

Code No: R07A1BS04

R07**Set No. 2****I B.Tech Examinations, December 2010****APPLIED CHEMISTRY****Civil Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Teflon is an addition polymer, it behaves like a thermosetting polymer. Give Reasons.
 (b) What are the different kinds of additives used in the fabrication of plastics?
 (c) What is crepe rubber and reclaimed rubber? [4+8+4]
2. (a) Write a brief account on
 i. pitting corrosion and
 ii. pipeline corrosion.
 (b) What is the principle of cathodic protection? Explain impressed current method of protection. Mention its merits and demerits. [8+8]
3. (a) What is meant by blended oils? Explain the functions of various additives added to the lubricants?
 (b) What are viscosity & viscosity index of lubricating oil? [12+4]
4. (a) Discuss the disadvantages of using hard water for various industries.
 (b) Explain the factors responsible for the corrosion of a boiler. Discuss the measures for its prevention. [8+8]
5. (a) List the laboratory tests for cement and describe them.
 (b) Write about the decay of concrete and its prevention. [10+6]
6. (a) Define Refractories and what are the criteria of a good refractory?
 (b) Give the classification of refractories with suitable examples. [6+10]
7. (a) What is cementation? Explain the various types of cementation process?
 (b) Why galvanization of iron is preferred to tinning? [12+4]
8. (a) What is potable water? Discuss the treatment of water for domestic purpose.
 (b) Calculate temporary hardness and total hardness of a sample of water containing $\text{Mg}(\text{HCO}_3)_2 = 7.3 \text{ mg/L}$; $\text{Ca}(\text{HCO}_3)_2 = 16.2 \text{ mg/L}$; $\text{MgCl}_2 = 9.5 \text{ mg/L}$; $\text{CaSO}_4 = 13.6 \text{ mg/L}$. [12+4]

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R07**Set No. 4****I B.Tech Examinations, December 2010****APPLIED CHEMISTRY****Civil Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Discuss the disadvantages of using hard water for various industries.
 (b) Explain the factors responsible for the corrosion of a boiler. Discuss the measures for its prevention. [8+8]
2. (a) What is cementation? Explain the various types of cementation process?
 (b) Why galvanization of iron is preferred to tinning? [12+4]
3. (a) List the laboratory tests for cement and describe them.
 (b) Write about the decay of concrete and its prevention. [10+6]
4. (a) Teflon is an addition polymer, it behaves like a thermosetting polymer. Give Reasons.
 (b) What are the different kinds of additives used in the fabrication of plastics?
 (c) What is crepe rubber and reclaimed rubber? [4+8+4]
5. (a) Write a brief account on
 - i. pitting corrosion and
 - ii. pipeline corrosion.
 (b) What is the principle of cathodic protection? Explain impressed current method of protection. Mention its merits and demerits. [8+8]
6. (a) Define Refractories and what are the criteria of a good refractory?
 (b) Give the classification of refractories with suitable examples. [6+10]
7. (a) What is meant by blended oils? Explain the functions of various additives added to the lubricants?
 (b) What are viscosity & viscosity index of lubricating oil? [12+4]
8. (a) What is potable water? Discuss the treatment of water for domestic purpose.
 (b) Calculate temporary hardness and total hardness of a sample of water containing $\text{Mg}(\text{HCO}_3)_2 = 7.3 \text{ mg/L}$; $\text{Ca}(\text{HCO}_3)_2 = 16.2 \text{ mg/L}$; $\text{MgCl}_2 = 9.5 \text{ mg/L}$; $\text{CaSO}_4 = 13.6 \text{ mg/L}$. [12+4]

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R07**Set No. 1****I B.Tech Examinations, December 2010****APPLIED CHEMISTRY****Civil Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is cementation? Explain the various types of cementation process?
 (b) Why galvanization of iron is preferred to tinning? [12+4]
2. (a) Teflon is an addition polymer, it behaves like a thermosetting polymer. Give Reasons.
 (b) What are the different kinds of additives used in the fabrication of plastics?
 (c) What is crepe rubber and reclaimed rubber? [4+8+4]
3. (a) Discuss the disadvantages of using hard water for various industries.
 (b) Explain the factors responsible for the corrosion of a boiler. Discuss the measures for its prevention. [8+8]
4. (a) Write a brief account on
 i. pitting corrosion and
 ii. pipeline corrosion.
 (b) What is the principle of cathodic protection? Explain impressed current method of protection. Mention its merits and demerits. [8+8]
5. (a) Define Refractories and what are the criteria of a good refractory?
 (b) Give the classification of refractories with suitable examples. [6+10]
6. (a) List the laboratory tests for cement and describe them.
 (b) Write about the decay of concrete and its prevention. [10+6]
7. (a) What is potable water? Discuss the treatment of water for domestic purpose.
 (b) Calculate temporary hardness and total hardness of a sample of water containing $\text{Mg}(\text{HCO}_3)_2 = 7.3 \text{ mg/L}$; $\text{Ca}(\text{HCO}_3)_2 = 16.2 \text{ mg/L}$; $\text{MgCl}_2 = 9.5 \text{ mg/L}$; $\text{CaSO}_4 = 13.6 \text{ mg/L}$. [12+4]
8. (a) What is meant by blended oils? Explain the functions of various additives added to the lubricants?
 (b) What are viscosity & viscosity index of lubricating oil? [12+4]

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R07**Set No. 3****I B.Tech Examinations, December 2010****APPLIED CHEMISTRY****Civil Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Teflon is an addition polymer, it behaves like a thermosetting polymer. Give Reasons.
 (b) What are the different kinds of additives used in the fabrication of plastics?
 (c) What is crepe rubber and reclaimed rubber? [4+8+4]
2. (a) Define Refractories and what are the criteria of a good refractory?
 (b) Give the classification of refractories with suitable examples. [6+10]
3. (a) List the laboratory tests for cement and describe them.
 (b) Write about the decay of concrete and its prevention. [10+6]
4. (a) Discuss the disadvantages of using hard water for various industries.
 (b) Explain the factors responsible for the corrosion of a boiler. Discuss the measures for its prevention. [8+8]
5. (a) What is meant by blended oils? Explain the functions of various additives added to the lubricants?
 (b) What are viscosity & viscosity index of lubricating oil? [12+4]
6. (a) What is potable water? Discuss the treatment of water for domestic purpose.
 (b) Calculate temporary hardness and total hardness of a sample of water containing $\text{Mg}(\text{HCO}_3)_2 = 7.3 \text{ mg/L}$; $\text{Ca}(\text{HCO}_3)_2 = 16.2 \text{ mg/L}$; $\text{MgCl}_2 = 9.5 \text{ mg/L}$; $\text{CaSO}_4 = 13.6 \text{ mg/L}$. [12+4]
7. (a) Write a brief account on
 - i. pitting corrosion and
 - ii. pipeline corrosion.
 (b) What is the principle of cathodic protection? Explain impressed current method of protection. Mention its merits and demerits. [8+8]
8. (a) What is cementation? Explain the various types of cementation process?
 (b) Why galvanization of iron is preferred to tinning? [12+4]
