

No. of Printed Pages : 03

Roll No. ....

**G-83**

**B. Tech. EXAMINATION, Dec. 2018**

(Seventh Semester)

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

(CHE)

CHE405B

ENERGY TECHNOLOGY

*Time : 3 Hours]*

*[Maximum Marks : 75*

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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.

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**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. Assume missing data if any.

(2-15/17) M-G-83

**P.T.O.**

### Unit I

1. (a) Explain the two theories suggested by the geologists regarding the mechanism of formation of coal from plant substances. **8**  
(b) Write a note on significance of any *two* constituents of coal. **7**
2. (a) Explain any *two* processes of coal washing in detail. **8**  
(b) Explain the guidelines one should adhere for safe storage of coal. **7**

### Unit II

3. (a) Explain all the theories in detail for the formation of petroleum. **8**  
(b) Differentiate between single stage atmospheric distillation unit and two stage distillation unit. **7**
4. (a) Explain the vis-breaking process in detail with the help of flow-sheet. **8**

**M-G-83**

**2**

- (b) Explain Howdys fixed bed process in detail with the help of flow-sheet. **7**

### Unit III

5. (a) Give the uses of natural gas. **5**  
(b) Draw a neat labelled diagram of producer gas plant. **10**
6. (a) Explain surface combustion. **5**  
(b) Explain the working of pressure jet atomising burner in detail. **5**  
(c) Explain twin bed heat reclamation system in detail. **5**

### Unit IV

7. Write a note on Biodiesel. **15**
8. Explain the characteristics of solar energy and wind energy. **15**

**(2-15/18) M-G-83**

**3**

**110**