

CBCS SCHEME

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BCV306D

Third Semester B.E./B.Tech Degree Supplementary Examination, June/July 2024

Fire Safety in Buildings

Time: 3 hrs

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.
3. Use of NBC : 2005, SP-35 : 1987 is allowed.*

Module – 1			M	L	C
Q.1	a.	Explain basic concepts of fire and fire as process of combustion.	10	L2	CO1
	b.	Explain fire resistance and standard fire.	10	L2	CO1
OR					
Q.2	a.	Explain in detail ventilation and fuel controlled fire.	10	L2	CO1
	b.	Elaborate in detail effects of fire on construction material.	10	L2	CO1
Module – 2					
Q.3	a.	Explain escape and refuge plan for fire safety.	10	L3	CO2
	b.	Explain in detail flame spread, detection and suppression of fire for fire safety.	10	L2	CO2
OR					
Q.4	a.	Write short notes on design of lift system for fire safety.	10	L3	CO2
	b.	Discuss the different cases in design of lift systems.	10	L3	CO2
Module – 3					
Q.5	a.	Explain flow system of water and discuss the supply and demand.	10	L3	CO3
	b.	Briefly explain variable demand and diversity factor for water supply system.	10	L3	CO3
OR					
Q.6	a.	Briefly explain control systems in flow systems for fire safety.	10	L3	CO3
	b.	Briefly discuss flow in pipe networks and fixture units.	10	L3	CO3
Module – 4					
Q.7	a.	Explain briefly HVAC and governing equations to HVAC process.	10	L3	CO4
	b.	Write short notes on design of electrical systems.	10	L3	CO4
OR					
Q.8	a.	Describe the stages of maintenance management.	10	L3	CO4
	b.	Briefly explain building inspection, planned and Ad-hoc maintenance.	10	L3	CO4
Module – 5					
Q.9	a.	Briefly explain condition survey and health evaluation of building.	10	L3	CO5
	b.	Write in detail effects of corrosion on concrete and alkali aggregate reaction.	10	L3	CO5
OR					
Q.10	a.	Explain different types of non-destructive testing methods.	10	L3	CO5
	b.	Write short notes on : i) Repair ii) Rehabilitation iii) Retrofitting iv) Strengthening v) Maintenance.	10	L2	CO5