Roll No……..….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B. Tech Civil Engg. (Semester – 3rd)
ENERGY SCIENCE & ENGINEERING
Subject Code: BCIES1302
Paper ID: [18110712]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:
   a. What do you understand by carbon foot prints?
   b. Define the objective of energy science and engineering.
   c. How do you make a building sustainable?
   d. How undersea oil pipeline projected related with the energy source?
   e. What is meant by LEED certification?
   f. Define Green building concept.
   g. List out the alternatives for the fossil fuels.
   h. Define superconductor-based energy storage system.
   i. Define term entropy.
   j. Write down the advantages of nuclear energy.

Section – B **(5 marks each)**

Q2. Explain the societal and environmental issue of place energy system.
Q3. What do you mean by clean energy?
Q4. Which makes sustainable development important?
Q5. Discuss the design and construction constraints for reactor contaminated buildings.
Q6. Differentiate between the concept of green building and green architecture.

Section – C **(10 marks each)**

Q7. What are fossil fuels and what are the different remedies and alternatives for fossil fuels? Explain in detail.
Q8. How will you design and develop civil engineering project related with hydro power station above ground and underground? Explain various parameters in detail.
Q9. (a) What are the different types of sustainable development?
   (b) Discuss the terms energy conservation and energy audit.