**KLS Gogte Institute of Technology (Autonomous)**

**Department of Chemistry**

**Subject: Applied Chemistry Code:18CHE22**

**Special Internal Assessment Test**

**Semester: II Date: 05/04/2018**

**Academic Year: 2018-19 Max. Marks: 25 Duration: 1 Hour**

**Note: Answer any FIVE questions each carries 5 marks.**

1. Explain the Differential metal corrosion and Pitting corrosion with examples. [L2 CO2 PO1]
2. What is Cathodic coating? Describe the process of Tinning with a neat labeled diagram.

[L2 CO2 PO1,3]

1. What is Throwing Power of plating bath? Calculate the throwing power of a plating bath in a Haring-Blum cell if the distances of the two cathodes from the anode are 4 cm and 6 cm and the quantities of the metal deposited are 75 mg and 70 mg respectively. [L3 CO2, PO1]
2. List out the differences between Electroplating and Electroless plating. Give the details of bath conditions required for electroplating of Chromium. [L2 CO2, PO1,3]
3. A fuel sample with 8% hydrogen was subjected to combustion in a Bomb Calorimeter. Calculate the GCV and NCV of the fuel sample from the following data.

Mass of fuel = 0.75x10-3 kg ; Mass of water in the calorimeter =1.5 kg;

Water equivalent of calorimeter = 0.5kg; Specific heat of water = 4.187 kJ kg-1K-1;

Rise in temperature = 2.5 K; [L3 CO3, PO1]

1. Define Cracking and Reforming. Explain any three reforming reactions. [L2 CO3, PO1]
2. What is Biodiesel? Explain the synthesis of Biodiesel and give its advantages. [L2 CO3, PO1]

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**Special Quiz**

**Semester: II Date: 05/04/2018**

**Academic Year: 2018-19 Max. Marks: 05 Duration: 15 Min.**

1. Water line corrosion is an example of \_\_\_\_\_\_\_\_\_\_type of corrosion.

A) Differential metal B) Differential aeration C) Stress D) None of these

2. Coating of zinc on base metal by hot dipping process is known as

A) Galvanizing B) Tinning C) Anodizing D) Phosphating

3. Nuts and Bolts should be made of same metal to prevent \_\_\_\_\_\_\_\_ Corrosion.

A) Differential metal B) Differential aeration C) Stress D) Pitting

4. In electroless plating of copper, Formaldehyde is used as,

A) Complexing agent B) Reducing agent C) Buffer D) Electrolyte

5. In electro plating the article to be plated acts as\_\_\_\_\_\_\_\_.

A) Cathode B) Anode C) Electrolyte D) None of these

6. For fine grained deposition, metal ion concentration must always be \_\_\_\_\_\_.

A) High B) Moderate C) Low D) None of these

7. Octane rating is high for\_\_\_\_\_\_\_\_\_

A) n-cetane B) n-heptane C) iso-octane D) Both B & C

8. Gasohol is a mixture of Ethyl alcohol and \_\_\_\_\_\_

A) Petrol B) Diesel C) LPG D) None of these

9. Antiknocking agent used in unleaded petrol is

A) TML B) TEL C) MTBE/ETBE D) None of these

10. Cracking is a process carried out to improve the yield of \_\_\_\_\_\_\_

A) Diesel B) Kerosene C) Petrol D) Biodiesel

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