

8. (a) Explain manufacturing of water gas with figure. 7
- (b) Explain advantages and disadvantages of CNG. Why CNG is called a pollution free fuel. 8

No. of Printed Pages : 04

Roll No.

BB-604

M. Tech. EXAMINATION, May 2017

(Second Semester)

(B. Scheme) (Main & Re-appear)

(ESEM)

ESEM-108-B

FUEL TECHNOLOGY

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Explain nuclear fuel cycle. 10
(b) What are fast breeder reactor ? 5
2. Write notes on the following : 15
 - (a) Properties of nuclear fuel
 - (b) Nuclear fission.
 - (c) Nuclear energy.

Unit II

3. (a) Write the brief procedure to find out calorific value of solid/liquid fuel by bomb calorimeter. 8
(b) Give brief idea about various stages of coal formation. 7
4. (a) Explain in brief proximate analysis of coal and its importance. 8
(b) List out physical properties of coal and explain. 7

M-BB-604

2

Unit III

5. (a) Explain the following property of petroleum products : 12
 - (i) Specific gravity
 - (ii) Flash Point
 - (iii) Fire Point
 - (iv) Anti-knocking value.
- (b) Explain cracking. 3
6. (a) Write short notes on the following : 10
 - (i) Dewaxing of petroleum products
 - (ii) Sweetening process of petroleum
- (b) Define Octane number and Cetane number. 5

Unit IV

7. (a) Explain main components and properties of producer gas. 8
(b) Give brief idea about LPG with its advantages and disadvantages. 7

(3-13/6) M-BB-604

3

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