below:

a. 2, 3 and 4

b. 1, 2 and 4

c. 1, 3 and 4

d. 1, 2 and 3

25. Match List I (Sources of character) with List II (Character exploited) and select the correct answer:

List-I

List-II

- | | |
|--------------|--|
| a. Norin- | a. resistance to Puccinia recondite causing leaf rust in wheat |
| b. Opaque-2 | b. Semi dwarfing habit in rice |
| c. Dee-e-o-n | c. Protein content in maize |
| d. Lr genes | d. Short stature in wheat |

A B C D

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

26. Given that the somatic chromosome number of *Triticum aestivum* is $2n = 6x = 42$, which one of the following pair is correctly matched?

- a. Monosome— $N = 40$
- b. Trisome— $2n = 42$
- c. Tetrasome— $= 41$
- d. Nullisome— $2n = 41$

27. When breaks occur in two chromosomes simultaneously in a nucleolus and the broken chromosomes rejoin in a new manner it results in

- a. Deletion
- b. Duplication
- c. Translocation
- d. Inversion

28. Consider the following statements:

- a. Heterochromatin is concentrated near the nuclear envelope and near the nucleolus.
- b. Euchromatin is visible during interphase and is distributed throughout the nucleoplasm
- c. Euchromatin is concentrated near the nucleolus and near the nuclear envelope

Of these statements

- a. 1, 2 and 3 are correct

- b. 1 and 2 are correct
- c. 2 and 3 are correct
- d. 1 and 3 are correct

29. The segregation of individuals in the F₂ or in a later generation of a cross, which shows a more extreme development of a character than either parent is termed as

- a. Hybridization
- b. Heterosis
- c. Linkage
- d. Transgressive segregates

30. Heritability may be defined as the

- a. Interaction product of genotype with environment
- b. Sum total of hereditary material present in a species
- c. Degree of resemblance between the original and the selected plants
- d. Proportion of phenotypic variability which is due to heredity