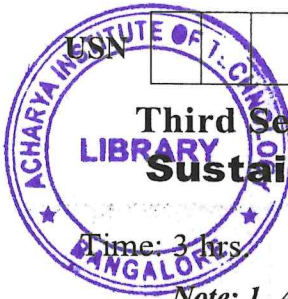


CBCS SCHEME

BCV306C



Third Semester B.E./B.Tech. Degree Examination, June/July 2026 Sustainable Design Concepts for Building Services

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Define Sustainability. With sketch explain the three dimensions of sustainability.	10	L2	CO1
	b.	With regards to energy, differentiate between : (i) Primary and Secondary Energy (ii) Commercial and Non-commercial Energy (iii) Renewable and Non-renewable Energy	10	L1	CO1
OR					
Q.2	a.	What is Carbon Foot Print? List and explain the effects of carbon foot print.	10	L2	CO1
	b.	List and explain the steps involved in Net Zero Buildings Construction.	10	L2	CO1
Module – 2					
Q.3	a.	Differentiate between conduction, convection and radiation.	10	L1	CO2
	b.	Define the term "Acoustic". What are the requirements of acoustic?	10	L1	CO2
OR					
Q.4	a.	Write a note on Indoor Air Quality Management.	10	L1	CO2
	b.	Define Visual Comfort in buildings. Explain steps to improve visual comfort.	10	L2	CO2
Module – 3					
Q.5	a.	Explain energy efficiency and building envelop.	10	L2	CO3
	b.	What is Daylighting? Tabulate the requirements of daylighting as per ECBC 2017.	10	L2	CO3
OR					
Q.6	a.	List the reasons to perform energy audit. Also discuss the steps involved in audit.	10	L2	CO3
	b.	Outline the process of Water Resource Management.	10	L3	CO3
Module – 4					
Q.7	a.	What is Green Product Certification? List the benefits.	10	L1	CO4
	b.	Elaborate the features of sustainable building materials.	10	L3	CO4
OR					
Q.8	a.	Write a note on Low-carbon cement and Zero emission bricks.	10	L1	CO4
	b.	Explain the steps involved in lean construction practices.	10	L2	CO4
Module – 5					
Q.9	a.	Explain LEED and BREEAM certification standards.	10	L2	CO5
	b.	List the criterias of Green Building Certification.	10	L1	CO5
OR					
Q.10	a.	List and explain IGBC performance parameters.	10	L2	CO5
	b.	Write a note on GRIHA rating system.	10	L2	CO5
