

16123(J) *June-16*

**B. Tech 6th Semester Examination**  
**Energy Assessment and Auditing (NS)**  
**EE-300(a)**

**Time : 3 Hours**

**Max. Marks : 100**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Candidates are required to attempt five questions in all selecting one question from each of the sections A, B, C & D of the question paper and all the subparts of the questions in section E. Use of non-programmable calculators is allowed.

**SECTION - A**

1. What is the importance of the power factor? Clarify in detail the different strategies from which we can enhance the power factor component? (20)
2. Explain in detail the notable highlights or procurements in Indian energy conservation Act 2001. (20)

**SECTION - B**

3. Give a case study of the energy conservation program in the equipment used in the industry sector. Also give the cost benefit analysis. (20)
4. Highlight the various areas of energy saving measures which can be taken in agriculture sector. (20)

[P.T.O.]

**SECTION - C**

5. Discuss the role of various institutions in India to promote energy conservation. (20)
6. What are the duties and responsibilities of Energy Manager in any organization? (20)

**SECTION - D**

7. What is Prototype Carbon Fund (PCF)? Explain in detail its importance alongwith its main objectives. (20)
8. Explain in detail the Clean Development Mechanism. What are the different methodologies involved in it? (20)

**SECTION - E**

Attempt all questions and each question carries two mark.

9. (i) Why the metering of energy consumption is essential?  
(ii) How energy efficiency can be improved in building design?  
(iii) Draw an energy flow chart and explain it briefly.  
(iv) What is the greenhouse gas effect?  
(v) Discuss about the relevance of energy costs.  
(vi) Discuss about the fuel and energy substitution.  
(vii) What are the consequences of standby power?  
(viii) Highlight the electricity consumption pattern in domestic sector.  
(ix) What is the source of solar energy? How it is produced?  
(x) List down the areas where the solar energy is utilized. (2×10=20)