

**Course Code/Name** : PH3201 –Physics for Civil Engineering  
**Regulation** : 2021

### UPC – Questions

Unit .No	Name of the Unit	Questions	CO Mapping	Grade	
				A	B
I	Thermal applications	1.The heat conduction through compound media in series & parallel. (12) 2. Radial heat flow in Rubber tube, Cylindrical method (16) 3. The factors affect thermal performance of building. (10) 4. Climate and design of solar radiation. (12) 5. Central heating,(8) 6. Heat gain and heat loss estimation in the components of Buildings (8) 7. The thermal insulation &benefits of thermal insulation.(8) 8. Fenestration system (8)	C110.1	1 2 3 4 5	6  7 8
II	Ventilation & refrigeration	1. Principles of natural ventilation , ventilation measurements and design for natural ventilation.(16) 2. Packaged air conditioner& window air conditioner.(16) 3.The design and working of chilled water plant and fan coil system.(16) 4. Different air conditioning systems for buildings.(16) 5.The common causes of AC fires, The steps to be taken to prevent the fires.(12) 6. Write short notes about water piping & cooling load.(12)	C110.1	1 2 3 4	5 6
III	Acoustics and lighting designs	1 .Sound absorption& Sound insulation measurements (12) 2. Artificial light sources and ambient , task and accent lighting in buildings.(12) 3.The hemispherical reflectance and transmission spectrum (12) 4.Principles of artificial lighting and supplementary artificial lighting.(12) 5. Daylight Calculation & design of windows.(12) 6. The measurements of day light & Visual field glare.(12) 7. Noise measurements and the impact of noise in multi storied building.(10)	C110.3	1 2 3 4 5	6 7
IV	New engineering materials	1.Composites- FRP & FRM (16) 2. Metallic glasses (16) 3.SMA- Shape memory alloys (16) 4. Ceramics- slip casting. Isostatic &Gas pressure bonding.(16) 5.Ferroelectric & ferromagnetic ceramic.(8) 6.High alumina ceramic.(8)	C110.4	1 2 3 4	5 6
V	Natural disasters.	1.Earthquake ground motion. Types, intensity & Site effect.(8) 2. Seismic waves & seismology (10) 3.Seismic Hazard Analysis- DSHA, PSHA (12) 4. Cyclone hazards, flood hazards (12) 5. Fire hazards , fire proofing & fighting materials (12) 6. Fire safety regulation & prevention of safety measures.(12)	C110.5	1 2 3 4 5	6

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## UPC – Student Planner

Slot	Unit .No	Name of the Unit	Questions	CO Mapping	Grade	
					A	B
1	V	Natural disasters.	1.Earthquake ground motion. Types, intensity & Site effect.(8) 2. Seismic waves & seismology (10) 3.Seismic Hazard Analysis- DSHA, PSHA (12) 4. Cyclone hazards, flood hazards (12) 5. Fire hazards , fire proofing & fighting materials (12) 6. Fire safety regulation & prevention of safety measures.(12)	C110.5	1 2 3 4 5	6
2	I	Thermal applications	1.The heat conduction through compound media in series & parallel. (12) 2. Radial heat flow in Rubber tube, Cylindrical method (16) 3. The factors affect thermal performance of building. (10) 4. Climate and design of solar radiation. (12) 5. Central heating,(8) 6. Heat gain and heat loss estimation in the components of Buildings (8) 7. The thermal insulation &benefits of thermal insulation.(8) 8. Fenestration system (8)	C110.1	1 2 3 4 5	6 7 8
3	IV	New engineering materials	1.Composites- FRP & FRM (16) 2. Metallic glasses (16) 3.SMA- Shape memory alloys (16) 4. Ceramics- slip casting. Isostatic &Gas pressure bonding.(16) 5.Ferroelectric & ferromagnetic ceramic.(8) 6.High alumina ceramic.(8)	C110.4	1 2 3 4	5 6
4	II	Ventilation & refrigeration	1. Principles of natural ventilation , ventilation measurements and design for natural ventilation.(16) 2. Packaged air conditioner& window air conditioner.(16) 3.The design and working of chilled water plant and fan coil system.(16) 4. Different air conditioning systems for buildings.(16) 5.The common causes of AC fires, The steps to be taken to prevent the fires.(12) 6. Write short notes about water piping & cooling load.(12)	C110.1	1 2 3 4	5 6
5	III	Acoustics and lighting designs	1 .Sound absorption& Sound insulation measurements (12) 2. Artificial light sources and ambient , task and accent lighting in buildings.(12) 3.The hemispherical reflectance and transmission spectrum (12) 4.Principles of artificial lighting and supplementary artificial lighting.(12) 5. Daylight Calculation & design of windows.(12) 6. The measurements of day light & Visual field glare.(12) 7. Noise measurements and the impact of noise in multi storied building.(10)	C110.3	1 2 3 4 5	6 7
6	<b>Pending Questions</b>					
7	<b>Part – A Questions</b>					

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