Seat
No.

[5352]-108

S.E. (Civil Engineering) (Second Semester)

EXAMINATION, 2018

CONCRETE TECHNOLOGY

(2012 PATTERN)

Time : Two Hours   **Maximum Marks : 50**

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

(*ii*)   Neat diagrams must be drawn wherever necessary.

(*iii*)   Figures to the right indicate full marks.

(*iv*)   Your answers will be valued us 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*)   Explain the dry process of manufacturing of cement.   [6]

(*b*)   Define creep of concrete. What are factors affecting creep of concrete ?   [6]

Or

2.   (*a*)   What are the different functions of admixtures ?   [6]

P.T.O.

(*b*) Write short notes on : [6]

    (*i*)   Shrinkage

    (*ii*)   Swelling.

3.   (*a*)   State the different types of destructive tests carried on hardened concrete. Explain Flexural test. [6]

    (*b*)   Write short notes on : [6]

    (*i*)   Ready mix concrete

    (*ii*)   Hot weather concreting.

Or

4.   (*a*)   What is light weight concrete ? How it can be achieved in practice ? [6]

    (*b*)   Write the comparison between ferrocement and RCC construction work. [6]

5.   (*a*)   What do you mean by concrete mix design ? What are the objectives in mix design ? [6]

    (*b*)   Briefly outline the IS code method of concrete mix design. Write the procedure of trial mixes. [7]

Or

6.   (*a*)   Write a short note on statistical quality control of concrete. [4]

    (*b*)   Explain the factors affecting the mix design. [4]

    (*c*)   Explain DOE method of mix design in brief. [5]

7. (*a*) What is durability ? What is significance of durability ? What effect of water cement ratio makes on durability ? [5]

(*b*) Write short notes on : [8]

(*i*) Shotcrete

(*ii*) Corrosion monitoring techniques and preventive measures.

Or

8. (*a*) What are the symptoms and diagnosis of distress of concrete ? [5]

(*b*) Write short notes on : [8]

(*i*) Attack by sea water

(*ii*) Carbonation of concrete and its determination.