



# GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI

(An Autonomous Institute of Govt. of Maharashtra)

## Department of Chemistry

Class Test- II (Sem II 2016-17)

20 March 2017

Course: Applied Chemistry (SHU 202)

Max. Marks: 15

Time: 1 Hr

Q.1. Answer the following questions.

(Each for 3 marks)

- What are Lubricants? Explain the Mechanism of Hydrodynamic Lubrication.
- Define Viscosity Index. How it can be determined by experimentally.
- Give the selection criteria for Transformers and Cutting Tools.
- What are Refractories? Explain some Properties of Refractories.
- Give the preparation, Properties and uses of Fire Clay OR Dolomite.

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e: 1 Hr

3 marks)



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Q.1. Answer Any four from the following. (Each for 3 marks)

- a) Define Flash Point. How it can be determined experimentally?
- b) Define Nanochemistry. Give the applications of Nanomaterials.
- c) Explain proximate analysis of Coal with Importance.
- d) What is meant by Lubricants? Explain the thin Film Lubrication.

Q.2. A petroleum gas has the following composition. Ethane-5%, Propane-10%, Butane-40%, Butene-10%, Isobutane -30%, Propene-5%. Calculate the volume of air required for the complete combustion of 100 m<sup>3</sup> of the gas and the percentage composition of the dry flue gases if 35% excess air is supplied. (3 marks)