



Bharatiya Vidya Bhavan's
Sardar Patel College of Engineering

(A Government Aided Autonomous Institute)
Munshi Nagar, Andheri (West), Mumbai – 400058.

End Semester Re-Exam

June 2016



Max. Marks: 100

Class: T.Y.B.Tech. (Civil)

Semester: V

Course: **Building Design and Drawing II**

Duration: 04 Hours

Program:

Course Code :

Instructions:

1. Q.1 is compulsory.
2. Out of remaining six questions, attempt any four questions.
3. In all five questions to be attempted.
4. Attempt each question on a fresh page (use both sides of the sheet)
5. Answers to the theory questions should be written on the drawing sheet only
6. Assume suitable data wherever required and state it clearly

Master file.

It is proposed to construct a PWD Rest House near an irrigation project site. The building is RCC framed G + 1 structure with the following requirements:

1. Manager's room – 10 sqm
2. Waiting hall / Lounge – 20 sqm
3. Rooms for
Section Engineers - 12 nos double Bed Suites with attached toilets - 20 to 25 sqm each
Resident Engineers 5 nos. single bedded with attached toilets – 15 to 20 sqm each
4. Guest Rooms (2 nos.) – 15 to 20 sqm
5. Chief Engineers Office – 15 sqm
6. Record room – 12 to 15 sqm
7. Store room – 12 sqm
8. Technical Drawing/ Blue print room/ Computer room – 15 to 20 sqm
9. Meeting hall / Conference room – 50 sqm
10. Recreation / TV / Game room – 50 sqm
11. Tiffin / Mess room – 100 sqm
12. Out-house / Servant Quarters – 2 nos. – 30 sqm each (show in Site Plan)

Q.1. a) Design and develop ground floor plan of the Rest House. Provide entrance, main stair, corridors, passages and sanitary units as per the standards. **15**

b) What are the principles of planning an educational building? **05**

Q.2. Draw a detailed section passing through staircase and sanitary unit for the PWD rest house you have planned in Q.1 **20**

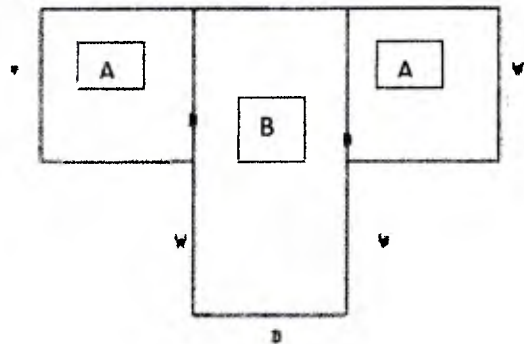
Q.3. a) State the importance of green building concept. Enlist various green building certifications adopted by government of India. **10**

b) Write a note on "Slum Clearance" and 'slum redevelopment' **10**

- Q.4.** a) Write a note on "Town planning: concepts & advantages" 05
 b) Write a note on "Master plan" 05
 c) Draw First Floor Plan for the structure you have planned in Q.1 10
- Q.5.** a) Draw a line plan of administrative office of your college showing the units or sections of administration with the interior details. 10
 b) Draw Site Plan for the structure you have planned in Q.no.1. 10
- Q.6.** Draw a scale 1:50 two point perspective view of the structure shown in figure. The observer is at a distance of 5.5 m along central visual ray. Assume eye level at 3.0 m above G.L. Retain all construction lines. 20

Number of steps-3, tread-300mm, rise-150mm
 D-door-1000x2000, W-window-1200x 1200,
 Height for pitched roof -3000,
 Slope -30 degree.
 All dimensions are in mm

Room A: 5m x 5m
 Room B: 5m x 10m



- Q.7.** a) Explain in detail the terms zoning and density control in town planning. 10
 b) Enlist the energy efficient techniques you would adopt for the public building you have planned in Q.1. Explain any one technique in detail. 10

2



Bharatiya Vidya Bhavan's Sardar Patel College of Engineering

(A Government Aided Autonomous Institute)
Munshi Nagar, Andheri (West), Mumbai – 400058.



Re Examination
June 2016

Max. Marks: 100

Class: TY B.Tech

Semester: V

Name of the Course: **Structural Analysis-II**

Duration: 3 Hours

Program: BTech in Civil Engineering

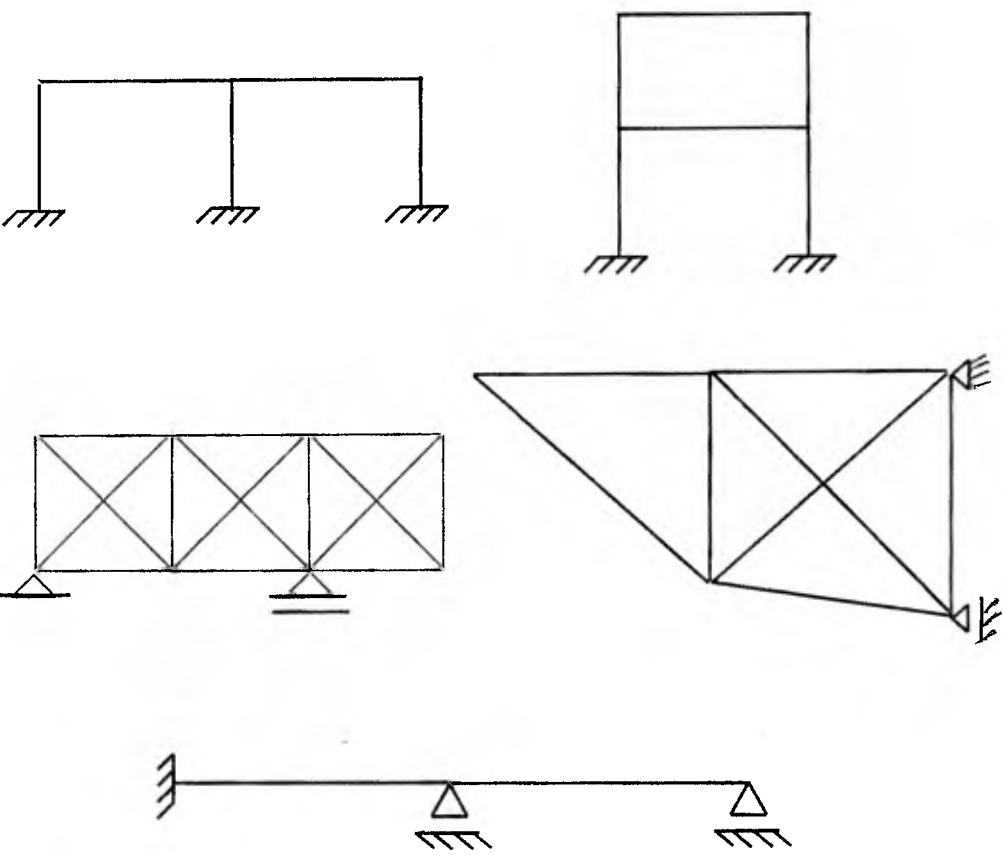
Course Code : **CE 301**

Master file.

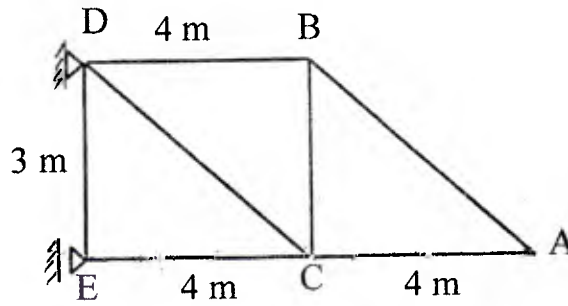
Instructions:

- Attempt any FIVE questions out of SEVEN questions.
- If there are sub questions, **answers to all sub questions should be grouped together.**
- Figures to the right indicate full marks.
- Assume suitable data if necessary and state the same clearly.

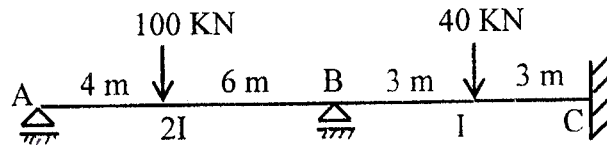
| Question No | Max Marks | Course Outcome Number | Module No. |
|-------------|-----------|-----------------------|------------|
| Q.1 (a) | (10) | 1 | 1 |



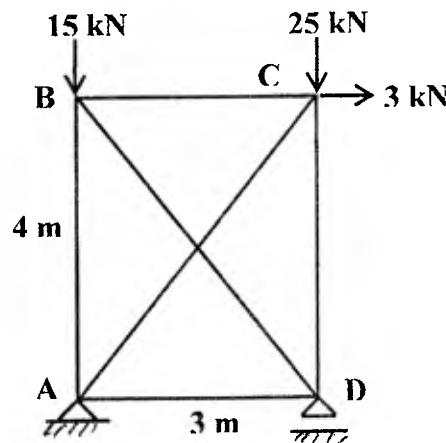
- Q.1 (b) The members DC, DB and AB of the truss shown in figure are subjected to temperature increase of 40°C . Calculate the vertical deflection of A due to the increase in temperature. (10) 1 2
 Take $\alpha = 12 \times 10^{-6}/^{\circ}\text{C}$.



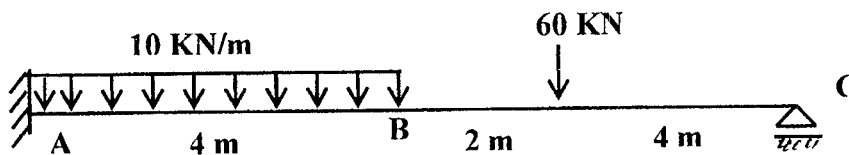
- Q.2 (a) Analyse the continuous beam shown in figure using three moment theorem. (10) 2 3



- Q.2 (b) Find the force in the member AC of the truss shown in figure below. Take force in member AC as the redundant force. Assume AE to be same for all the members. (10) 2 3

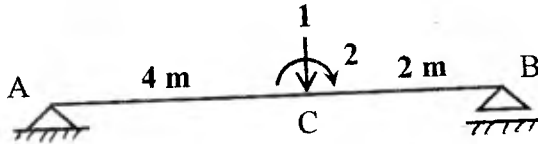


- Q.3 (a) Find the reaction at C in the beam shown in figure using the theorem of least work. (10) 2 4

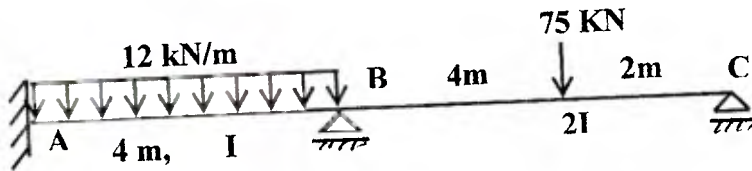


Q.3 (b) A two hinged parabolic arch of span 30 m and rise 5 m carries a concentrated load of 40 kN at a distance of 6 m from the left support. Determine the horizontal thrust in the arch. The moment of inertia (MI) of the section of the arch varies as $I = I_0 \sec\theta$, where $I_0 = MI$ of the section at the crown. (10) 2 3

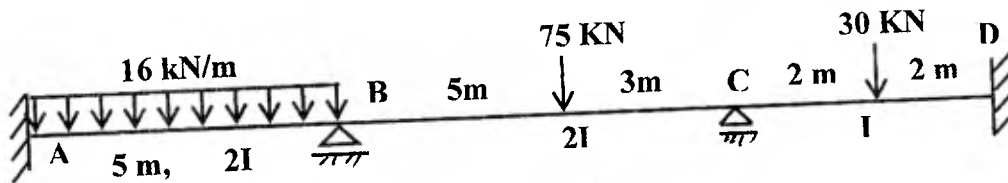
Q.4 (a) Calculate the flexibility coefficients for the beam shown in figure w.r. to the coordinates indicated in figure. (10) 2 3



Q.4 (b) Analyse the beam shown in figure by slope deflection method. (10) 3 6

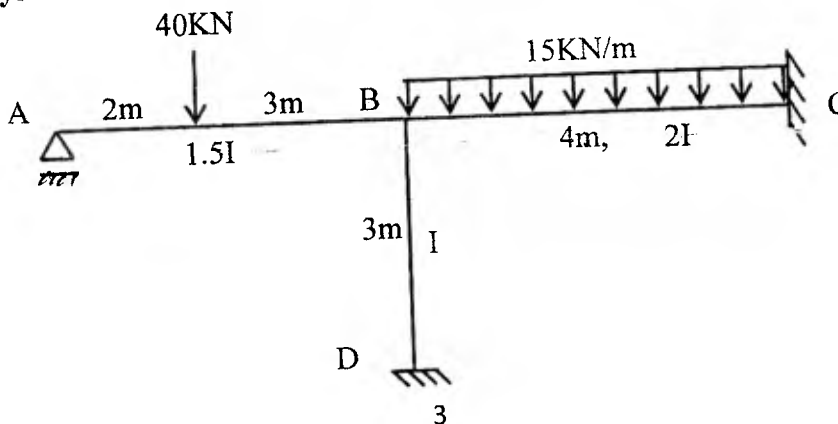


Q.5 (a) Analyse the beam shown in figure by moment distribution method. Draw BMD. (16) 3 6



Q.5 (b) Define flexibility coefficient f_{ij} and state the important properties of the flexibility matrix. (04) 2 3

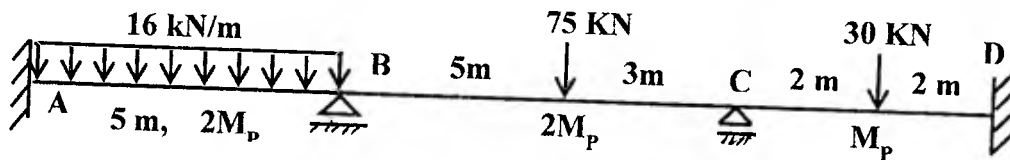
Q.6 (a) Analyse the frame shown in figure by stiffness method. (14) 3 5



- Q.6 (b) (i) Explain the difference between force method and displacement method of analysis of indeterminate structures. (03) 2, 3 3,4,5
- (ii) State if the following method is a force method or displacement method. (03) 3,4,5
- (a) Method of least work
- (b) Moment distribution method

- Q.7 (a) Find the shape factor for the symmetrical I section with the following data. (10) 4 7
- Top flange - width = 300 mm, thickness = 20 mm
- Bottom flange - width = 300 mm, thickness = 20 mm
- Depth of web = 250 mm, thickness of web = 20 mm.

- Q.7 (b) A continuous beam is subjected to working loads as shown in figure below. If $M_P = 75$ kN-m, calculate the (true) load factor for the beam. (10) 4



Duration: 3 hours

Library
25/06116

Marks: 100



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL COLLEGE OF ENGINEERING
Munshi Nagar, Andheri (West), Mumbai 400 058
(A Government Aided Autonomous Institute)



KT EXAM
June 15-16

Class/Branch: T.Y B.Tech (Civil)

Semester: V

Name of the Course: Entrepreneurship & Management

Programme: Civil Engineering

Course Code: CE306

Note:

- Attempt any five questions.
- Assume suitable data if required.
- Answers to all sub-questions should be grouped together.

Master file.

- Q.1. a) Explain the concept of Entrepreneur and Entrepreneurship? Also explain the difference between them? (10 marks)
- b) What are the different factors affecting to entrepreneurship process? (10 marks)
- Q.2. a) Discuss the various classification/types of entrepreneurs along with one examples. (10 marks)
- b) Explain the McClelland Need for Achievement Theory with Kakinada experiments? (10 marks)
- Q.3. a) Describe contribution made by "Fredrick Taylor" towards scientific management? (10 marks)
- b) Describe contribution made by "Henry Fayol" towards Administrative approach management? (10 marks)
- Q.4. a) what do you mean by the Project? Explain the stages, identification, selection of project? (10 marks)
- b) What are different sources & types of finance available for entrepreneurship in India? (10 Marks)
- Q.5. a) Define the small scale industry and also Highlight the chief characteristics of it? (10 marks)
- b) Explain in detail various steps to be followed in start up the small scale industry? (10 marks)
- Q.6. a) Write short note on: Pay-back period. (4 Marks)
- b) An initial investment in plant & machinery of ₹ 20000 is expected to generate cash flows of ₹ 2342, ₹ 2200, ₹ 3850, ₹ 5230 at the end of first, second, third & fourth year respectively. At

the end of fourth year machines will be sold for ₹ 850 as salvage value. Calculate the net present value of the investment if the discount rate is 10.5%. (6 Marks)

c) Journalize the following transactions in the books of Mr. Aakash for Dec 2014 & also post them in ledger for cash account only. (10 marks)

| Date | Transactions | Amount |
|------|----------------------------------------------|--------|
| 1 | He started the business with cash | 300000 |
| 3 | Sold goods to Mr.Amitr for cash | 1800 |
| 8 | Purchased goods on credit from rakesh. | 34000 |
| 10 | Paid office rent by cheque of Bank of Baroda | 6500 |
| 12 | Paid commission to RaKESH | 600 |
| 16 | Purchased furniture from SHAH furniture Mart | 11000 |
| 19 | Deposited money in bank of MAHARASHTRA | 21000 |
| 24 | Returned goods to Mr.Nagesh | 2000 |
| 26 | Received interest | 15000 |

Q.7. Write short notes on: - (any four)

(20 marks)

- i. SWOT analysis.
- ii. Environment for Entrepreneurship.
- iii. Break-Even analysis
- iv. Barriers affecting to Entrepreneurship.
- v. Importance of Small Scale Industries in India.
- vi. Line & line-staff Organisation.