

BRACT'S
Vishwakarma Institute of Information Technology, Pune

M.E (STRUCTURES)-SEM III

Subject: Elective III (Adv analysis of steel Frames, Design of Concrete Shell Structures and Foreign

Language)

Max marks: 50.

Date:

Note:

Solve Section A, Section B and Section C in separate answer books

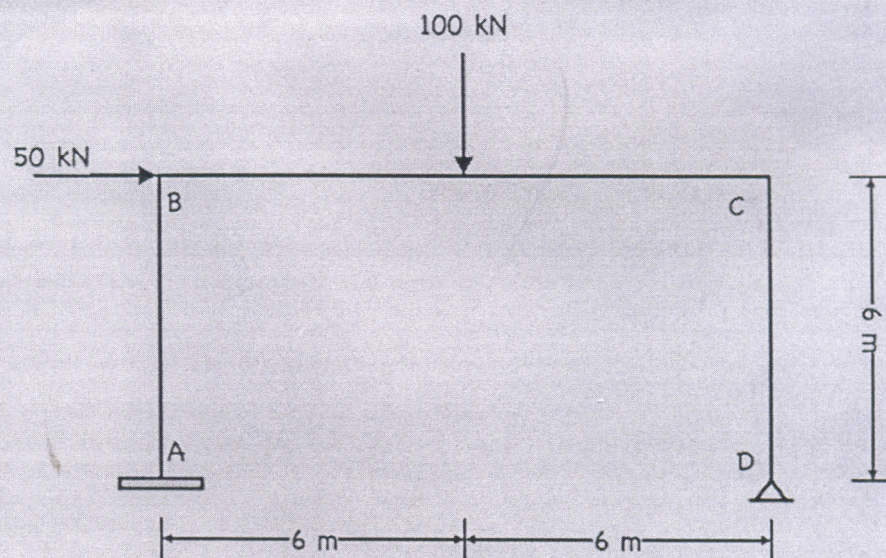
Solve any two full questions from Q.1, Q.2 and Q.3

Q.4 and Q.5 are compulsory.

Q.6, Q.7 and Q.8 are compulsory.

SECTION A

- Q.1 a) Derive the relation of deflection $y(x)$ for a beam column member subjected to UDL over a portion of the span. 5 marks
- b) Derive the buckling load for a Fixed – Fixed Strut 5 marks
- Q.2 For the rectangular frame shown below, draw the BMD for FOEA & FOIA. 10 marks



- Q.3 a) Write a note on different methods of analysis. 5 marks
- b) Write a note on different methods of Second order inelastic analysis (SOIA). 5 marks

SECTION B

- Q.4 a) Explain the plate action and slab action in the behavior of a folded plate. 5 marks
- b) Draw various cross-sections of the folded plates. 5 marks

OR

- Q.4 Discuss in detail the parameters for the selection of a Cylindrical Shell. 10 marks

- Q.5 a) Write the objects of Prestressing of Cylindrical Shells. 6 marks
- b) Write the boundary conditions for a single Cylindrical Shell with edge beams. 4 marks

OR

- Q. 5 Explain in details the Schorer's theory in matrix form. 10 marks

SECTION C

Q.6 Répondez aux questions : 5 marks

- a. Quelle est votre profession ?
- b. Quelles langues parlez-vous ?
- c. Vous avez quel âge ?
- d. A quelle heure dinez- vous ?.....
- e. Où habitez-vous ?

Q.7 Quelle heure est-il ? 3 marks

- a. 12h45 -
- b. 4h55 -
- c. 15h17-

Q.8 Complétez la liste : 2 marks

- a. Jeudi, vendredi, samedi,
- b. Avril, mai, juin,