

M.Tech. Structural Engineering & Construction (CBCS Pattern) Semester - I  
**PSES14 - Building Services**

P. Pages : 1

Time : Three Hours



**GUG/S/23/10964**

Max. Marks : 70

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- Notes :
1. All questions carry equal marks.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Illustrate your answers wherever necessary with the help of neat sketches.
  4. Solve **any five** questions.

1. a) Discuss significance of building services in hospital and discuss role of building service engineering? **7**  
b) Enumerate municipal bye laws and regulation of rain water harvesting for commercial building with neat sketch. **7**
2. a) What are special features required for physically handicapped in building services. **7**  
b) How refuse is collected from building and also discuss about refuse bin and sacks. **7**
3. Explain electricity distribution in multi-storeyed building. **14**
4. a) What are different types of air conditioners? How will you design capacity of it for different structures? **7**  
b) Explain design for cooling water plant for the industrial unit where around 200 workers are employed in each shift. **7**
5. a) Explain fire detection system. **7**  
b) Explain in brief planning consideration in building using non combustible material. **7**
6. Write a note on **any three**. **14**
  - a) Fire extinguishing system.
  - b) Protection of opening from fire.
  - c) Automatic sprinkler.
  - d) Safety against fire in theatres and cinemas.

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