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

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MVCT/MVCP-301(A)
M.E./M.Tech., III Semester
Examination, June 2017
Advanced Highway Construction

Time : Three Hours

Maximum Marks: 70

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

1. a) List different methods of road construction. Discuss their advantages and limitations.   7
   b) What are the problems in construction of roads over black cotton soils? How are the various problems dealt with?   7

2. Explain in brief with suitable sketches :-   4×3½=14
   a) Surface dressing
   b) OGPC with seal coat
   c) Modified penetration macadam
   d) Mastic asphalt
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3. a) Discuss the field and laboratory tests for quality control of embankment construction.   8
   b) List different compaction equipments? Discuss suitability of various compaction equipments for different type of soils.   6

4. a) What is dry lean concrete? Discuss the specifications of DLC. Also explain detailed construction procedure of DLC.   6

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   b) What is the necessity for providing joints in cement concrete pavements? Discuss types of joints with neat sketches.   www.rgpvonline.com   8

5. a) What are the IRC specifications for dowel bars and tie bars?   6
   b) Explain with sketches the Joint filler and sealers. Discuss the desirable properties and various materials in use.   8

6. a) What is the necessity for providing reinforcement in Cement concrete pavements? Discuss the uses and limitations of reinforced concrete pavements.   8
   b) Explain briefly the fibre reinforced concrete pavements. Discuss advantages and disadvantages of fibre reinforced concrete roads.   6

7. Explain in brief.   www.rgpvonline.com   4×3½=14
   a) CPM/PERT in highway construction
   b) Benefit - cost analysis and its significance.
   c) Highway financing
   d) Master plan

8. Write short notes on (any four) :   4×3½=14
   a) Lime stabilization and its suitability
   b) Grannular sub base and its specifications.
   c) Separation membrane for concrete roads.
   d) Prestressed concrete pavements.
   e) Curing methods of CC pavements.

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