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Total No. of Pages : 01

Total No. of Questions : 08

M.Tech(Civil Engg). (2016 Batch) (Sem.-1)

PAVEMENT DESIGN

Subject Code : MTCE-203

M.Code : 74239

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. How is the sampling of aggregates carried out? Distinguish between aggregate impact value, aggregate abrasion value, aggregate crushing value and polished stone value.
- Q2. What are the various types of binders used in the construction of road? Explain various tests carried out to determine the adhesion of bituminous binder to an aggregate in presence of water.
- Q3. Explain the construction procedure for Penetration (Grouted) macadam and built up spray grout.
- Q4. What are the methods for pavement evaluation? Explain the Non destructive pavement deflection testing equipments.
- Q5. What are the common defects, symptoms, causes and remedies for bituminous surfaces?
- Q6. Explain in detail the elements of quality assurance system in context of road payment projects.
- Q7. Design the size and spacing of dowel bars at the expansion joints of cement concrete pavement of thickness 25cm with radius of relative stiffness 80cm, for a design wheel load of 5000kg. Assume load capacity of dowel system as 40% of the design wheel load. Joint width is 2.0cm, permissible shear and flexural stresses in dowel bar are 1000 and 1400 kg/cm² respectively and permissible bearing stress in CC is 100kg/cm².
- Q8. Enumerate the steps in the construction of cement concrete pavements.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

