Dr. Chandra Pal

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-VI Semester (Civil)

COURSE CODE: 18B11WCE631   MAX. MARKS: 15

COURSE NAME: Advanced Structural Analysis

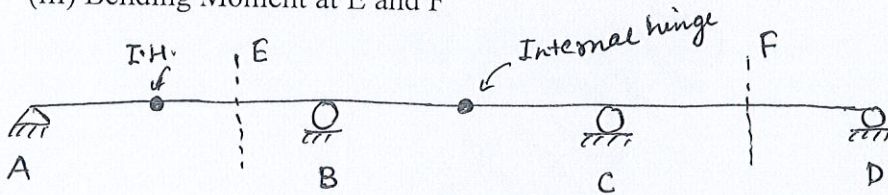COURSE CREDITS: 03   MAX. TIME: 1 Hour

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated against each question in square brackets.

Q1. Elaborate the need of Influence Line Diagram and also mention its difference with shear force and bending moment diagram.   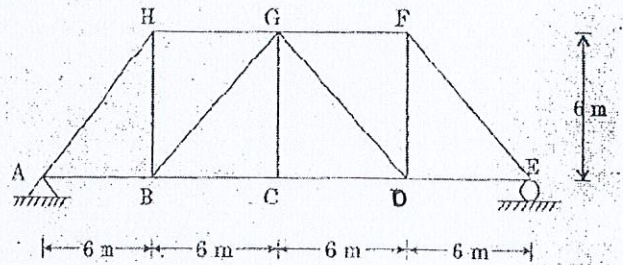   [2]

Q2. For the given beam, draw the ILD using Muller Breslau Principle for

    (i) Support reaction at A and D

    (ii) Shear force at section E and F

    (iii) Bending Moment at E and F   [4]

Q3. For the given truss, draw the ILD for member AB, GC and BG.   [4]

Q4. A simply supported beam has a span of 20m. Uniformly distributed load of 20kN/m and 3 m long crosses the beam from left to right. Find

(i) maximum shear force and bending moment at C

(ii) Absolute shear force and Absolute bending moment on the beam.   [5]