A		Reg. No. :										
		Question Pape	er C	ode	e: 5	9G5	54					
	B.E.	/B.Tech. DEGREE EX	XAM	INA	ATIC	DN, I	DEC	2021	1			
		Interdis	ciplin	nary								
		Civil En	ginee	ering	5							
		15UGM954 – S	Smar	t Bi	ildir	ngs						
		(Regulat	tion 2	2015	5)							
		(Common to Elec	trical	l En	gine	ering	5)					
Dur	ation: Three hours					Ν	laxii	num	: 100	) Ma	rks	
		Answer AL	L Qı	ıesti	ons							
		PART A - (5	x 1 =	5 N	Iark	s)						
1.	It is a plan which quantifies future facts and figures.											CO1-
	(a) Procedure	(b) Programme		(c)	Rule	;			(d)	Bud	get	
2.	BMS covers the following aspects of the smart buildings									CO2-		
	(a) Building services			(b) Building automation								
	(c) Building information modeling				(d) None							
3.	The judicious and effective use of energy to maximise profits and enhance competitive positions". This can be the definition of								CO3-			
	(a) Energy conserva	ation	(	b) E	nerg	gy ma	anag	emer	nt			
	(c) Energy policy			(d) Energy Audit								
4.	Which of the following actions may best help maintain human comfort even in an increased indoor temperature?									CO4-		
	(a) Lowering the humidity											
	(b) Re-circulating the air supply											
	(c) Lowering the lighting intensity											
	(d) Increasing the v	entilation rate										
5.	Good indoor air quality requires which of the following?										CO5-	
	(a) Temperature	(b) Humidity	(	c) V	enti	latio	n		(d)	All	of th	ese

		$PART - B (5 \times 3 = 15 \text{ Marks})$			
11.	Clas	ssify the benefits of intelligent buildings.	CO1- R		
12.	Nar	rate the use of Solar passive architecture used in Building design	CO2- R		
13.	Ske	tch the Primary Investigation and Stages of Life Cycles.	CO3- U		
14.	Ske	tch the Selection of Energy Sources in Building	CO4- R		
15.	Def	ine Thermal Comfort in Buildings.	CO5- R		
		PART – C (5 x 16= 80Marks)			
16.	(a)	Suggest the best choice for intelligent building located in Madurai /Trichy/Chennai area.	CO1-Ana	(16)	
		Or			
	(b)	Analyze the smart buildings and its strategies in smart buildings with suitable examples?	CO1-Ana	(16)	
17.	(a)	Suggest one of the best energy sources which could optimize the cost in the Indian smart buildings with suitable examples Or	CO2-Ana	(16)	
	(b)	Analyze about the emerging efficient design strategies adopted in a smart building with suitable case studies?	CO2-Ana	(16)	
18.	(a)	Explain briefly about Construction and Stages of Energy in Building Design.	CO3-U	(16)	
	(b)	Explain briefly about Passive Heating And Cooling System in Buildings	CO3-U	(16)	
19.	(a)	Explain briefly about Trends in Energy Consumption. Or	CO4- U	(16)	
	(b)	Explain briefly about Energy Performance of Existing Building.	CO4- U	(16)	
20.	(a)	Explain briefly about Interior, Quality, and Thermal Comfort in Buildings.	CO5- U	(16)	
		Or			
	(b)	Explain briefly about Classification of HVAC System and Its Requirements.	CO5- U	(16)	