Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGG.- SEMESTER–VI EXAMINATION - OCTOBER 2012

Subject code: 366003 **Date: 29-10-2012**

Subject Name: Pavement Design and Evaluation

Time: 2:30 pm – 5:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Differentiate between flexible pavement and rigid pavement.	**07**
	(b)	Explain stresses due to temperature, stresses due to loading and combined stresses in flexible pavement.	**07**
Q.2			
	(a)	Explain various types of failures in rigid pavement and their causes.	**07**
	(b)	Explain in detail the maintenance of rigid pavements.	**07**
		OR	
	(b)	Explain briefly the IRC procedure for design of rigid pavement.	**07**
Q.3			
	(a)	Write note on ESWL.	**07**
	(b)	Write note on general failures in flexible pavement.	**07**
		OR	
Q.3	(a)	What are the properties of subgrade required to study for the pavement design.	**07**
	(b)	Enumerate the various methods of flexible pavement design. Briefly indicate the basis of design in each case.	**07**
Q.4			
	(a)	What are the various causes of formation of waves and corrugations in flexible pavement? Suggest remedial measures.	**07**
	(b)	Discuss the effects of repeated applications of loads on pavements.	**07**
		OR	
Q. 4	(a)	Explain and define critical load position.	**07**
	(b)	What are the stresses required to study for rigid pavement design and why?	**07**
Q.5			
	(a)	How runway pavement does differ from highway pavement?	**07**
	(b)	Write note on ESAL.	**07**
		OR	
Q.5	(a)	Write note on pavement evaluation.	**07**
	(b)	Discuss the design parameters in pavement design.	**07**

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