Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

CE-8042 (GS)

B.E. VIII Semester

Examination, May 2018

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.

iii) Assume data suitably.

1. a) Explain the concept of Equivalent Single Wheel load and its applications in pavement structure. 7
   b) Describe the various factors considered in the design of pavements. 7

2. Explain the following: 14
   a) Freezing and thawing
   b) Effect of load repetitions

3. a) Explain the different components parts of pavement structures and their functions. 7
   b) Describe the CBR method of flexible pavement design. 7

4. a) Explain the stress distribution through various layers in flexible pavement. 7
   b) Differentiate between Boussinesque's theory and burmister theory. 7

5. Explain the procedure of plate bearing test to find out the modulus of subgrade reaction. 14

6. Discuss:
   a) Westergaard's concept of temperature stresses in concrete pavement. 7
   b) Critical combination of stresses due to wheel load and temperature load. 7

7. Design the CC pavement thickness expansion and contraction joint spacing, for a wheel load of 5000kg. Assume all data suitably. 14

8. Write short notes on: 14
   a) Map cracking
   b) Mud pumping
   c) Spalling of joints
   d) Reflection cracking

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