Roll No. 2261IA42

GLOBAL INSTITUTE OF TECHNOLOGY

B. Tech. I-Semester Exam 2022

1FY3-09/Basic Civil Engineering

(For section A&B)

27-12-2022/Tuesday

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

Attempt all questions

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. **no supplementary sheet shall be issued in any case.**

Part A (Answer should be given up to 25 words only)
All questions are compulsory 10x 2 = 20

Q.1 Define Fore Bearing & Back Bearing [CO2]
Q.2Explain Use of a line ranger [CO2]
Q.3 Enumerate five core fields of a Civil Engineer [CO1]
Q.4 Define a closed traverse with checks. [CO2]
Q.5 Define ranging in surveying [CO2]
Q.6 Draw a neat & clean diagram of metric chain. [CO2]
Q.7 What do you mean by geodetic surveying? [CO2]
Q.8 Define B.M. Reduced Level, Height of Instrument. [CO2]
Q.9 Explain the two basic principles of surveying [CO2]
Q.10 Define Datum, Back sight, fore Sight

Part B (Analytical/Problem solving questions)
Attempt all questions (word Limit 100) **5x4=20**

Q.1 Discuss various specialization of Civil Engineering. [CO1]
Q.2 Define surveying, also discuss the type of surveying. [CO2]
Q.3.Differentiate between Surveyor and Prismatic compass [CO2]
Q.4 Explain relevance of civil engineering in the overall infrastructural development of the country [CO1]
Q.5 Convert the following whole circle bearing to quadrantal bearing [CO2]
(i) $51^0 13'$ (ii) $123^0 15'$ (iii) $345^0 6'$ (iv) $246^0 45'$

Part C (Descriptive/Analytical/Problem Solving/Design Question)
Attempt all questions 3x 10 = 30

Q.1Explain two fundamental principle of surveying upon which the various method of surveying is based. [CO2]
Q2 The following bearings were observed with a compass. Calculate interior angle
Line AB (FB= $60^0 30'$), Line BC (FB= $122^0 0'$),Line CD (FB= $46^0 0'$),Line DE (FB= $205^0 30'$)
Line EA (FB= $300^0 0'$) [CO2]
Q3 The following reading were taken during a levelling work with 4m staff
0.578, 0.933, 1.768, 2.450, 2.005, 0.567, 1.888, 1.181, 3.679, 0.612, 0.705, 1.810. The instrument was shifted after 5th and 9th reading, Calculate R.L of Each point by taking RL of Bench mark equal to your year of birth. Apply necessary checks. [CO2]

a
b