

Question Paper Code : 51503

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

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Second Semester

Civil Engineering

PH 3201 – PHYSICS FOR CIVIL ENGINEERING

(Common to PTPH 3201-Physics for Civil Engineering for BE (Part-time)-Second Semester-Civil Engineering-Regulations 2023)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by fenestration?
2. Define thermal comfort.
3. State the principle of natural ventilation.
4. Outline the protection measures taken against fire caused by air conditioning system.
5. Define visual glare.
6. Distinguish between day lighting and artificial lighting.
7. State the principle of shape memory effect.
8. Distinguish between crystalline and non-crystalline ceramics.
9. Define P wave and S wave.
10. Distinguish between class B and C fires.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the factors affecting thermal performance of a building. State the different kinds of thermal measurements.

Or

- (b) Explain design of solar radiation based on climate. Write short note on shading devices.

12. (a) Describe the principle, construction and working of window air conditioner.

Or

- (b) Explain the different types of air conditioning systems of buildings.

13. (a) Elucidate the impact of noise in multistoried buildings and summarize the preventive measures to reduce noise in multistoried buildings.

Or

- (b) Discuss the importance of supplementary artificial lightings in detail.

14. (a) Explain how ceramics can be manufactured by slip casting, isostatic pressing and gas pressure bonding methods.

Or

- (b) Explain the thermal, mechanical, electrical and chemical properties of ceramics.

15. (a) Discuss the probabilistic seismic hazard analysis and deterministic seismic hazard analysis.

Or

- (b) Explain the classification of fire hazards and the cause of fire hazards. Also discuss the prevention and safety measures taken during fire hazard.

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