Code No: **RT42012E** **R13** **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019

TRAFFIC ENGINEERING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any THREE questions from Part-B

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PART–A *(22 Marks)*

1.	a)	What do you mean by pedestrian? Why pedestrian lane is important?	[4]
	b)	What is time headway?	[3]
	c)	What is meant by signal coordination?	[3]
	d)	How air quality can be measured?	[4]
	e)	What is basic capacity?	[4]
	f)	What is IVHS? Write its applications.	[4]

PART–B *(3x16 = 48 Marks)*

2.	a)	Explain various human factors governing road user behavior.	[8]
	b)	Explain the classification of highways.	[8]
3.	a)	Discuss about microscopic and macroscopic flow characteristics.	[8]
	b)	What are the various uses of travel time and delay studies?	[8]
4.	a)	Discuss in detail about various kinds of road markings.	[8]
	b)	Explain about analysis of traffic accidents.	[8]
5.	a)	What are the different techniques for controlling traffic noise?	[8]
	b)	Mention the air quality standards.	[8]
6.	a)	What is level of service? What are the factors affecting capacity and level of service?	[8]
	b)	Discuss about capacity and level of service of urban roads.	[8]
7.	a)	Explain the role of IVHS in traffic surveillance and monitoring.	[8]
	b)	Explain various IVHS categories.	[8]

Code No: **RT42012E** **R13** **Set No. 2**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019

TRAFFIC ENGINEERING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any THREE questions from Part-B

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PART–A *(22 Marks)*

1.	a)	Define spot speed.	[4]
	b)	What are microscopic speed characteristics?	[3]
	c)	What is road safety audit?	[3]
	d)	What is noise pollution?	[4]
	e)	What is possible capacity?	[4]
	f)	What are various IVHS programs?	[4]

PART–B *(3x16 = 48 Marks)*

2.	a)	What are the vehicle characteristics?	[8]
	b)	Write the objectives of traffic volume studies?	[8]
3.	a)	Discuss about microscopic and macroscopic density characteristics.	[8]
	b)	Explain about distance headway characteristics.	[8]
4.	a)	With neat sketches show various types of traffic signs, classifying them in proper groups.	[8]
	b)	Explain the IRC method of traffic signal design.	[8]
5.	a)	What are the measures for controlling air pollution?	[8]
	b)	How are the sound levels measured?	[8]
6.	a)	Explain about the level of service concept in the HCM manual.	[8]
	b)	Discuss about various operating conditions for different levels of service in a two lane rural highways without access control.	[8]
7.	a)	What are various advantages of IVHS?	[8]
	b)	Is IVHS preferable in economic point of view?	[8]

Code No: **RT42012E** **R13** **Set No. 3**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019

TRAFFIC ENGINEERING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any THREE questions from Part-B

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PART–A *(22 Marks)*

1. a) Define traffic volume. [4]
   b) What are microscopic flow characteristics? [3]
   c) Write about fixed signals. [3]
   d) What is air pollution? [4]
   e) What is HCM? [4]
   f) What is the purpose of IVHS in traffic engineering? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain the procedure for floating car method. [8]
   b) What are the various causes of road accidents? [8]

3. a) Describe about Car-following theories. [8]
   b) Discuss about density contour maps. [8]

4. a) Explain about fixed and vehicle activated signals. [8]
   b) How are the accident records maintained? [8]

5. a) What are the detrimental effects of traffic noise? [8]
   b) Discuss about various kinds of air pollutants. [8]

6. a) What is the importance of capacity in highway transportation studies? [8]
   b) Discuss about various operating conditions for different levels of service in a multi lane rural highways without access control. [8]

7. a) Discuss in detail about Intelligent Vehicle Highway Systems. [8]
   b) Explain about various IVHS programs used in traffic monitoring. [8]

Code No: **RT42012E** **R13** **Set No. 4**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019

TRAFFIC ENGINEERING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
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PART–A *(22 Marks)*

1.	a)	What do mean by journey speed?	[4]
	b)	What are macroscopic speed characteristics?	[3]
	c)	What is signal phasing?	[3]
	d)	How sound levels are measured?	[4]
	e)	What is level of service?	[4]
	f)	What is IVHS? Write its applications.	[4]

PART–B *(3x16 = 48 Marks)*

2.	a)	What are the objectives of speed studies?	[8]
	b)	What are the various aspects to be investigated in parking studies?	[8]
3.	a)	Write about the mathematical distribution in speed studies.	[8]
	b)	What are various density measurement techniques?	[8]
4.	a)	Explain the procedure for Webster's method of traffic signal design.	[8]
	b)	Discuss about highway safety improvement program.	[8]
5.	a)	What are the different sources of noise generation by road traffic?	[8]
	b)	What are the acceptable levels of noise?	[8]
6.	a)	Define basic capacity, practical capacity and possible capacity according to HCM 1950.	[8]
	b)	Discuss about various operating conditions for different levels of service in freeways and express ways in the rural areas.	[8]
7.	a)	How IVHS helps in traffic surveillance?	[8]
	b)	Explain the use of IVHS in various countries.	[8]