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(c) Explain the steps involved in DSM planning and implementation. 7

(d) Discuss briefly socioeconomic awareness programs. 7

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B. E. (Seventh Semester) Examination,
Nov.-Dec. 2015

(New Scheme)

(Elect. Engg. Branch)

ENERGY AUDITING and MANAGEMENT

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any two parts from parts (b), (c) and (d) of each question.

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1. (a) Define Energy Conservation. 2

(b) Explain briefly types of load forecasting. 7

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- (c) What are different type of energy sources? Write their limitation also. 7
- (d) Explain energy conservation in realistic distribution system. CSVTUonline.com 7
2. (a) What is Fire Wood Crises? 2
- (b) Explain Solar PV energy system. 7
- (c) Explain briefly potential of Wind Energy Source. 7
- (d) Describe global warming & its effects. 7
3. (a) Define Non-conventional energy sources. 2
- (b) Explain briefly about preventive maintenance. 7
- (c) A 3-phase, 50 Hz, 400 V motor develops 100 HP the power factor being 0.75 lagging and efficiency 93%. A bank of capacitors is connected in delta across the supply terminals and power factor raised to 0.95 lagging. Each of the capacitance units is built of 4 similar 100 V capacitors. Determine the capacitance of each capacitor. CSVTUonline.com 7
- (d) The monthly readings of a consumer's meter are as

- follows : CSVTUonline.com
- Maximum demand = 50 kW
- Energy consumed = 36,000 kwh
- Reactive energy = 23,400 kVAR
- If the tariff is ₹ 80 per kW of maximum demand plus 8 paise per unit plus 0.5 paise per unit for each 1% of power factor below 86%. Calculate the monthly bill of the consumer. 7
4. (a) What is Fine Tuning? 2
- (b) What are the energy conservation opportunities in residential buildings, shopping complexes and in university campus? 7
- (c) Suggest some energy conservation measures for Industries. CSVTUonline.com 7
- (d) Explain Technology upgradation. 7
5. (a) Define Valley Filling. 2
- (b) What are the identity measures of DSM and how to develop the DSM program? 7