Reg. No.																
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Question Paper Code

12806

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Second Semester

Civil Engineering

20BSPH204 - PHYSICS FOR CIVIL ENGINEERING

Regulations - 2020

Duration: 3 Hours Max.								
PART - A $(10 \times 2 = 20 \text{ Marks})$ Answer ALL Questions				K – Level	co			
1.	Def	fine intensity of sound. What is its unit?	2	<i>K1</i>	CO1			
2.	List	t the acoustical factors to be considered while we construct any buildings.	2	<i>K1</i>	CO1			
3.	Wh	at are the properties of metallic glasses?	2	<i>K1</i>	CO2			
4.	l. Define pseudo elasticity.							
5.	5. What are photopic, mesopic and scotopic visions?							
6.	6. What are the three main components of fenestration?							
7.	. Explain thermal insulation.							
8.	Wh	at are the components of a window air-conditioner?	2	<i>K1</i>	CO5			
9.	9. Define seismic waves.							
10.	10. What is earthquake?							
PART - B (5 × 13 = 65 Marks) Answer ALL Questions								
11.	a)	Derive Sabine's Formula for the reverberation time of a Hall. Explain the growth and decay of sound energy. OR	13	K2	CO1			
	b)	Write an essay on the design procedure of an auditorium to have good acoustics.	13	K2	CO1			
12.	a)	Explain the principles of artificial lighting and their sources in detail. OR	13	K2	CO3			
	b)	Derive cosines and inverse square law in photometry.	13	K2	CO3			
13.	a)	Discuss the different types of shading devices.	13	K2	CO4			
		OR						

b) Discuss the factors affecting thermal performance of buildings.

13 K2 CO4

14. a) Describe the construction and working of Chilled water plant.

OR

b) Discuss different air conditioning systems for buildings.

13 K2 CO5

15. a) Discuss the earthquake ground motion with types, intensity and magnitude.

OR

b) Explain seismic waves and seismology in detail.

PART - C $(1 \times 15 = 15 \text{ Marks})$

16. a) Discuss the classification of composites. Give detailed study of Fiber 15 K2 CO2 Reinforced Plastics (FRP) and Fiber reinforced metal (FRM).

OR

b) Explain thermal, mechanical, electrical and chemical properties of 15 K2 CO2 ceramic materials.