Reg. No.											

Question Paper Code	11741

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022
Second Semester
Civil Engineering
20BSPH204 - PHYSICS FOR CIVIL ENGINEERING
(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

Marks,
K-Level,CO

1.	State Weber – Fechner Law in Sound.	2,K1,CO1
2.	What is reverberation?	2,K1,CO1
3.	What are the properties of metallic glasses?	2,K1,CO2
4.	What are ceramic fibers?	2,K1,CO2
5.	Mention few artificial light sources.	2,K1,CO3
6.	What is visual field glare?	2,K1,CO3
7.	Write the principle of air conditioning.	2,K2,CO5
8.	What are the common causes of AC fire?	2,K1,CO5
9.	What are seismic waves?	2,K1,CO6
10.	What is earthquake?	2,K1,CO6

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.   13,K2,CO1

OR

    b) Explain sound insulation and different types of sound absorbing materials.   13,K2,CO1

12. a) Discuss the classification of composites. Give detailed study of Fiber Reinforced Plastics (FRP) and Fiber reinforced metal (FRM).   13,K2,CO2

OR

    b) Describe the type, properties and applications of shape memory alloys.   13,K2,CO2

13. a) Describe the daylight design of windows.   13,K2,CO3

OR

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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b) Describe the photopic, mesopic and scotopic vision in detail. *13,K2,CO3*

14. a) Discuss the principles of natural ventilation, ventilation measurements and design for natural ventilation. *13,K2,CO5*

OR

b) Describe the construction and working of Chilled water plant. *13,K2,CO5*

15. a) Discuss the earthquake ground motion with types, intensity and magnitude. *13,K2,CO6*

OR

b) Explain the steps involved in the probabilistic seismic hazard analysis. *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Discuss the factors affecting thermal performance of buildings. *15,K2,CO4*

OR

b) Explain heat gain and heal loss estimation in the components of buildings. *15,K2,CO4*