

**I B. Tech II Semester Supplementary Examinations, April/May - 2019**  
**ENGINEERING CHEMISTRY-II**  
(Com. to All Branches)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions  
All Questions carry **Equal** Marks

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1. a) Discuss the classification of polymers with examples. (8M)  
b) Explain why polymers are conducting. Write about intrinsically doped conducting polymers. (7M)
2. a) What are bullet proof plastics? How are they prepared? Mention their applications. (7M)  
b) Explain the function of different additives used in compounding of plastics with examples. (8M)
3. a) How is natural rubber prepared? What are its disadvantages? (8M)  
b) Discuss the preparation and applications of polyurethanes. (7M)
4. a) What is a nanomaterial? What are carbon nanotubes? Explain a method how carbon nanotubes are prepared. (8M)  
b) Write any three properties and applications of carbon nanotubes. (7M)
5. a) Explain dimensional stability and refractoriness of refractory. (8M)  
b) What are ceramics? Discuss its classification. (7M)
6. a) Discuss about (i) reforming and (ii) knocking. (8M)  
b) What is a lubricant? Explain thin fluid mechanism of lubricant. (7M)
7. a) Explain how the following are affecting corrosion: (8M)  
(i) Overvoltage  
(ii) Passivity  
(iii) temperature  
(iv) Position of metal in galvanic series.  
b) Give a brief account on special paints. (7M)
8. a) Describe any two methods of green synthesis. (8M)  
b) Discuss the need of green chemistry. (7M)