

Code No: R161219

**R16****SET - 1****I B. Tech II Semester Regular/Supplementary Examinations, April/May - 2018****ENGINEERING CHEMISTRY**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)  
2. Answering the question in **Part-A** is Compulsory  
3. Answer any **FOUR** Questions from **Part-B**
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**PART -A**

1. a) Why is plasticized PVC better than rigid PVC? (2M)
- b) Mention any three characteristics taken in consideration while selecting a good fuel. (2M)
- c) What are irreversible cells? Give example. (2M)
- d) What are nanomaterials and carbon nanotubes? (2M)
- e) Why is LCV less than GCV? (2M)
- f) What kind of ions causes alkalinity to water? (2M)
- g) Define fire and pour point. (2M)

**PART -B**

2. a) Why should rubber be vulcanized? In addition to vulcanization, what additives are also added? (7M)
- b) Explain the preparation and uses of polyethylene. (7M)
3. a) What are rocket fuels? How are they classified? Explain. (7M)
- b) Explain diesel knocking and petrol knocking. (7M)
4. a) Discuss calomel electrode with a neat sketch. (7M)
- b) Explain pitting and differential aeration corrosion. (7M)
5. a) What are liquid crystals? Discuss lyotropic liquid crystals with example. (7M)
- b) Discuss the preparation and properties of fullerenes. (7M)
6. a) Discuss internal treatment of water. (7M)
- b) Explain breakpoint chlorination. (7M)
7. a) Discuss the classification of refractories. Give examples. (7M)
- b) Explain thermal insulators. (7M)