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Roll No.

18BB2264

M. Tech. EXAMINATION, 2020

(Second Semester)

(C Scheme) (Re-appear)

(M. TECH. (CONSTRUCTION AND REAL ESTATE MANAGEMENT))

MCRM608C

Real Estate Technology

Time : 2½ Hours]

[Maximum Marks : 75

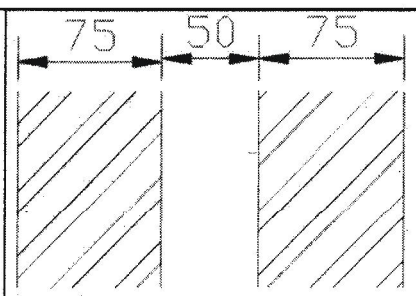
Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Four* questions in all. All questions carry equal marks.

1. Write short notes on any *three* of the following passive and low energy technologies :
 - (a) Thermal storage
 - (b) Dessert coolers
 - (c) Earth berming
 - (d) Passive radiant cooling.
2. Distinguish between Passive and Low Energy (hybrid) technologies ? How can it save energy in building while ensuring occupant thermal comfort ?
3. You are commissioned to select the HVAC system for a high-rise hotel building in Hyderabad. Analyze the characteristics of this building in relation to appropriate selection of HVAC system and equipment. You need to outline what are the options

available doe centralized HVAC systems, what are the relevant variables, what are the objective functions, and elaborate on the process through which optimal design can be achieved.

4. (a) Calculate air-to-air thermal transmittance (U-value) and give its unit for the given construction :

Wall section	Layer	Thickness M	Conductivity W/m K	Resistance m²K/W
	Outside film	-	-	0.100
	1. Brick	.075	1.21	
	2. Cavity	-	-	0.18
	3. Brick	.075	1.21	
	Inside film	-	-	0.123
	Resistance			
	U-value			

- (b) Illustrate various components of an air conditions.
5. (a) Explain fire alarm and automatic sprinkler systems for fire control in a high rise building in India.
- (b) Highlight advantages of CFL (compact fluorescent lamp) over GLS) General Lighting Service lamp from the perspective of energy efficiency, maintenance, and environment.
6. Describe briefly four techniques of waste water treatment; which one would you suggest for the University campus with a population of 10000 ?
7. (a) Discuss function and working of escalator ? What is “service-on-demand’ (SOD) escalator ? How can it save energy ?
- (b) What are the structural requirement for installation of life in an apartment building ?
8. Explain with illustration various building components needed for a geared traction lift system with a machine room.