

College of Engineering, Pune

F. Y. B. Tech

END SEM EXAMINATION 08-09

Spring Semester

AS 103 - Chemistry

Date- 18/04/2009
Academic Year: 2008- 09

Timing: 3 hrs
Max. Marks: 50

Instructions:

- 1 Solve all the questions
 - 2 Figures to right indicates full marks.
 - 3 Do not keep mobile phones with you, the handsets will be retained permanently by exam cell.
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- Q. 1 Explain the following terms with suitable example:- (any 3) **10**
- i) Addition polymerization
 - ii) Degradation of polymer
 - iii) Vulcanization of rubber
 - iv) Number Average Molecular weight.
- Q. 2 Solve any two:- **10**
- i) Explain hydrogen evolution mechanism of corrosion.
 - ii) Compare between amorphous & crystalline solids.
 - iii) Explain any two methods of corrosion control.
- Q. 3 Explain any two:- **10**
- i) Instrumental methods of analysis are free from personal errors.
 - ii) Defects increase applicability of engineering materials.
 - iii) Liquid fuels are most suitable commercial fuels.
- Q. 4 Explain any three methods of gasoline manufacture **8**
- Or
- Explain characteristic properties of liquid lubricants.
- Q.5 Suggest most suitable material/method for following application **12**
- (Any twelve)
- 1 Protection of underground pipe line from corrosion
 - 2 Lubricant for steam cylinder
 - 3 Lubricant for cryostat
 - 4 Lubricant for lathe machine for metal cutting
 - 5 Gaskets for IC engine

- 6 Lubricant for Train wheels
- 7 Refrigerator door linings
- 8 Lubricant for Steel cupboard hinges
- 9 Utensils for kitchen
- 10 Waterproof roof
- 11 CDs and other magnetic data storage devices
- 12 Estimation of Iron from blood sample
- 13 Estimation of Pb from gasoline
- 14 Waterproof stockings
- 15 Bosch and Lomb Contact lenses

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