

GUJARAT TECHNOLOGICAL UNIVERSITY**ME – SEMESTER –II-(New)-EXAMINATION – SUMMER-2019****Subject Code: 3721417****Date: 31/05/2019****Subject Name: Advanced Concrete Technology****Time: 02:30 PM TO 05:00 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) List methods of manufacturing of Cement and explain any one in detail. **07**
 (b) Give classification of Testing of cement and explain any two testing method of cement. **07**
- Q.2** (a) Write down the comparisons between Normal Concrete and Special Concrete. **07**
 (b) “Special Concretes are a boon to the construction industry” justify the statement with viewpoint of Project Manager. **07**
- OR**
- (b) List out Common Quality Problems in RMC and explain any two in detail with their remedies. **07**
- Q.3** (a) List down the different methods use for concrete mixed design and explain steps of any one method in detail. **07**
 (b) Differentiate between Conventional and Advanced Curing methods. **07**
- OR**
- Q.3** (a) Which are the various tests to be performed on fresh and hardened concrete? And explain any one method in detail with sketch **07**
 (b) Enlist Concreting operation and explain them in details. **07**
- Q.4** (a) Write down the different properties and applications of epoxy resins. **07**
 (b) Explain in detail : (Any Two) **07**
 1. High performance concrete
 2. Ferro-cement concrete
 3. self-compacting concrete
- OR**
- Q.4** (a) Write a short note on Slag cement and health assessment of concrete. **07**
 (b) Give difference between Class C and Class F Fly ash and give Chemical Properties of both. **07**
- Q.5** (a) Explain the term “shrinkage” and explain why shrinkage is there in concrete and what are the precautions of it? **07**
 (b) Write down the different factors affecting the durability of concrete. **07**
- OR**
- Q.5** (a) What is Role of Supplementary Cementitious Material in advancement of Concrete Industry? **07**
 (b) What is Sulphate attack? How it can be prevented? **07**
