Subject Code : 217

FACULTY OF ENGINEERING & TECHNOLOGY
T.E. Civil (Revised) Examination
NOVEMBER/DECEMBER, 2015
Transportation Engineering – II

Time: Three Hours | Max. Marks: 80

"Please check whether you have got the right question paper"

Note: i) *Q.No. 1 from Section A and Q.No. 6 from Section B is compulsory.*
ii) *Solve any two questions from remaining question in each section.*
iii) *Figures to the right indicate full marks.*

SECTION-A

Q.1		What are the requirements of ideal highway alignment? Explain various factors governing the desing of highway alignment.	**10**
Q.2	(a)	What are the various types of surveys carried out while designing highway?	**07**
	(b)	Explain the role of PMGSY in rural road development.	**08**
Q.3	(a)	Derive the expression for stopping sight distance on plain road.	**07**
	(b)	An ascending gradient of 1 in 100 meets a descending gradient of 1 in 120. A summit curve is to be designed for a speed of 100 kmph so as to provide a stopping sight distance. Assume suitable data as per IRC.	**08**
Q.4	(a)	Explain mix design procedure for bituminous mixes.	**07**
	(b)	Define toughness of aggregate and explain impact test on aggregate. State its desirable limits as per IRC.	**08**
Q.5	(a)	Explain classification of roads and explain salient features of Bombay Road Plan.	**07**
	(b)	Explain total reaction time of driver and the factors on which it depends. Explain PIEV theory.	**08**

SECTION – B

Q.6		Explain spot speed, running speed, space mean speed, time mean speed and average speed of vehicle.	**10**
Q.7	(a)	Explain various design factors considered while designing the flexible pavement.	**07**
	(b)	Explain joints in rigid pavement.	**08**

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Q.8	(a)	Explain construction of cement concrete road.	07
	(b)	What are the various types of special repair in flexible pavement.	08
Q.9	(a)	Enlist various types of equipments and machinery used for road construction and explain any one of them.	07
	(b)	Explain causes of pavement failure.	08
Q.10	(a)	What are the various types of traffic islands used. Explain the use of each.	07
	(b)	Explain the CBR method of pavement design. How is this method useful to determine thickness of component layers?	08

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