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Roll No .....

CE-8042 (GS)

B.E. VIII Semester Examination, June 2020

Grading System (GS)

Pavement Design

(Elective - II)

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. Describe the Westergaard stress distribution theory for the design of rigid pavement.

2. Explain the following:
   i) Contract pressure
   ii) Design wheel load
   iii) CBR

3. Differentiate between Boussinesque's theory and burmister theory.

4. What is present serviceability index? How rigid pavement is designed by AASHTO method? Explain step by step.

5. In a dual wheel load assembly, the load on each wheel is 35 kN, tyre pressure is 0.60N/mm^2 and CC wheel spacing is 410mm The load is placed on a payment 500 mm thick. The subgrade is characterized by E=20N/mm^2 and μ=0.5 calculate the deflection on the top of subgrade, at the radial distances of 0.150mm and 250mm from centre of left wheel measured towards other wheel.

6. Write the Equation Recommended in IRC 37. 2001 for the computation of design traffic. Explain each term. How are the values obtained?

7. Explain Benkelman beam method for evaluation and strengthening of flexible pavement, with the help of neat sketch.

   OR

   Discuss the procedure to measure the deflection of flexible pavement using falling weight loading method.

8. Write short notes on:(Any two)
   a) Map cracking
   b) Mud pumping
   c) Spalling of joints
   d) Reflection cracking

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