

5246

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
JUNE 2010**

CE 04 804 E – FUNCTIONAL DESIGN OF BUILDINGS

Time : Three Hours

Maximum : 100 Marks

Answer all questions

1. (a) Explain the various sound insulation materials commonly used in Auditorium?
(b) Explain the ill effects of noise on human beings
(c) Explain light pollution & what are methods to control it?
(d) Discuss the lumen method
(e) Define ET nomograms & Mean radiant temperature
(f) What are the ways in which the topography influences the climate?
(g) Define low energy cooling
(h) Explain the various shading devices

(8 X 5 = 40 MARKS)

- 2.(a) Explain in detail airborne and structure borne propagation of sound and what are ways to mitigate both?

OR

- (b) What are the acoustical design criteria for an open air theatre?

3. (a) Write short notes on: (i) polar distribution curves (ii) Day light factor (iii) Sky component

OR

- (b) Explain the lighting design criteria for institutional and Health care building types?

4. (a) Discuss in detail “climate on a global scale” in today's context.

OR

(b) Explain the process of heat flow through buildings and describe the methods to control heat gain in buildings.

5. (a) What are the principles of ergonomic design? Explain in detail any two.

OR

(b) What are the passive and active methods for control of climate in building design? Explain the methods briefly.

(4 X 15 =60 MARKS)

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