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

**Roll No** .....

# CE-8042-GS

## B.E. VIII Semester

Examination, December 2020

## Pavement Design

**(Elective - II)**

***Time : Three Hours***

***Maximum Marks : 70***

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

1. a) Discuss the repetition of loads and their effect on flexible pavement design.
   b) What is VDF? How is it calculated for each category of vehicle and condition of vehicle, weather laden or unladen?

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

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

4. a) What is CBR? How is it find in the laboratory, write the procedure.
   b) Write the advantages and disadvantages of flexible and rigid pavement.

5. Describe the following:
   a) Equivalent single wheel load
   b) Pavement component materials
   c) Frost, Freezing and Thawing

6. a) Discuss meaning of following terms used in flexible pavement
      i) GSB
      ii) WMM
      iii) DBM
   b) Explain the CBR method of pavement design. How is this method useful to determine thickness of component layers?

7. Draw the typical cross section of flexible pavement and show its various components. Also discuss the function of each component and their nomal thickness.

8. Write short note on (any four).
   a) North Dakota cone method
   b) Design wheel load
   c) Radius of relative stiffness
   d) Edge stresses
   e) Serviceability index method

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