

**1E3109****1E3109****B. Tech. I - Sem. (Main / Back) Exam., - 2023****1FY3 – 09 Basic Civil Engineering****Time: 3 Hours****Maximum Marks: 70**[ersahilkagyan.com](http://ersahilkagyan.com)*Instructions to Candidates:*

*Attempt all ten questions from Part A, five questions out of seven questions from Part B and three questions out of five from Part C.*

*Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.*

*Use of following supporting material is permitted during examination.  
(Mentioned in form No. 205)*

1. NIL2. NIL**PART – A****[10×2=20]****(Answer should be given up to 25 words only)****All questions are compulsory**

- Q.1 What is Surveying?  
 Q.2 Define Building Byelaws.  
 Q.3 Discuss the difference between Plinth area and Carpet area.  
 Q.4 Enlist any four traffic signs.  
 Q.5 Differentiate Foresight, Back sight and Intermediate sight.  
 Q.6 What do you understand by 'Infrastructure' Development?  
 Q.7 What is the Flow of energy in the ecosystem?

- Q.8 Write the name of two instrument used in linear measurements.
- Q.9 Define latitude and longitude of a line.
- Q.10 What do you mean by ecosystem?

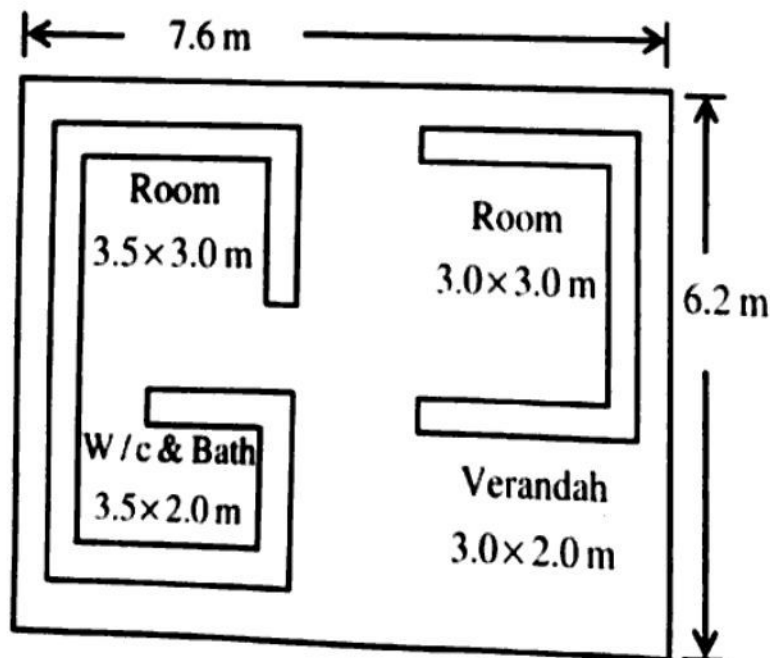
## PART – B

[5×4=20]

### (Analytical/Problem solving questions)

#### Attempt any five questions

- Q.1 What are the fundamental principals of surveying? Explain briefly.
- Q.2 Explain "how Orientation affects the ventilation of a building".
- Q.3 Enlist any four important chemical characteristics of raw water. Mention the method of analysis and its acceptance value as per water Quality standards of any two of them.
- Q.4 Calculate plinth area, floor area and carpet area for the plan of a building given below. Wall thickness is 30 cm.



- Q.5 Write short note on "Energy recovery from recycling of solid waste".
- Q.6 Explain the methods to control noise pollution.
- Q.7 Write short note on "Transportation Engineering".

## PART – C

[3×10=30]

### (Descriptive/Analytical/Problem Solving/Design Questions)

#### Attempt any three questions

- Q.1 Explain the steps involved in laying out of building plan on ground.
- Q.2 Explain with a neat sketch construction of a Prismatic compass.
- Q.3 Discuss the components of a residential building with a neat figure.
- Q.4 Discuss with neat sketch –
- (1) Hydrological cycle
  - (2) Carbon cycle
- Q.5 In traversing in anti-clock wise direction, the following readings were observed.

Line	AB	BC	CD	DE	EA
Fore Bearing	105°15'	20°00'	316°30'	187°15'	122°45'

Draw a neat sketch of the traverse. Determine the interior angles of the traverse and apply check.

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