Code No: R05411801 **R05** **Set No. 2**

IV B.Tech I Semester Examinations, November 2010

ELECTRO METALLURGY AND CORROSION

Metallurgy And Material Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

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1. Write short notes on
   (a) Electrophoresis
   (b) Electrochemistry principles
   (c) Electrochemical analyzer. [6+5+5]
2. (a) What are the corrosion prevention methods?
   (b) Discuss the effect of inhibitors and painting on corrosion resistance. [8+8]
3. (a) List the common tests done on e-dep. Describe the tests done to measure thickness and corrosion resistance of e-dep.
   (b) What are the characteristics of pitting corrosion? What type of alloys are prone to pitting corrosion and explain the effect of halide ion on pitting corrosion? [8+8]
4. With a neat flow sheet explain the suitable aqueous electrolyte preparation for electro winning of copper from sulphide ores. [16]
5. Define electrolysis and why all the cathodic deposition processes utilizes this principle. [16]
6. (a) What is alloy plating? What are its uses?
   (b) Discuss about the uses of alloy plating. [8+8]
7. Write short notes on
   (a) Electrochemical theory of corrosion
   (b) Electrode reactions of electrolytic cell
   (c) Electrolysis. [6+5+5]
8. (a) What are the advantages and disadvantages of sacrificial anode methods?
   (b) Discuss about the limitations of cathodic protection methods. [8+8]

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Code No: R05411801 **R05** **Set No. 4**

IV B.Tech I Semester Examinations, November 2010

ELECTRO METALLURGY AND CORROSION

Metallurgy And Material Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

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1. Define electrolysis and why all the cathodic deposition processes utilizes this principle. [16]

2. (a) What are the advantages and disadvantages of sacrificial anode methods?
   (b) Discuss about the limitations of cathodic protection methods. [8+8]

3. (a) What is alloy plating? What are its uses?
   (b) Discuss about the uses of alloy plating. [8+8]

4. (a) List the common tests done on e-dep. Describe the tests done to measure thickness and corrosion resistance of e-dep.
   (b) What are the characteristics of pitting corrosion? What type of alloys are prone to pitting corrosion and explain the effect of halide ion on pitting corrosion? [8+8]

5. Write short notes on
   (a) Electrochemical theory of corrosion
   (b) Electrode reactions of electrolytic cell
   (c) Electrolysis. [6+5+5]

6. (a) What are the corrosion prevention methods?
   (b) Discuss the effect of inhibitors and painting on corrosion resistance. [8+8]

7. With a neat flow sheet explain the suitable aqueous electrolyte preparation for electro winning of copper from sulphide ores. [16]

8. Write short notes on
   (a) Electrophoresis
   (b) Electrochemistry principles
   (c) Electrochemical analyzer. [6+5+5]

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Code No: R05411801 **R05** **Set No. 1**

IV B.Tech I Semester Examinations, November 2010
ELECTRO METALLURGY AND CORROSION
Metallurgy And Material Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the advantages and disadvantages of sacrificial anode methods?
   (b) Discuss about the limitations of cathodic protection methods. [8+8]
2. (a) List the common tests done on e-dep. Describe the tests done to measure thickness and corrosion resistance of e-dep.
   (b) What are the characteristics of pitting corrosion? What type of alloys are prone to pitting corrosion and explain the effect of halide ion on pitting corrosion? [8+8]
3. (a) What is alloy plating? What are its uses?
   (b) Discuss about the uses of alloy plating. [8+8]
4. Define electrolysis and why all the cathodic deposition processes utilizes this principle. [16]
5. Write short notes on
   (a) Electrochemical theory of corrosion
   (b) Electrode reactions of electrolytic cell
   (c) Electrolysis. [6+5+5]
6. (a) What are the corrosion prevention methods?
   (b) Discuss the effect of inhibitors and painting on corrosion resistance. [8+8]
7. With a neat flow sheet explain the suitable aqueous electrolyte preparation for electro winning of copper from sulphide ores. [16]
8. Write short notes on
   (a) Electrophoresis
   (b) Electrochemistry principles
   (c) Electrochemical analyzer. [6+5+5]

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Code No: R05411801 **R05** **Set No. 3**

IV B.Tech I Semester Examinations, November 2010
ELECTRO METALLURGY AND CORROSION
Metallurgy And Material Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Define electrolysis and why all the cathodic deposition processes utilizes this principle. [16]

2. Write short notes on
   (a) Electrochemical theory of corrosion
   (b) Electrode reactions of electrolytic cell
   (c) Electrolysis. [6+5+5]

3. Write short notes on
   (a) Electrophoresis
   (b) Electrochemistry principles
   (c) Electrochemical analyzer. [6+5+5]

4. (a) What are the advantages and disadvantages of sacrificial anode methods?
   (b) Discuss about the limitations of cathodic protection methods. [8+8]

5. With a neat flow sheet explain the suitable aqueous electrolyte preparation for electro winning of copper from sulphide ores. [16]

6. (a) What is alloy plating? What are its uses?
   (b) Discuss about the uses of alloy plating. [8+8]

7. (a) List the common tests done on e-dep. Describe the tests done to measure thickness and corrosion resistance of e-dep.
   (b) What are the characteristics of pitting corrosion? What type of alloys are prone to pitting corrosion and explain the effect of halide ion on pitting corrosion? [8+8]

8. (a) What are the corrosion prevention methods?
   (b) Discuss the effect of inhibitors and painting on corrosion resistance. [8+8]

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