

SUBJECT CODE:- 500
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E.(Civil) Examination Jan- 2015
Concrete Technology
(Revised)

[Time: Three Hours]

[Max. Marks: 80]

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

- N.B
- i) Q.1 & 6 are compulsory. Attempt any two questions from the remaining section A
 - ii) Figures to the right indicate marks.
 - iii) draw neat sketches wherever necessary
 - iv) Assume suitable data & mentions it in block letters in front of Question & answer.

Section A

- | | | |
|-----|---|----------------|
| Q.1 | Answer the following question(any five) | 10 |
| | <ol style="list-style-type: none"> a) What are the raw materials used manufacturing of cement. b) What is hydration of cement? Explain in short. c) What are different types of tests carried out on cement? d) What is bulking of aggregate? e) Methods of finding out moistures content of aggregate f) What is alkali aggregate reaction? g) What are the mechanical properties of concrete? h) What are the admixtures? i) What is standard memory procedure of motor & concrete | |
| Q.2 | <ol style="list-style-type: none"> a) What are various types of batching of materials example? b) What are physical properties of hardened concrete? c) What is sieve analysis? For which material it is carried out & enlist different IS services used. | 04
05
06 |
| Q.3 | <ol style="list-style-type: none"> a) What is segregation, blending of concrete explain and give the factors affecting it. b) How the compaction of concrete is done. What are the equipments used for compaction? c) What is the strength of concrete? Which factors affect the strength of concrete? | 06
04
05 |
| Q.4 | <ol style="list-style-type: none"> a) What is destructive and Non-destructive testing for concrete? Explain the conditions under which we can opt these method b) What are creep, shrinkage & elasticity of concrete? Explain significance of all the in detail. c) What are basic member of work. Explain principle of design of formwork. | 05
06
04 |
| Q.5 | Write short notes on [Any three] | 10 |
| | <ol style="list-style-type: none"> a) Mechanical properties of aggregate b) Water proofing materials & their functions c) Impact strength of concrete d) Admixtures in concrete e) Swelling of concrete | |

SECTION-B

Q.6	Answer the following [any five]	10
	a) What is the concept of mix design?	
	b) What quality control should be adopted while mix design of concrete?	
	c) What are the different grades of concrete as per IS 456:2000? Specify proportion of materials used.	
	d) What are different types of mix design procedures?	
	e) What is light weight concrete; materials used?	
	f) What is self compacting concrete?	
	g) What are steel fibers? Enlist three types	
	h) What is pumping of concrete?	
	i) What is sulphate attack?	
	j) Factors affecting cracks in concrete	
Q.7	a) What is IS: 10262 method of mix design explain in detail.	06
	b) What are different equipment used during manufacturing of concrete explain in detail.	05
	c) What are lightweight concrete? Flow & with which materials they are manufactured.	04
Q.8	a) What is mean strength variance standard deviation & coefficient of variance in mix design?	06
	b) What are the different data required related to materials for mix design.	04
	c) What are permeability, durability and chemical attack on concrete explain?	05
Q.9	a) What is sulphate attack by sea water and corrosion of reinforcement	06
	b) How the evaluation of cracks are done on cracks of concrete.	05
	c) What are repairs on concrete? Explain.	04
Q.10	Write short note:[Any three]	10
	a) American concrete institute method of mix design	
	b) Core test of concrete	
	c) Hot weathered concreting	
	d) Factors affecting corrosion of concrete	
	e) Hauling of concrete	