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|  | | | **R.V. College of Engineering**  **(*Autonomous Institute affiliated to VTU, Belagavi)***  **Department of Chemistry**  **Sub: Engineering Chemistry (16CH22)**  **II Semester, ‘G’ Section ‘EIE’ branch**  **Quiz-3 (For Absentees)** | | | | | | | | | | | | | | | | | | | |
| **Date: 08/04/2017** | | | | | | |  |  |  | |  | | **Duration: 15 minutes** | | | | | | **Max Mark: 10** | | | |
| **Roll No.:** | |  | | | **Section:** | | | | **Name of the Student :** | | | | | | |  | | | **Signature:** | | | |
| **Q No** | | | 1 | 2 | | 3 | | | 4 | 5 | | 6 | | 7 | 8 | 9 | 10 | Version | Total Marks | Signature of Faculty | | |
| **Marks** | | |  |  | |  | | |  |  | |  | |  |  |  |  | **A** |  |  | | |
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| ***Instruction: Answer ALL the questions*** | | | | | | | | | | | | | | | | | | | |  |  |  |
| **Sl. No** | **Questions** | | | | | | | | | | | | | | | | | | | Marks | BT | CO |
| 1 | What is a quantum dot? | | | | | | | | | | | | | | | | | | | 1 | L1 | 1 |
| 2 | Suggest a best wet chemical method for the preparation of MgO nanoparticles from Magnesium nitrate. | | | | | | | | | | | | | | | | | | | 1 | L2 | 2 |
| 3 | Among Magnesium carbonate, Iron oxide, Ca(NO3)2 and Glycine, Which precursor can be used as a reductant in solution combustion method? | | | | | | | | | | | | | | | | | | | 1 | L3 | 3 |
| 4 | Why do we prefer oxygen free environment in CVD method for CNT preparation? | | | | | | | | | | | | | | | | | | | 1 | L2,L3 | 2 |
| 5 | How does the surface area of nanomaterial vary with decrease in the particle size? | | | | | | | | | | | | | | | | | | | 1 | L1,L2 | 1 |
| 6 | Interpret the effect of covalent functionalization on the structure of CNT with suitable example. | | | | | | | | | | | | | | | | | | | 1 | L4 | 4 |
| 7 | Propose the significance of surface plasmon resonance phenomenon. | | | | | | | | | | | | | | | | | | | 1 | L3,L4 | 3 |
| 8 | Write the steps involved in Hummer’s method used for graphene preparation. | | | | | | | | | | | | | | | | | | | 1 | L2,L3 | 2 |
| 9 | Analyse the structural changes happen when graphene is doped with ‘N’ element. | | | | | | | | | | | | | | | | | | | 1 | L4,L5 | 4 |
| 10 | Highlight the structural differences of various forms of SWCNT? | | | | | | | | | | | | | | | | | | | 1 | L3,L4 | 3 |
| **Course Outcomes (As per Bloom’s revised taxonomy)** | | | | | | | | | | | | | | | | | | | | | | |
| 1.      Explain the principles of Chemistry in Engineering (L1). | | | | | | | | | | | | | | | | | | | | | | |
| 2.      Apply the knowledge of Chemistry in solving societal problems related public health, safety and environmental issues (L2, L3). | | | | | | | | | | | | | | | | | | | | | | |
| 3.      Identify, analyze and interpret Engineering problems associated with chemistry to achieve solutions (L3, L4). | | | | | | | | | | | | | | | | | | | | | | |
| 4. Developing solutions for problems associated with water, fuel, corrosion, battery, nanomaterial and polymer technologies (L4). | | | | | | | | | | | | | | | | | | | | | | |