

SUBJECT CODE NO:- P-97
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E.(Civil) Examination MAY/JUNE-2016
Concrete Technology
(Revised)

[Time: Three Hours]

[Max Marks:80]

“Please check whether you have got the right question paper.”

- N.B
- 1) Q.1 & Q. 6 are compulsory. Attempt any two questions from the remaining section A.
 - 2) Figures to right side indicate marks.
 - 3) Draw neat sketches wherever necessary.
 - 4) Assume suitable data & mention it in block letters in front of question & answer

SECTION: A

- | | | |
|-----|---|----------------|
| Q.1 | Answer the following questions (<u>any five</u>) | 10 |
| | <ol style="list-style-type: none"> a) What are argillaceous & calcareous materials? b) What water requirement for hydration of cement? c) What are various types of cement? d) What is the field tests carried out on cement? e) What is fineness of cement explain its significance? f) What the classification of aggregates? g) What is the quality of water used in cement & concrete? h) What are the factors promoting alkali aggregate reactions? i) What is workability of concrete j) What are super plasticizer | |
| Q.2 | <ol style="list-style-type: none"> a) What are the various methods of curing? b) What are physical properties of fresh concrete? c) What are the factors affecting workability of concrete? | 05
05
05 |
| Q.3 | <ol style="list-style-type: none"> a) What is high strength concrete & high performance concrete? Explain. b) Enumerate different types of admixtures & explain any two in details. c) What are the different types of tests conducted on hardened concrete to know the strength? Explain setting time of concrete. | 04
05
06 |
| Q.4 | <ol style="list-style-type: none"> a) What is nondestructive testing of concrete? Explain rebound hammer test b) How elasticity & shrinkage affect strength of concrete. Explain in detail. c) What are various types of frameworks with neat sketches? | 05
05
05 |
| Q.5 | Write short notes on (<u>any three</u>) | 15 |
| | <ol style="list-style-type: none"> a) Placing of concrete b) Laitance in concrete c) transit mixers d) Slump test on concrete e) Water cement ratio. | |

SECTION: B

- Q.6 Answer the following (any five) 10
- a) Batching of concrete
 - b) What is high performance concrete?
 - c) What is aerated concrete?
 - d) What are types of fibers?
 - e) What is high density council?
 - f) What are joints in concrete?
 - g) What is freezing & thawing of concrete?
 - h) What is shotcrete or garneting of concrete
- Q.7 a) What is American concrete institute method of mix design? 05
- b) What are IS recommended method explain in short? 05
- c) What is high density concrete? What are the materials used for its manufacturing 05
- Q.8 a) What are special concrete explain light weight concrete? 05
- b) What is permeability of concrete? Explain the factors affecting & corrective measures 05
- c) What is cold weathering concrete? Explain will respect to low temp above 0° C & low temp below 0° C. 05
- Q.9 a) What are the effects on hardened concrete subjected to freezing & thawing? 05
- b) What is carbonation of concrete & how it is determined? 05
- c) What repairs state symptoms & diagrams are of distress? 05
- Q.10 Write short note (any three) 15
- a) What are special concrete & special concreting techniques
 - b) Different methods of mix design
 - c) Pumping of concrete
 - d) Ready mix concrete
 - e) Roller compacted concrete