

(4)

- (b) Briefly discuss the use of different waste materials in road construction. 5
8. (a) What are the causes of landslides? Classify different types of landslides in hill roads. 5
- (b) Briefly explain different earth retaining structures/ measures adopted in hill roads. 5

Total Pages-4

May-2015

(Set-1)

M.Tech-2nd(TE)
Highway Construction Practice

Full Marks : 70

Time : 3 hours

Q. No. 1 is compulsory and answer any **five** from the rest of the questions

The figures in the right-hand margin indicate marks

1. Answer *all* questions : 2 × 10
- (i) What do you mean by degree of compaction?
- (ii) What are the functions of a Pneumatic tyred roller?
- (iii) Where will you recommend use of vertical sand drains?
- (iv) What is the objective of providing the Prime coat?
- (v) What is the type of material used for Tack coat and method of application?

(Turn Over)

- (vi) What is Surface dressing ?
- (vii) What is the difference between WBM and WMM ?
- (viii) What are different types of joints in concrete pavement ?
- (ix) What do you mean by mastic asphalt ?
- (x) What are the functions of geotextiles in highway construction ?
2. (a) Explain different layers of a conventional flexible pavement with sketch. 5
- (b) Briefly explain various types of joints in cement concrete pavement. 5
3. Write short notes on the following : 10
- (i) Penetration Macadam
- (ii) Stone Matrix Asphalt
- (iii) Cemented/Stabilized base
- (iv) Micro surfacing.

4. (a) List the specifications of materials for construction of subgrade for a highway pavement. Explain the construction steps. 5
- (b) List the requirements and specifications of the granular subbase course of a flexible pavement. 5
5. (a) Briefly explain the common types of equipment used for construction of soil for embankment and subgrade. 5
- (b) Write brief notes on dowel bars, tie bars, joint filler and joint sealants used on concrete pavements. 5
6. (a) What do you mean by soil stabilization ? Briefly explain the different methods of soil stabilization. 5
- (b) Mention the specification of materials and construction steps for wet mix macadam (WMM). 5
7. (a) Differentiate between hot mix, warm mix and cold mix asphalt construction along with their suitability. 5