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BCE-052

DIPLOMA IN CIVIL ENGINEERING
DCLE(G)

00870

Term-End Examination
June, 2014

BCE-052 : TRANSPORTATION ENGINEERING

Time : 2 hours *Maximum Marks : 70*

Note : *Question no. **1** is **compulsory**. Attempt any **four** questions out of the balance questions. Calculator is permitted.*

1. Select the correct option in the following : *7×2=14*

(a) First Highway Development Plan in India was

(i) Lucknow Plan

(ii) Bombay Plan

(iii) Nagpur Plan

(iv) Delhi Plan

(b) In our country, the transportation system, not used for conveyance of passengers is

(i) Aerial ropeway

(ii) Roadways

(iii) Railway lines

(iv) Pipelines

(c) Dimension of Broad Gauge (BG) Railway is

(i) 1·876 m

(ii) 1·678 m

(iii) 1·676 m

(iv) 0·767 m

(d) Shed for accommodating aircraft for maintenance and repair is called

(i) Workshop

(ii) Service Centre

(iii) Apron

(iv) Hangar

(e) Generally the speed of a ropeway system is

(i) 1 – 2 m/sec

(ii) 2·5 – 5·0 m/sec

(iii) 5 – 10 m/sec

(iv) 10 – 15 m/sec

(f) The binder which can be used in wet weather and rain is

(i) Emulsion

(ii) Cutback

(iii) Tar

(iv) Epoxy

(g) Foundation used for construction of a bridge is

(i) Grillage foundation

(ii) Raft foundation

(iii) Well foundation

(iv) Inverted Arch foundation

2. (a) What are the various modes of transport ? What is the role of each ? Explain.

(b) What are the basic considerations governing the selection of road alignments ? *2×7=14*

3. (a) What do you understand by "Road Geometrics" ? Explain.

(b) Define the transition curve as used in highway projects. What purpose does it serve ? *2×7=14*

4. (a) What is sight distance ? What are its types ? Explain.

(b) What are the various tests conducted on stone aggregate ? Explain any one test with sketches. *2×7=14*

5. (a) What are the guidelines for the site selection of a bridge ? Explain.

(b) What is a culvert ? What are its various types ? Explain by sketches. *2×7=14*

6. (a) Draw a typical cross-section of a railway track.

(b) What are the functions of Air Traffic Control ? Explain. *2×7=14*

7. Write short notes on any ***four*** of the following : $4 \times 3\frac{1}{2} = 14$

(i) Pipeline transport system

(ii) Continuous flow system

(iii) Camber and their types

(iv) IRC loading

(v) Apron and Heliports

(vi) Superelevation