BT-7/M-20   **37046**

TRANSPORTATION ENGG.-II

CE-405-E

Time : Three Hours]   [Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least one question from each Unit. All questions carry equal marks.

Unit I

1. Explain 'Flexible and Rigid' pavements and bring out the difference.   **20**

2. Calculate the stresses at interior, edge and corner regions of a cement concrete pavement using Westergaard's equations. Use the following data :
   Wheel load = 5100 kg., Modulus of elasticity of CC = 3×10^5 kg/cm^2, Pavement thickness = 18 cm. Poisson's ratios of concrete = 0.15, Modulus of subgrade reaction = 6 kg/cm^2, Radius of contact area = 15 cm.   **20**

Unit II

3. What is WBM roads ? Discuss briefly its construction.

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4. Write short notes on the following :
   (a) Prime Coat
   (b) Tack Coat. **20**

Unit III

5. Explain the Benkelman beam test in detail. **20**

6. Explain the surface and sub-surface drainage system. **20**

Unit IV

7. Explain the net present value techniques for evaluation of highway projects. **20**

8. Explain the heading and benching method in tunneling.

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