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[5352]-508

S.E. (Civil Engg.) (II Sem.) EXAMINATION, 2018

CONCRETE TECHNOLOGY

(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Answer question Nos. Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6, Q. 7 or Q. 8.

(ii) Neat diagrams must be drawn wherever necessary.

(iii) Figures to the right indicate full marks.

(iv) Your answers will be valued as a whole.

(v) Use of electronic pocket calculator is allowed.

(vi) Assume suitable data, if necessary.

(vii) Use of IS code 10262,456 is not allowed.

1. (a) What are the minor compounds in Portland cement ? What is their role ? [6]

(b) Explain in detail importance of compaction of concrete. What are the different methods of compaction ? [6]

Or

2. (a) Write a short note on classification of Aggregates. [6]

(b) What are different methods to measure workability ? Explain flow table test in detail. [6]

P.T.O.

3. (a) Write short notes on : [6]

(i) Shrinkage

(ii) Swelling.

(b) State and explain various operations involved during the concreting from mixing to finishing of concrete surface. [6]

Or

4. (a) Explain the compressive strength of concrete. How it is determined in laboratory ? [6]

(b) Write short notes on : [6]

(i) Fiber reinforced concrete

(ii) Self compacting concrete.

5. (a) Briefly outline the IS code method of concrete mix design. Write the procedure of standard mixes. [7]

(b) What do you mean by nominal mix, standard mix and design mix ? [6]

Or

6. (a) Explain the factors governing the selection of mix proportions. [7]

(b) Explain DOE method of mix design in brief. [6]

7. (a) What is durability of concrete ? What is significance of durability ?
What effect w/c ratio makes on durability ? [7]
- (b) What is evaluation of crack ? Why is it necessary ? [6]
- Or*
8. (a) Write a short note on “Retrofitting by FRP”. [5]
- (b) What is effect of permeability on concrete ? What measures
should be taken to reduce permeability of concrete ? [8]