Analytical Techniques

Q.1 Write note on working principle of UV-Visible, Infra-Red and NMR spectroscopy

Q.2 Write note on applications of UV-Visible, Infra-Red and NMR spectroscopy

Q.3 Write a note on thin layer chromatography

Q.4 Write note on gas chromatography

Q.5 Write note on liquid chromatography

Fermentation

Q.1 Write a note on manufacturing process of ethanol from molasses

Q.2 Write a note on manufacturing process of ethanol from starches

Q.6 Write note on fermentation process for preparation of acetic acid

Fuel and Combustion

Q.1 Write note on refining of petroleum

Q.2 Define the gross calorific value (GCV)/High calorific value (HCV)

Q.3. Define the net calorific value (NCV)/Low calorific value (LCV)

Q.4 Write the Dulong's formula for calculation of GCV and LCV

Q.5 Write a note on determination of calorific value by Bomb calorimeter

Q.6 Write note on proximate analysis of coal

Q.7 Write note on ultimate analysis of coal

Q.8 Write note on Biofuels; Biodiesel and biomass briquettes

Q.14 Define Octane Number and knocking

Corrosion

Q.1 Write a note on electrochemical (wet/immersion) theory of corrosion

Q.2 Write a note chemical (Dry) theory of corrosion

Q.3 Write a note on type of corrosion (**Note:** Type of corrosion are : uniform corrosion, Pitting corrosion, Crevice corrosion, Intergranularcorrosion and stress corrosion)

Q.4 Write note on metallic and nonmetallic coating method (**Note**: They are protective measurement methods)

Q.5 Write note on cathodic protection method (**Note**: It is a protective measurement methods)

Q.6 Write note on anodic protection method (**Note**: It is a protective measurement methods)

Q.7 Write note on corrosion inhibitor (**Note**: It is a protective measurement methods)

Metals and Alloys

Q.1 Write a note on physical property of metal

Q.2 Write a note on heat treatment process

Q.3 Write note on type and applications of alloy

Q.4 Write the type of copper alloys and its application

Q.5 Write the type of aluminium alloys and its application

Q.6 Write the type of nickel alloys and its application

Battery

Q.1 Write note on Photolysis of water

Q.2 Write note on lithium batteries;

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