TRANSPORTATION ENGINEERING

Course code	Course title	No. of period/week	Total no. of periods	Marks for Formative Assessment	Marks for Summative Assessment
C-404	Transportation Engineering	04	60	20	80

Model Paper for Unit Test-I
State Board of Technical Education and Training,
A.P.Diploma in Civil Engineering (DCE)
Fourth Semester: C-404 TRANSPORTATION ENGINEERING

Time: 90 Minutes **Unit Test –I** **Maximum Marks : 40** **PART- A** **16 Marks**

Instructions:

(i) Answer all questions

(ii) First question carries FOUR marks, each question of remaining carries THREE marks.

1. (a) The longitudinal slope of a road is called _____ (CO1)

   (b) Rise of the outer edge of the road above the inner edge is called _____ (CO1)

   (c) Example for mandatory sign is _____ (CO2)

   (d) The purpose of catch basin in the road drainage system is to _____ (CO3)

2. Define the terms (a) Liquid limit (b) Plasticity index (CO1)

3. Draw the cross section of flexible pavement showing various components. (CO2)

4. What are the traffic signs? State the classification. (CO2)

5. Write any three requirements of good highway drainage system. (CO3)

PART- B **3 x 8 = 24 Marks**

Instructions:

(i) Answer all questions

(ii) Each question carries EIGHT marks

(iii) Answer should be comprehensive and the criterion for valuation is the contentbut not the length of the answer.

6. (A) Explain how different engineering surveys are conducted for locating the alignment of road. (CO2)

(OR)

(B) State factors influencing selection of alignment for road project. (CO2)

7. (A) State objects of traffic survey and state various studies that are generally carried out. (CO2)

(OR)

(B) Explain about various traffic signs used in highways. (CO2)

8. (A) State and explain about surface drainage and sub-surface drainage with the help of neatsketches.(CO3)

(OR)

(B) Explain various types of machinery used in highway construction. (CO3)

Model Paper for Unit Test-II:

State Board of Technical Education and Training,

A.P.Diploma in Civil Engineering (DCE)

Fourth Semester: C-404 TRANSPORTATION ENGINEERING

Time: 90 Minutes **Unit Test –II** **Maximum Marks : 40**

PART- A **16 Marks**

Instructions:

(i) Answer all questions

(ii) First question carries FOUR marks, each question of remaining carries THREE marks.

1. (i) The expansion of W.B.M_____ (ii)Which of the following causes stresses in Sleepers?

   a) Eccentric vertical loads
   b) Contact shear stress of wheel and rail
   c) Lateral deflection of sleepers (CO3)
   d) Track components (CO4)

(iii) Pick up the incorrect statement from the following:(a)Fish plates fit the underside of the rail head

(b) Fish plates fit the top of the rail foot

(c) Fish plates fit the web of the rail section

(d) Cross sectional area of fish plates, is normally the same as that of the rail section (CO4)

(iv) The difference between the bridge and culvert is with respect to_____ (CO5)

2. Distinguish between rigid pavement and flexible pavement. (CO3)
3. Write any three functions of railway sleepers. (CO4)
4. Define gauge. State different types of gauges adopted in Indian railways. (CO4)
5. State any three facilities provided in loco yards. (CO4)

PART- B **3 x 8 = 24 Marks**

Instructions:

(i) Answer all questions

(ii) Each question carries EIGHT marks

(iii) Answer should be comprehensive and the criterion for valuation is the content but notthe length of the answer.

6. (A) Explain the method of construction of W.B.M road. (CO3)

(OR)

(B) Explain different stages involved in the construction of cement concrete pavement. (CO3)

7. (A) Explain different types of rail joints with a neat sketch. (CO4)

(OR)

(B) Draw a neat sketch of cross section of a permanent way and indicate the parts and mentionthe purpose of each part. (CO4)

8. (A) Explain different types of yards with neat sketches. (CO4)

(OR)

(B) State the factors to be considered for selection of site for a bridge. (CO5)

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Model Test Paper

State Board of Technical Education and Training, A.P.

Diploma in Civil Engineering (DCE)

Fourth Semester: C - 404 TRANSPORTATION ENGINEERING

Time: 180 Minutes **End Examinations** Maximum Marks: 80

PART – A 3 x 10 = 30 Marks

Instructions:

(i) Answer all questions

(ii) First question carries THREE marks.

(iii) Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. State any three important functions of I.R.C.` (C01)
2. List any three types of soils. (C01)

3. State the necessity of widening of roads in curves. (C02)

4. What is meant by grade separation on roads? (C03)

5. State the need for joints in Cement Concrete roads. (C03)

6. Define the terms (i) Freeboard, (ii) Scour depth and (iii) Afflux. (C04)

7. State the classification of bridges based on materials and type of super structure. (C04)

8. State the classification of stations (CO4)

9. Define the terms (i) Water way (ii) Afflux (CO5)

10. List any three types of causeways. (C05)

PART – B 5 x 10 = 50 Marks

Instructions:

(i) Answer any FIVE questions
(ii) Each question carries TEN marks.
(iii) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the components of a road with a neat sketch (CO1)

12. What are the factors influencing alignment of road in plain and hilly areas. (C02)

13. Explain the traffic islands with neat sketches (CO2)

14. Explain the methods of providing sub surface drainage (C03)

15. Explain the method of construction of WBM road (CO3)

16. Explain any four types of rail joints with neat sketches. (C04)

17. Describe different types of turnouts with neat sketches (CO4)

18. Sketch a bridge sub structure and explain the component parts (C05)

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