

CBCS SCHEME

USN

--	--	--	--	--	--	--	--

 LLeR,R_y
 CHIKopt

I7CV562

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

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define Sustainability. Discuss briefly the Socio-Environmental and Economic Sustainability concepts. (12 Marks)
- b. Explain Water Act and discuss the impacts of act on Society. (08 Marks)

OR

- 2 a. Explain the role of Technology in Sustainable development. (12 Marks)
- b. Discuss briefly the challenges for Sustainable development. (08 Marks)

Module-2

- 3 a. What is meant by Carbon Sequestration? Explain the steps involved in carbon sequestration with a neat sketch. (12 Marks)
- b. Explain the concept of Climate Change as a Global Environmental Issue. Discuss its effects. (08 Marks)

OR

- 4 a. Explain Environmental Management Standards through ISO 14000. (12 Marks)
- b. What is the scope of Life Cycle Analysis? (08 Marks)

Module-3

- 5 a. What are Green buildings? Explain the Green Building Concepts and Sustainable Design adopted in India. (10 Marks)
- b. Discuss the two certification programmes implemented in India for Green building. (10 Marks)

OR

- 6 a. How Energy Efficiency can be achieved in a Sustainable building design? Explain. (16 Marks)
- b. Discuss any four Green materials used in building construction. (04 Marks)

Module-4

- 7 a. Write a short note on
 - (i) Geothermal Energy
 - (ii) Wind Energy
 - (iii) Solar Energy
 - (iv) Conventional and Non-conventional Energy
 (12 Marks)
- b. What is fuel cell? How does it work? What are their advantages? (08 Marks)

OR

- 8 a. What is Rain water Harvesting? Discuss various Techniques of Rain Water Harvesting. (12 Marks)
b. Draw a line sketch showing the harvesting techniques in residential buildings. Discuss its advantages. (08 Marks)

Module-5

- 9 a. Explain the role of Green Engineering in eradicating poverty. (10 Marks)
b. Write a short note on :
(i) Sustainable Urbanization
(ii) Industrial Ecology. (10 Marks)

OR

- 10 a. What is Green Engineering? What are the principles of Green Engineering? (12 Marks)
b. Discuss how Green Engineering concepts reduce pollution. (08 Marks)

www.FirstRanker.com