Registration No :

Total Number of Pages : 02

2nd Semester Reg/Back Examination: 2022-23
Basic Civil Engineering
BRANCH(S): AERO, AE, BIOMED, BIOTECH, CIVIL, CSEAI, CSEDS, CSE, CSIT, CSEAIML, ELECTRICAL & C.E, EEE,ELECTRICAL,ECE,ETC,IT,MANUTECH,MECH,METTA,MINING,PLASTIC,PT
Time : 3 Hour
Max Marks : 100
Q. Code : M490
Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1   Answer the following questions: (2 x 10)
   a)   State the major disciplines of Civil Engineering.
   b)   Write the standard size of bricks as per BIS.
   c)   Define mortar and its type.
   d)   Define prestressed concrete.
   e)   What is surveying?
   f)   Write relation between Fore Bearing and Back Bearing.
   g)   Define check line and tie line.
   h)   Define porosity and degree of saturation.
   i)   State the function of foundation in a structure.
   j)   Write different modes of transport.

Part-II

Q2   Only Focused-Short Answer Type Questions- (Answer Any Eight out of   (6 × 8)
        Twelve)
   a)   State the qualities of good bricks.
   b)   Briefly explain chemical classification of rocks.
   c)   What is standard consistency of cement? How it is determined in the laboratory?
   d)   State advantages and disadvantages of brick masonry over stone masonry.
   e)   Write short notes on Workability of concrete.
   f)   What is a local attraction? How it is detected in the field?
   g)   Calculate sag correction for a 30 m steel tape under a pull of 80 N, if it is suspended in three equal spans. Unit weight of steel is 78.6 kN/m^3. Area of cross-section of tape is 8 mm^2.
   h)   Briefly explain various methods used for linear measurements in surveying.
   i)   Illustrate different types of foundations with neat sketches.
   j)   Write different advantages and disadvantages of Irrigation.

k) What is cross drainage works? State different types of cross drainage works.

l) Explain planning and design aspects of transportation engineering.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 Discuss the characteristics of good building stones. **(16)**

Q4 The following are the observed bearings of the lines of a traverse ABCDEA with a compass in a place where local attraction was suspected. **(16)**

Line	FB	BB
AB	191°45'	13°0'
BC	39°30'	222°30'
CD	22°15'	200°30'
DE	242°45'	62°45'
EA	330°15'	147°45'

At what stations do you suspect local attraction? Find the correct bearings of the lines also compute the included angles.

Q5 Explain in details about I.S. soil classification system and draw the plasticity chart. **(16)**

Q6 (a) Discuss different types of cement used in construction sector. **(8 x 2)**

(b) Write short notes on total station.