

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

P. Pages : 1

Time : Three Hours



**GUG/W/24/10964**

Max. Marks : 70

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

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|-----------|-----|---|-----------|
| <b>1.</b> | a)  | Discuss significance of building services in hospital & discuss role of building service engineering.     | <b>7</b>  |
|           | b)  | Enlist Municipal bye laws & regulation of rain water harvesting for commercial building with neat sketch. | <b>7</b>  |
| <b>2.</b> | a)  | Explain what is meant by term 3-phase power supply.   | <b>4</b>  |
|           | b)  | What are the causes of fire in any type of building.  | <b>10</b> |
| <b>3.</b> | a)  | What are the accessories required for the sanitation system in any type of building work.                 | <b>7</b>  |
|           | b)  | What problems arises during plumping work of vertical expanded building.                                  | <b>7</b>  |
| <b>4.</b> | a)  | Explain P-4 diagram of vapour compression cycle.  | <b>7</b>  |
|           | b)  | Explain various system of air conditioning.   | <b>7</b>  |
| <b>5.</b> | a)  | Explain in brief planning consideration in building using non-combustible material.                       | <b>7</b>  |
|           | b)  | Write a short note on:  | <b>7</b>  |
|           | i)  | Modern theory of light & colour   |           |
|           | ii) | Luminous flux.  |           |
| <b>6.</b> |     | Explain in detailed.  | <b>14</b> |
|           | a)  | Building Automation.  |           |
|           | b)  | Smart Building.   |           |

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