

1E3109

Roll No. _____

Total No. of Pages: **3****1E3109****B. Tech. I - Sem. (Main / Back) Exam., - 2023****1FY3 - 09 Basic Civil Engineering****Time: 3 Hours****Maximum Marks: 70***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?

[1E3109]**Page 1 of 3****[6320]**

- 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?

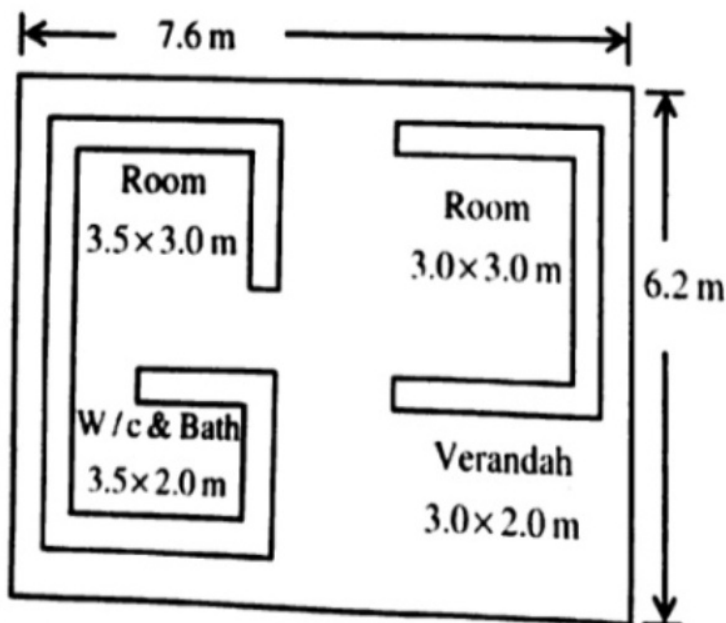
PART – B

[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”.

1E3109]

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.

1E3109**1E3109**

B.Tech. I Sem. (Main) Examination, April/May - 2022
1FY3-09 Basic Civil Engineering

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates:**

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

Schematic diagram must be shown wherever necessary. Any data you feel missing 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)*

PART - A

(Answers should be given up to 25 words only)

All questions are compulsory.

(10×2=20)

1. What is the role of Civil Engineers in Transportation Engineering?
2. Explain relevance of Civil Engineering in the overall infrastructural development of the country.
3. Write any two characteristics of good scale.
4. What do you mean by 'Geodetic Surveying'?
5. What are the advantages of 'total station'?
6. A teacher wants to construct a double storied bungalow on a plot of 15m×20m. Front margin is 4.5 m. Rear margin is 3m. what will be the total built - up area? Also calculate FSI.
7. What is National Building Code?
8. What remedial actions should be taken while designing highway to avoid crash?
9. What do you mean by 'Ozone Depletion'?
10. What is the necessity of grit chamber in sewage treatment?

1E3109 /2022**(1)****[Contd....**

PART - B

(Analytical/Problem solving questions)

(5×4=20)

Attempt any five questions:

1. Enlist with brief description, the corrections to be applied to measurements made with steel tape.
2. Describe the characteristics of contour lines.
3. What is site plan? Which are the information to be included in a site plan?
4. Briefly explain the different components of building with neat figure.
5. Draw any five traffic signs and explain the meaning of each.
6. Explain different audiological, physiological and psychological effects of noise pollution.
7. Write short note on 'Sanitary Landfills'.

PART - C

(Descriptive/Analytical/Problem solving/Design Questions)

(3×10=30)

Attempt any three questions.

1. a) Draw and label the different parts of 'Dumpy Level'.
b) Define the following terms:
 - i) Axis of the telescope.
 - ii) Change point
 - iii) Parallax.
 - iv) Datum.
 - v) Height of instrument.
2. The bearings of the sides of a traverse ABCDE are as follows:

Side	Fore bearing	Back bearing
AB	107°15'	287°15'
BC	22°0'	202°0'
CD	281°30'	101°30'
DE	189°15'	9°15'
EA	124°45'	304°45'

Compute the interior angles of the traverse. Draw the sketch. Check the answer.

3. Differentiate between
- i) Load bearing structure and Framed structure. (4)
 - ii) Educational buildings and institutional buildings. (3)
 - iii) Sub-structure and super structure. (3)
4. Discuss in details the various modes of transport, their characteristics and criteria for choice of a particular mode of transport.
5. a) How is ecological balance disturbed due to human activities? (4)
- b) Write short note on
- i) Nitrogen cycle
 - ii) Rain water harvesting. (6)
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2E3208**2E3208**

B.Tech. II Sem (Main) Examination, July - 2022
2EY3-09 Basic Civil Engineering

Time : 3 Hours**Maximum Marks : 70**

Attempt all Ten questions from Part A, Five questions out of Seven questions from Part B and Three questions out of Five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing 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)

PART - A

(Answer should be given up to 25 words only)

ALL questions are compulsory.

(10×2=20)

1. Write the scope of Civil Engineering.
2. Define plan and Maps in survey.
3. Explain the object of levelling.
4. Describe solid waste and its types.
5. Explain principles of surveying.
6. What are the various types of Buildings.
7. Describe various modes of transportation in brief.
8. Write down harmful effects of Air Pollution.
9. Define contour maps.
10. Explain Bio diversity.

PART - B
(Analytical/Problem solving questions)

Attempt any **Five** questions:

(3×4=12)

1. Explain various types of tapes used in survey.
2. Describe Impact of Infrastructural development on economy of country.
3. Convert the whole circle bearing into quadrantal bearing.
 - a) OA 32°
 - b) OB 109°
 - c) OC 211°
 - d) OD 303°
4. Explain in brief the procedure of ranging survey line.
5. Describe in brief various components of buildings.
6. Explain in short various types of foundations with neat sketch.
7. Describe Rain Water Harvesting.

PART - C
(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Three** questions:

(3×10=30)

1. Describe various types of tape corrections in survey.
2. Describe various causes of Road Accidents and what safety measures will take to avoid Road Accidents.
3. Explain hydrological cycle with neat sketch.
4. Write short note on sanitary land fill.
5. Describe in brief treatment of waste water.