Reg. No.																

Question Paper Code	13759

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Second Semester

Civil Engineering

24BSPH204 - PHYSICS FOR CIVIL ENGINEERING

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	The molten rock material found in the interior of the earth is called _____ (a) Magma (b) Crust (c) Lava (d) Ionized plasma core	1	K1	CO1
2.	_____ is the relative displacement of adjacent points on opposite sides of a fault measured on the fault surface. (a) Slip (b) Flop (c) Sudden jump (d) Flip	1	K1	CO1
3.	Heat transfer takes place according to which law? (a) First (b) Zeroth (c) Second (d) Third	1	K2	CO2
4.	Insulating paint is not a replacement but helps in _____ indoor building temperatures. (a) polishing (b) regulating (c) cooling (d) modulating	1	K1	CO2
5.	Which component of an air conditioner can lead to overheating due to friction in bearings? (a) Heat generator (b) Cooler (c) Compressor (d) Freezing box	1	K1	CO3
6.	Scenario: John used an anemometer in a duct with a velocity of 3 m/s and a cross-sectional area of 0.2 m^2. What is the airflow volume through the duct? (a) 6 m^3/s (b) 0.6 m^3/s (c) 0.06 m^3/s (d) 66 m^3/s	1	K1	CO3
7.	The frequency of infrasound (a) <40 hertz (b) <20 hertz (c) <100 hertz (d) <30 hertz	1	K1	CO4
8.	Choose the answer that the reverberation time is too large, (a) Reverberation (b) Resonance (c) Normal Vibration (d) Seismic waves	1	K2	CO4
9.	How many forms of supplementary artificial lighting are available? (a) 2 (b) 5 (c) 4 (d) 3	1	K1	CO5
10.	____ property is exhibited by glass that makes its structure non-directional and homogeneous? (a) Isotropic (b) Isotonic (c) Isobaric (d) Isotomeric	1	K2	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11.	Define Rayleigh waves.	2	K1	CO1
12.	What are the types of hazards?	2	K1	CO1
13.	What are the benefits of thermal insulation?	2	K1	CO2
14.	What are three modes of heat transfer?	2	K2	CO2
15.	What are the causes of AC fires?	2	K1	CO3
16.	Explain the principle of air conditioning.	2	K2	CO3
17.	Distinguish between loudness and intensity of sound.	2	K2	CO4
18.	Explain noise. How is it classified?	2	K2	CO4
19.	Define irradiance.	2	K1	CO5
20.	What is photometry?	2	K1	CO5
21.	Mention the application of composites?	2	K1	CO6
22.	What are the types of composites based on the matrix materials?	2	K1	CO6

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Describe the volcano eruption and their effects.	*11*	*K2*	*CO1*
		OR			
	b)	Applications of seismic waves and seismology.	*11*	*K2*	*CO1*
24.	a)	Describe the central heating system.	*11*	*K2*	*CO2*
		OR			
	b)	Brief write-up on the different types of shading devices.	*11*	*K2*	*CO2*
25.	a)	Write a note on (a) packaged air conditioner and (b) chilled water plant.	*11*	*K2*	*CO3*
		OR			
	b)	Organize a small note on the cooling load.	*11*	*K2*	*CO3*
26.	a)	State and prove the Sabine's equation with a suitable diagram.	*11*	*K3*	*CO4*
		OR			
	b) (i)	Write Short notes on Ceramic fibers, Ferroelectric ceramic.	*6*	*K3*	*CO4*
	(ii)	Brief explanation on Ferromagnetic ceramics and High-aluminum ceramics.	*7*	*K3*	*CO4*
27.	a)	Derive cosine's law and the inverse square law in photometry.	*11*	*K2*	*CO5*
		OR			
	b)	Describe relations between radiant and luminous characteristics of radiation.	*11*	*K2*	*CO5*
28.	a)	Explain the preparation, types, properties, and applications of metallic glasses.	*11*	*K2*	*CO6*
		OR			
	b)	Describe the type, properties, and applications of shape memory alloys.	*11*	*K2*	*CO6*