Q. Code:631506

Reg. No. | | | | | | | | | | | | |

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2023
OE18407 – Basics and Principles of Green Building Design
(Regulation 2018/2018A)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Summarise the basics of green buildings and the assessment methods.	2
CO 2	Enumerate the principles and elements of design of green buildings.	2
CO 3	Describe about the thermal performance of building sections, lighting and ventilation in buildings.	2
CO 4	Describe the water conservation techniques and sustainable materials.	2
CO 5	Enumerate the guidelines of the energy conservation building code, model tools used to calculate energy efficiency.	2

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

		CO	RBT LEVEL
1.	Discuss the functions of GRIHA.	1	2
2.	What is the need of green building?	1	2
3.	Define sustainability.	2	2
4.	List the different shading devices.	2	2
5.	How to calculate the heat transmission through building sections?	3	2
6.	What is meant by thermal comfort?	3	2
7.	Explain 3Rs in water conservation.	4	2
8.	List the ways to reduce carbon emission.	4	2
9.	What is the purpose of a carbon calculator?	5	2
10.	What is meant by energy efficiency?	5	2

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL
11. (a)	Explain how the green buildings are assessed?	(14)	1	2
	(OR)			
(b)	Summarise the merits and demerits of green buildings. Also classify the green buildings.	(14)	1	2

12. (a)	Enumerate the principles and elements of design of green buildings.	**(14)**	**2**	**2**
	(OR)			
(b)	Explain about the shading devices with its applications.	**(14)**	**2**	**2**
13. (a)	Explain about the thermal performance of building sections.	**(14)**	**3**	**2**
	(OR)			
(b)	Explain how should the ventilation be planned for a green building.	**(14)**	**3**	**2**
14. (a)	Write short notes on low energy materials and sustainable materials.	**(14)**	**4**	**2**
	(OR)			
(b)	Describe briefly about the water conservation techniques that need to be carried out in a green building.	**(14)**	**4**	**2**
15. (a)	Enumerate the model tools used to calculate energy efficiency in a building.	**(14)**	**5**	**2**
	(OR)			
(b)	Summarise the guidelines discussed in Energy Conservation Building Code.	**(14)**	**5**	**2**

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Describe about the need of green building in present scenario.	**(10)**	1	**4**

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