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# PRESIDENCY UNIVERSITY

## BENGALURU

### Mid - Term Examinations – October 2025

**Date:** 29-10-2025

**Time:** 02.30pm to 04.00pm

|                              |  |                       |
|------------------------------|--|-----------------------|
| <b>School:</b> SOCSE/SOE     | <b>Program:</b> B.Tech Civil Engineering                 |                       |
| <b>Course Code :</b> CIV2021 | <b>Course Name:</b> Design Concepts of Building Services |                       |
| <b>Semester:</b> VII         | <b>Max Marks:</b> 50                                     | <b>Weightage:</b> 25% |

| <b>CO - Levels</b> | <b>CO1</b> | <b>CO2</b> | <b>CO3</b> | <b>CO4</b> | <b>CO5</b> |
|--------------------|------------|------------|------------|------------|------------|
| <b>Marks</b>       | <b>35</b>  | <b>15</b>  |            |            |            |

#### Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

### Part A

**Answer ALL the Questions. Each question carries 2marks.**

**5Q x 2M=10M**

|          |   |                |           |            |
|----------|---|----------------|-----------|------------|
| <b>1</b> | What is the need for planning and provisioning Building Services?                 | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| <b>2</b> | List the items classified under Mechanical System of Building Service.            | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| <b>3</b> | What is a humidifier?   | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| <b>4</b> | List the factors influencing choice of Building Service such as Air Conditioning. | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| <b>5</b> | What is HVAC?   | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |

## Part B

### Answer the Questions.

**Total Marks 40M**

|           |           |  |                 |           |            |
|-----------|-----------|--|-----------------|-----------|------------|
| <b>6.</b> | <b>a.</b> | Briefly explain various types of building services | <b>10 Marks</b> | <b>L2</b> | <b>CO1</b> |
|-----------|-----------|--|-----------------|-----------|------------|

**Or**

|           |           |   |                 |           |            |
|-----------|-----------|---|-----------------|-----------|------------|
| <b>7.</b> | <b>a.</b> | What are the different types of maintenance work? Explain briefly | <b>10 Marks</b> | <b>L2</b> | <b>CO1</b> |
|-----------|-----------|---|-----------------|-----------|------------|

|           |           |  |                 |           |            |
|-----------|-----------|--|-----------------|-----------|------------|
| <b>8.</b> | <b>a.</b> | Provision of services to a building is dependent on the occupancy and type of structure. Briefly explain the different types of building | <b>07 Marks</b> | <b>L2</b> | <b>CO1</b> |
|-----------|-----------|--|-----------------|-----------|------------|

|  |           |  |                 |           |            |
|--|-----------|--|-----------------|-----------|------------|
|  | <b>b.</b> | What are the various types / classification of air conditioners? | <b>08 Marks</b> | <b>L2</b> | <b>CO1</b> |
|--|-----------|--|-----------------|-----------|------------|

**Or**

|           |           |   |                 |           |            |
|-----------|-----------|---|-----------------|-----------|------------|
| <b>9.</b> | <b>a.</b> | What is Ventilation. Briefly explain how this can be provisioned including necessary equipment, if any. | <b>07 Marks</b> | <b>L2</b> | <b>CO1</b> |
|-----------|-----------|---|-----------------|-----------|------------|

|  |           |   |                 |           |            |
|--|-----------|---|-----------------|-----------|------------|
|  | <b>b.</b> | What are the principles of lighting? Briefly explain. | <b>08 Marks</b> | <b>L2</b> | <b>CO1</b> |
|--|-----------|---|-----------------|-----------|------------|

|            |           |   |                 |           |            |
|------------|-----------|---|-----------------|-----------|------------|
| <b>10.</b> | <b>a.</b> | A client who intends to build a Hospital has contacted your AEC firm. A junior engineer is unable to explain the term HVAC from your firm's brochures showcasing a previous project. Please fill in the required details so the client is aware of its need and benefits. | <b>15 Marks</b> | <b>L3</b> | <b>CO2</b> |
|------------|-----------|---|-----------------|-----------|------------|

**Or**

|            |           |  |                 |           |            |
|------------|-----------|--|-----------------|-----------|------------|
| <b>11.</b> | <b>a.</b> | Write short notes on lighting system and requirements for a commercial building? | <b>15 Marks</b> | <b>L3</b> | <b>CO2</b> |
|------------|-----------|--|-----------------|-----------|------------|