

Total No. of Printed Pages:2

SUBJECT CODE NO:- E-161
FACULTY OF ENGINEERING AND TECHNOLOGY
T.E.(CIVIL) Examination Nov/Dec 2017
Transportation Engg.- II
(REVISED)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i. Figures to the right indicate full marks.
 - ii. Q.No.1 & 6 are compulsory.
 - iii. Solve any two questions from the remaining of each section.

Section A

- Q.1 Briefly outline the historical development of road construction. 10
- Q.2
- a) Why the extra widening is necessary on horizontal curves. 07
 - b) What are desirable properties of bitumen? Explain penetration test in detail. 08
- Q.3 The speed of overtaking and overtaken vehicles are 85 kmph and 70 kmph respectively. The acceleration of overtaking vehicle is 0.92m/s^2 . Spacing between the vehicles is 16m; reaction time of driver is 2 sec. calculate safe OSD for 2 lane road. 15
Case I- on one way traffic road.
Case II- on two way traffic road.
Case III- on two way traffic 4 lane divided national highway.
- Q.4
- a) Discuss the various types of surveys carried out while designing highways. 07
 - b) Calculate the stopping sight distance (SSD) of vehicle running at 60 kmph. Use longitudinal coefficient of friction as 0.36 and reaction time 2.5 sec 08
- Q.5
- a) Discuss the role of IRC in enhancing the highway development in India. 08
 - b) Explain the classification of roads. 07

Section B

- Q.6 Explain CBR method of flexible pavement design with neat sketch. 10
- Q.7
- a) Explain various causes of pavement failure. 07
 - b) Compute the equivalent radius of resisting section of 25cm slab, given that radius of contact area of wheel load is 15 cm. 08
- Q.8
- a) Explain the construction procedure of WBM along with material specifications. 07
 - b) Explain the term traffic volume. What are the objectives of carrying out traffic volume study? 08

- Q.9 a) Enlist different earth moving equipment's. Explain any one in detail. 07
b) Differentiate between flexible and rigid pavements 08
- Q.10 a) Explain origin and destination study. What are various uses of O and D studies? 07
b) Discuss in detail expansion joint and contraction joint 08