No. of Printed Pages : 4
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120435/030435/94741

3rd Sem. / Ceramic Engg.

Subject : Fuels and Furnaces

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Combustion is an _____ chemical reaction.

Q.2 Air contains _____ % of oxygen by volume.

Q.3 LPG stands for _____.

Q.4 Tunnel kiln is a batch type of kiln.(True/False)

Q.5 Analysis of flue gas is made with the help of _____ apparatus.

Q.6 Powdered coal is called as _____

Q.30 Discuss glass tank furnace.

Q.31 List the classification of kiln.

Q.32 Explain optical pyrometer.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Describe the working and lining of refractory in blast furnace used in iron and steel plant.

Q.34 Describe the any one method of measurement of temperature in ceramic plant.

Q.35 Explain the manufacturing process of producer gas and list its properties and uses.

Q.36 Describe the testing method of determination of calorific value of a given sample of coal.

Q.7 Methane content in NATURAL gas is _____ percent.

Q.8 Water gas is a source of hydrogen gas. (True/false)

Q.9 Coke is a _____ fuel.

Q.10 Determination of viscosity of Oil is done by _____ viscometer.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11 Define combustion.

Q.12 Define pyrometer.

Q.13 Define ignition temperature.

Q.14 List the use water gas.

Q.15 Tell the formula of methane.

Q.16 Define flash pont.

Q.17 Define cetane number.

Q.18 Define viscosity.

Q.19 List the composition of water gas.

Q.20 List the two liquid fuels used in ceramic plant.

Q.21 Define chimney.

Q.22 Define furnace.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Classify fuels.

Q.24 Explain solid fuels with examples.

Q.25 Discuss Bomb calorimeter.

Q.26 Differentiate between combustible and non combustible constituents.

Q.27 Discuss ultimate analysis of coal.

Q.28 Explain burner for liquid fuels.

Q.29 Explain natural gas.