

320633(20)

B. E. (Sixth Semester) Examination, 2020

(Old Scheme)

(Civil Engg.)

ADVANCED CONCRETE TECHNOLOGY

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All questions are compulsory with internal choices of two among (b), (c), (d) parts. IS-10262:2009 and IS-456:2000 is allowed.

Unit-I

1. (a) List out the name and abbreviation of Bogue's compounds. 2

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- (b) Write short notes on Portland pozzolana cement. 7
- (c) Write short notes on hydration of cement and structure of hydrated cement. 7
- (d) Enumerate the test for determination of flakiness index of the aggregate with neat sketch. 7

Unit-II

2. (a) Draw a representative diagram of true, shear and collapse slumps. 2
- (b) What are the factors affecting workability of the concrete. 7
- (c) Write short notes on segregation and bleeding. 7
- (d) Write short note on shrinkage of the concrete. 7

Unit-III

3. (a) What do you understand by standard deviation of test results. 2
- (b) Explain about Schmidt's rebound hammer for non destructive testing of concrete. 7

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- (c) Explain the step by step procedure of concrete mix design by latest IS code method for any resumed grade of concrete. 7
- (d) What are the sampling and acceptance criteria of concrete? 7

Unit-IV

4. (a) What are the ingredients of fly ash concrete? 2
- (b) Explain about polymer concrete. 7
- (c) Explain about fiber reinforced concrete. 7
- (d) Explain about light weight concrete. 7

Unit-V

5. (a) Write down the various stages of manufacture of concrete. 2
- (b) Explain in brief about the various method adopted for transportation of concrete. 7
- (c) Explain about underwater concreting by Tremie method. 7

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(d) Explain in brief about the curing methods.

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