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Question Paper Code: 91007

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

First Semester

Agriculture Engineering

19UCY107 - CHEMISTRY FOR AGRICULTURIST

(Regulation 2019)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The ability of an atom to attract the shared electron pair towards itself is known as _____ CO1- R
(a) Coordination (b) Electro negativity (c) Bonding (d) Electron Affinity
2. The type of hybridization is exhibited by C_2H_2 is _____ CO1- R
(a) SP (b) SP^2 (c) SP^3 (d) None of the above
3. _____ bond is account for many physical features of metals such as luster, conduction and strength. CO1- R
(a) Metallic (b) Ionic (c) Covalent (d) Hydrogen
4. Hardness is expressed in terms of $CaCO_3$ equivalent, because CO2- R
(a) It is highly insoluble salt (b) Its molecular weight is 100
(c) Its equivalent weight is 50 (d) All the above
5. The reagent used in Calgon conditioning is CO2- R
(a) $Na_2[Na_4(PO_3)_6]$ (b) $CaCO_3$ (c) $[NaAlO_2]$ (d) $Mg(OH)_2$
6. Which of the following salt is not responsible for hardness of water? CO2- R
(a) $CaCO_3$ (b) $MgCO_3$ (c) $Na(HCO_3)$ (d) None of the Above
7. The type of soil has the greater surface area is _____ CO3- R
(a) Loam (b) Sand (c) Clay (d) Red soil

8. All the type of soil contains _____, organic matter, water and air. CO3- R
(a) Minerals (b) Micro organisms (c) Radioactive elements (d) Oil and gases
9. Butter, vegetable oil, Cholesterol are examples for CO4- R
(a) Proteins (b) Food preservatives (c) Lipids (d) Carbohydrates
10. Which one of the following vitamin is soluble in water CO4- R
(a) A (b) B (c) D (d) K

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain Valance Band Theory (VBT) in detail with examples. CO1- U (8)
Discuss its applications and limitations.
12. Write the principle of EDTA method. Describe the estimation of CO2- U (8)
hardness of water by EDTA method.
13. Write a note on mineral materials and organic matters present in the CO3- U (8)
soil.
14. Explain the need and role of food preservatives, colouring agents and CO4- U (8)
flavoring agents in food industry. Name few examples for each
category.
15. Explain the carbonate, phosphate and Calgon conditioning of water CO2- U (8)
to overcome the boiler troubles.

