Reg. No.															

Question Paper Code	14120

B.E./ B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 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.	Which of the following layers of the Earth is liquid? (a) Outer Core (b) Inner Core (c) Crust (d) Mantle	1	K1	CO1
2.	The most abundant gas emitted from volcanoes is _____. (a) water vapour (b) helium (c) sulphur dioxide (d) carbon dioxide	1	K1	CO1
3.	The heat is transferred by conduction, convection and radiation in _____. (a) melting of ice (b) boiler furnaces (c) condensation of steam in condenser (d) None of these	1	K1	CO2
4.	Which of the following has least value of conductivity? Glass (b) Water (c) Air (d) Rubber	1	K1	CO2
5.	Which of the following is the SI unit to measure pressure in refrigeration? (a) Bar (b) Newton (c) joule (d) Pascal	1	K1	CO3
6.	_____ is the process used in winter air conditioning? (a) Cooling and Dehumidification (b) Heating and Humidification (c) Dehumidification (d) Humidification	1	K1	CO3
7.	Which characteristic of sound determines its loudness? (a) Frequency (b) Pitch (c) Amplitude (d) Wavelength	1	K2	CO4
8.	The time required for any sound to decay to 60dB is called _____. (a) echo time (b) delay time (c) reverberation time (d) transient time	1	K1	CO4
9.	For which type of light source is the inverse square law strictly valid? (a) Cylindrical source (b) Searchlight (c) Isotropic point source (d) All type of light sources	1	K2	CO5
10.	The example for crystalline solid is _____. (a) glass (b) rubber (c) quartz (d) plastic	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	How do scientists determine the approximate age of the Earth?	2	K2	CO1
12.	Compare P-Waves with S - Waves.	2	K2	CO1
13.	What are the three modes of heat transfer?	2	K1	CO2
14.	Mention few thermal insulation paints.	2	K1	CO2
15.	Give the benefits of natural ventilation.	2	K1	CO3
16.	List the advantages and disadvantages of Split Air Conditioner.	2	K2	CO3
17.	State Weber-Fechner law.	2	K1	CO4
18.	Name the factors affecting acoustics of buildings.	2	K1	CO4
19.	What is Visual glare?	2	K1	CO5
20.	Summarize the forms of artificial sky.	2	K2	CO5
21.	Recall the properties of metallic glasses.	2	K1	CO6
22.	What do you mean by Slip casting?	2	K1	CO6

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Illustrate the structure and constitution of the interior of the earth.	*11*	*K2*	*CO1*
		OR			
	b)	Discuss the causes and effect of volcanic eruptions.	*11*	*K2*	*CO1*
24.	a)	Explain the general principles of Thermal Insulation. List the benefits of the same.	*11*	*K2*	*CO2*
		OR			
	b)	Explain the various shading devices with its functions and importance.	*11*	*K2*	*CO2*
25.	a)	Describe the construction and working of a window air conditioner.	*11*	*K2*	*CO3*
		OR			
	b)	Demonstrate the different air conditioning systems for different types of buildings.	*11*	*K2*	*CO3*
26.	a)	Derive Sabine formula for reverberation time and explain the growth and decay of sound.	*11*	*K3*	*CO4*
		OR			
	b)	Define absorption coefficient in sound. Demonstrate a method for measuring the absorption coefficient of a material.	*11*	*K3*	*CO4*
27.	a)	Discuss in detail about the day light and the design of day light windows.	*11*	*K2*	*CO5*
		OR			
	b)	Summarize the principles of artificial lighting and supplementary artificial lighting.	*11*	*K2*	*CO5*
28.	a)	Classify composites and write a note on Fiber Reinforced Plastics (FRP).	*11*	*K2*	*CO6*
		OR			
	b)	Describe the structure, characteristics and applications of shape memory alloys.	*11*	*K2*	*CO6*