

- Q.27 Draw the block diagram of hydraulic power plant
- Q.28 Write the importance of safe storage of coal
- Q.29 Explain in detail about by product coke oven
- Q.30 Explain the working principle of vertical axis wind turbine
- Q.31 Discuss about the glass melting furnace with its labelled diagram
- Q.32 Write the manufacturing process of producer gas
- Q.33 Draw the labelled diagram of nuclear power plant
- Q.34 Explain the concept of windmill
- Q.35 Write a short note on
- Portland cement
  - solar cooker

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain the manufacturing process of water gas
- Q.37 With the help of neat diagram explain the working of blast furnace
- Q.38 Explain the process of thermal power plant with the help of neat diagram

No. of Printed Pages : 4

180546/120546/030564C

Roll No. ....

#### 4th Sem / Chem Subject:- Energy Technology

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 As time passes the calorific value of stored coal
- Decreases
  - Increases
  - Remains unaltered
  - May increase or decrease
- Q.2 Which of the following is a poisonous fuel gas
- Coke oven gas
  - blast furnace gas
  - natural gas
  - water gas
- Q.3 Which is the most matured coal
- Ignite
  - bituminous
  - semi Anthracite
  - anthracite
- Q.4 Main constituent of natural gas is
- Methane
  - ethane
  - hydrogen
  - propane
- Q.5 Fat coal means coal having
- Low calorific value

- b) high volatile matter
  - c) low ash content
  - d) non smoking tendency
- Q.6 Bomb calorimeter is used to determine the calorific value of \_\_\_\_\_ Fuels
- a) Gaseous                      b) solid
  - c) liquid                      d) both solid and liquid
- Q.7 Which of the following fuel has the highest calorific value
- a) Petrol                      b) hydrogen
  - c) LPG                      d) natural gas
- Q.8 Flash point of Diesel And Kerosene is determined by
- a) Able apparatus
  - b) pensky Martin apparatus
  - c) saybolt apparatus
  - d) none of these
- Q.9 Which of the following has the lowest flash point of all
- a) Diesel                      b) Kerosene
  - c) petrol                      d) furnace oil
- Q.10 Most of the sun energy results from
- a) Thermo nuclear reactions
  - b) chemical reactions
  - c) Gravity
  - d) none of these

(2) 180546/120546/030564C

## SECTION-B

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

- Q.11 Name any two renewable energy sources
- Q.12 Define energy
- Q.13 Write any two merits of conventional fuel
- Q.14 Define fire point
- Q.15 Expand NCV
- Q.16 Define Octane number
- Q.17 Which gas is used to reduce scaling in furnace stock?
- Q.18 What is the percentage of oxygen in the atmospheric air?
- Q.19 Name two major constituents of sun
- Q.20 Define cracking

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write any two merits and demerits of liquid fuel over solid fuel
- Q.22 Explain the process of ultimate analysis of coal
- Q.23 Differentiate between gross calorific value and net calorific value
- Q.24 Write about the fractional distillation of crude oil
- Q.25 Explain the Biomass conversion system in brief.
- Q.26 Write in brief about geothermal energy

(3) 180546/120546/030564C