

# Assignments (Applied chemistry)

## SEM II 2015-16

### CORROSION

(CE BRANCH)

1. What are the factors responsible for atmospheric corrosion?
2. What are the different types of oxide films?
3. Why foodstuffs are not stored in galvanized containers?
4. Define electrochemical corrosion. Give any two example of it.
5. What are the four factors affecting the rate of corrosion.
6. Distinguish between galvanizing & tinning
7. Explain the method which is useful to coat the odd shaped small articles.
8. What is electroplating method of metallic coating? Give two functions.
9. Define paints. Give two characteristics of good paint.
10. Name any two functions of pigment & give example of it.
11. Name any two functions of drying oil & give example of it.
12. List functions of thinners & give two examples.
13. What are fillers? Give their functions & examples.
14. What are plasticizers? Give their examples.

## **WATER**

(CE BRANCH)

1. State the types of hardness.
2. Give the ill effects of hard water on paper industry & dye industry.
3. State the difference between scales & sludge.
4. Why water obtained by zeolite process is not used in boilers.
5. Give any two limitations of permutit process.
6. Why is hard water not suitable for washing & cooking?
7. Define soft & hard water.
8. Give four characteristics of potable water.
9. Explain of ion exchange process.
10. What is sterilization?
11. What is caustic embrittlement?
12. What is meant by boiler corrosion?
13. Write differences between Lime soda & Zeolite process.
14. What are the steps involved in treatment of drinking water.
15. Define the terms Screening, Coagulation & Flocculation.
16. Define Desalination of water.
17. Name any two substances used for sterilization of water.
18. What is the principle of ion exchange process?
19. What is the principle of Zeolite process?
20. How water is sterilized by Chloramines process?
21. How is water sterilized by Bleaching powder?

# CEMENT

(CE BRANCH)

1. Define Cement.
2. Name the different types of cement.
3. What is Portland cement?
4. Name the raw materials used for manufacturing of cement.
5. Give chemical composition of cement.
6. Write the functions of Lime & Silica.
7. What is initial setting of cement?
8. What is plaster of Paris?
9. What is lime?
10. What is slaking of lime?
11. What is hydrated lime?
12. How is lime classified?
13. What are mortars & Concrete?

# **METALLURGY**

(FOR MECH & CIVIL BRANCH)

1. Explain with justification coke & limestone is added during the extraction of iron.
2. What are the different zones of blast furnace according to temperature.
3. Explain note on zone of fusion.
4. Write chemical reactions take place in the zone of heat absorption.
5. Write chemical reactions takes place in the zone of reduction.
6. Define steel. How steels are classified on the basis of percentage of carbon?
7. What is heat treatment? Write any two purposes of heat treatment.
8. What are the commercial forms of iron. Give one application of each.
9. Write difference between pig iron & wrought iron.
10. Write any two properties & application of cast iron
11. Write any two properties & application of wrought iron

## FUELS

(FOR MECH BRANCH)

1. Give any four characteristics of good fuel.
2. What is ignition temperature of fuel?
3. What do you understand by 'calorific' value of fuel.
4. Explain why the gaseous fuels have highest calorific value.
5. "Gaseous fuels are preferred to solid & liquid fuels even though former are costly".  
Give reasons.
6. Name the product of fractional distillation of crude oil.
7. What are petrochemicals?
8. Explain the terms: i) Ignition Temperature ii) calorific value
9. Give the advantages & disadvantages of solid fuel.
10. Give the advantages & disadvantages of liquid fuel.
11. Give the advantages & disadvantages of gaseous fuel.
12. Draw a neat diagram of refining of petroleum.
13. Write a short note on CNG.
14. Write short note on biodiesel.

# LUBRICANTS

(FOR MECH BRANCH)

1. Define lubricant & State the functions of lubricants
2. State the types of lubricant with examples of each.
3. How lubricants are selected?
4. Define oiliness. Give its significance.
5. Write the function of lubricants used in gears.
6. Write the properties of graphite due to which it has become most useful solid lubricant.
7. Lubricants is added along with fuel in IC engine. Justify.
8. Define viscosity & explain its role in selecting the lubricant.
9. Define viscosity index.
10. Define flash point & fire point of lubricant.
11. Define cloud & pour point.
12. Define acid value, saponification value.
13. Define emulsification & aniline point.
14. State the type of lubricant in gears, cutting tools.
15. Where water is used as lubricant or coolant.
16. Why silicon oils are not employed for high temperature applications.