Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 80279

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Second Semester

Civil Engineering

PH 8201 — PHYSICS FOR CIVIL ENGINEERING

(Regulation 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the indices of thermal comfort?
2. Give the principles of natural ventilation.
3. State Weber – Fechner law.
4. Give the properties of sound absorbing materials with example.
5. Define cosines law of electromagnetic waves.
6. Mention on Visual field glare.
7. Define Composite and its classification.
8. Write the importance of Isostatic pressing.
9. Interpret the characteristics of seismic waves.
10. List the fire-proof materials for buildings.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the various factors affecting the thermal performance of buildings.

Or

(b) Elaborate the design and working of chilled water plant and fan coil systems.

12. (a) State Sabine's formula. Derive the absorption Coefficient equations using growth and decay method.

Or

(b) Explain the various factors affecting acoustics of buildings and illustrate sound insulation methods.

13. (a) Explain the relationship between luminescence and radiant quantities

Or

(b) Explain the hemispherical reflectance and transmittance spectrum and discuss the measurements of day-light.

14. (a) Give a detailed report on Fibre Reinforced Plastics (FRP) and Fiber Reinforced Metals (FRM).

Or

(b) Explain the characteristics of ferroelectric and ferromagnetic ceramics.

15. (a) Explain the occurrence of earthquake ground motion and its estimation techniques.

Or

(b) Give a detailed report on fire prevention and safety regulations and fire fighting equipment.