



# CBCS SCHEME

17CT562

## Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Special Concrete

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain the micro structure of concrete and its various phases. (08 Marks)  
b. Explain the various types of special concrete and their applications. (12 Marks)

OR

- 2 a. Explain the materials and mix proportions used in the preparation of fibre reinforced concrete. (10 Marks)  
b. Explain the behavior of FRC in compression and tension aspects. (10 Marks)

### Module-2

- 3 a. Explain the ingredients of HDC and its applications. (10 Marks)  
b. Explain the properties of High density concrete. (10 Marks)

OR

- 4 a. Explain the necessity of self compacting concrete and its applications. (10 Marks)  
b. Explain the various types of tests conducted for self compacting concrete. (10 Marks)

### Module-3

- 5 a. Classify the types of light weight concrete and its properties with respect to strength and durability. (10 Marks)  
b. Explain the necessity of light weight concrete and ingredients of LWC. (10 Marks)

OR

- 6 a. Explain the types of polymer concrete. (10 Marks)  
b. Define Polymer concrete and explain the properties and applications of polymer concrete. (10 Marks)

### Module-4

- 7 a. Explain the significance of High Strength Concrete and material required with respect to products of HSC. (10 Marks)  
b. Define high strength concrete. Explain the methods of producing HSC. (10 Marks)

OR

- 8 a. What are the techniques of production of ultra high strength concrete, explain in brief. (10 Marks)  
b. Explain the materials used in ultra HSC and its applications. (10 Marks)

### Module-5

- 9 a. What is the necessity of HPC and applications of HPC? (10 Marks)  
b. Explain the materials used in HPC and mix design criteria of HPC. (10 Marks)

OR

- 10 a. Explain the advantages and disadvantages of HPC. (08 Marks)  
b. Write a short note on:  
i) Rick Husk Ash (12 Marks)  
ii) Ground Granulated Blast furnace slag.

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.