

B.E. (Civil Engineering) Seventh Semester (C.B.S.)
Elective - I : Building Services

P. Pages : 2

Time : Three Hours



TKN/KS/16/7526

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data whenever necessary.
 4. Illustrate your answers whenever necessary with the help of neat sketches.
 5. Use of non programmable calculator is permitted.

1. a) Explain briefly water supply provisions. **6**
- b) Explain the detailed planning and design considerations of sanitary unit for a double storey building. **7**
- OR**
2. a) Describe hydraulic testing of pipe sewers. **6**
- b) Explain the detailed planning and design considerations of drainage unit of a single storey building. **7**
3. a) Explain the acoustic design approaches for various building types with reference to applicable standards. **7**
- b) Write a note on **any one**. **7**
- i) Requisites of acoustic environment.
- ii) Selection of acoustic materials.
- OR**
4. a) Explain the requirements and need of sound in thermal insulations in building. **7**
- b) How do you overcome the problems of acoustics defects in buildings? **7**
5. Explain the following: **13**
- i) Requirements of lighting. ii) Principles of lighting.
- OR**
6. a) What is illuminance level & luminous efficiency of school and hospital buildings? Explain. **6**
- b) Discuss in detail wiring in buildings. **7**
7. a) Discuss in detail about the air distribution for a residential building. **7**
- b) Explain the requirements for air conditioning in buildings. **7**
- OR**
8. Write a note on **any three**. **14**
- i) P-H diagram of vapour compression cycle.
- ii) Position and size of openings.

- iii) Convective cooling.
- iv) Physiological cooling.
- v) Humidity control.

9. a) Write in detail about the various types of security systems. **6**
- b) Write short notes on: **7**
- i) Lift machine room.
 - ii) Escalators.

OR

10. a) Discuss the special features required for physically handicapped and elderly. **6**
- b) Explain the important of water heating due to solar or electrical. **7**
11. Write a note on: **13**
- i) Fire escapes and fire alarm systems.
 - ii) Smoke detectors.

OR

12. Explain briefly. **13**
- i) Fire load
 - ii) Fire resistance
 - iii) Fire severity.
