

**320654(20)**

**B. E. (Sixth Semester) Examination,  
April-May 2019**

**(New Scheme)**

**(Civil Branch)**

**CONCRETE TECHNOLOGY**

*Time Allowed : Three hours*

*Maximum Marks : 80*

*Minimum Pass Marks : 28*

*Note : Answer all questions. Part (a) of each question is compulsory. Solve any two parts from (b), (c) and (d). The figures in the right-hand margin indicate marks.*

**Unit - I**

- 1. (a) Define surface index and specific surface of aggregate. 2

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- (b) Explain the manufacturing process of portland cement. Differentiate between dry and wet process of manufacturing of cement. 7
- (c) Describe the importance of the quality of water used for concreting. 7
- (d) Write short note on alkali-aggregate reaction. 7

**Unit - II**

- (a) Define workability of concrete. 2
- (b) What is an admixture? Explain the various types of admixtures with example. 7
- (c) Write short notes on : 7
  - (i) Segregation of concrete
  - (ii) Bleeding of concrete
- (d) What are the various factors which affects the workability of concrete? Explain each point in detail. 7

**Unit - III**

- (a) Define compressive strength of concrete. 2
- (b) Write short notes on : 7

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- (i) Creep and shrinkage of concrete
- (ii) Durability of concrete
- (c) Write down the parameters affecting the compressive strength of concrete. 7
- (d) Explain the corrosion of steel bars. 7

- (d) Write short notes on : 7

- (i) Ready mix concrete
- (ii) Self compacting concrete

**Unit - IV**

- 4. (a) Define concrete mix design. 2
- (b) Explain destructive and non-destructive tests on concrete. <http://www.csvtuonline.com> 7
- (c) Describe the concrete mix design steps as per Indian standard method. 7
- (d) Write down the principles of concrete mix design. 7

**Unit - V**

- 5. (a) Define special concrete. 2
- (b) Explain light weight concrete in detail. 7
- (c) Explain the following : 7
  - (i) Fibre reinforced concrete
  - (ii) Polymer concrete

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