Prof Chandrapal Ga

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-2 EXAMINATION- April -2018
B.Tech. VI Semester

COURSE CODE: 10B11CE615   **MAX. MARKS: 25**

COURSE NAME: Advanced Structure Analysis

COURSE CREDITS: 04   **MAX. TIME: 1.5 HRS**

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1. (i) Define three stages in which a elastic section converted to plastic section. Also derive the moment carrying capacity of beam corresponding to each stage.

(ii) Find the shape factor for the section shown in fig. -1.   **(4+4 = 8) [CO1, CO4]**

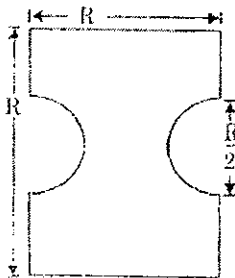**Q.2.** Determine the collapse load for the beam shown in fig. -2.   **(6) [CO1, CO4]**

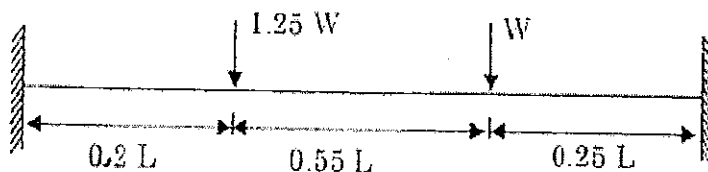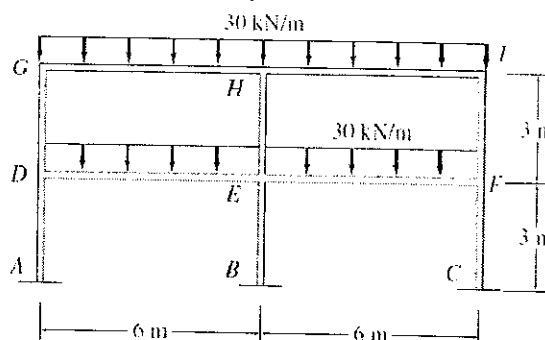
Fig. -1

Fig. - 2

Q.3. Solve the given frame by approximate method.   **(5) [CO1, CO4, CO5]**

Q.4. The system of concentrated loads shown in figure rolls from left to right on the beam of 15m. For a section 4m from left support determine maximum bending moment. **(6) [CO1, CO4]**