

Subject Code: R10204/R10

Set No - 1

I B. Tech II Semester Supplementary Examinations April/May - 2017

ENGINEERING CHEMISTRY-II

(Common to All Branches)

Time: 3 hours**Max. Marks: 75**

Answer any **FIVE** Questions

All Questions carry equal marks

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1. a) Give the mechanism of addition polymerization and condensation polymerization. What is the minimum functionality required for a monomer to form a cross-linked polymer?
b) Write the structures and two properties and two uses of : i) PTFE ii) Bakelite (8+7)
2. a) Explain the functions of different ingredients used in compounding of plastics.
b) Write a note on fibre reinforced plastics. (8+7)
3. a) How are they following produced? (i)Buna-N ii) Polyurethane. Mention their properties and uses.
b) Explain the process of vulcanization of rubber. (8+7)
4. a) Discuss any two methods for the synthesis of carbon nanotubes.
b) Write a short note on quantum dots and nanowires. (8+7)
5. a) What are the constituents of cement? Discuss the mechanism of setting and hardening of cement.
b) Explain liquid glazing of ceramics. (8+7)
6. a) What do you understand with the knocking of a fuel? Report the ways to improve the anti knocking characteristics of a fuel.
b) Explain the mechanism of lubrication process. (8+7)
7. a) Discuss the various factors influencing the rate of corrosion.
b) What are different types of corrosion resistant floor finishes? Explain. (8+7)
8. a) Explain any two methods for green synthesis.
b) What are the green chemistry principles? (8+7)