



CBCS SCHEME

5

15CV562

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Sustainability Concepts in Engineering

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Discuss in brief, social environmental and economic sustainability. (08 Marks)
b. Write a brief note on need for sustainability in engineering. (08 Marks)

OR

- 2 a. Write short notes on: (i) Water Act (ii) Air Act (08 Marks)
b. Explain Clean Development Mechanism (CDM). (08 Marks)

Module-2

- 3 a. Explain in detail, Life cycle Analysis (LCA). (08 Marks)
b. What are the objectives of ISO 14000? (08 Marks)

OR

- 4 a. Explain in detail, carbon foot print. (08 Marks)
b. Discuss in brief, bio-mimicking. (08 Marks)

Module-3

- 5 a. Explain the construction of green buildings. (08 Marks)
b. Discuss in detail, passive solar design technique. (08 Marks)

OR

- 6 a. Write short notes on: (i) GRIHA (ii) IGBC (12 Marks)
b. List out green materials used for sustainable construction. (04 Marks)

Module-4

- 7 a. Explain the process of rainwater harvesting with a neat sketch. (12 Marks)
b. Explain the benefits of bio-fuels. (04 Marks)

OR

- 8 a. Write short notes on: (i) Solar energy (ii) Wind energy (08 Marks)
b. What are the advantages and disadvantages of renewable and non-renewable energy sources? (08 Marks)

Module-5

- 9 a. Explain in detail, green engineering concepts. (12 Marks)
b. What is sustainable urbanization? (04 Marks)

OR

- 10 a. Write short notes on: (i) Industrial ecology (ii) Industrial symbiosis (08 Marks)
b. What is Green Engineering? What are the objectives of Green Engineering? (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.