

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**
