

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 58172

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

One credit

Civil Engineering

15UCE872- SPECIAL CONCRETES

(Regulation 2015)

Duration: 1.30 hours

Maximum: 50 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The characteristic strength of M_{50} concrete is _____
(a) 40 N/mm^2 (b) 60 N/mm^2 (c) 50 N/mm^2 (d) 30 N/mm^2
- In bacterial concrete in order to seal the cracks on the surface _____ is formed due to metabolic activity of bacteria.
(a) 1 week (b) 1 day (c) 3 days (d) 5 days
- While compacting the concrete by a mechanical vibrator, the slump should not exceed
(a) 2.5 cm (b) 5.0 cm (c) 7.5 cm (d) 10 cm
- Where aspect ratio increases strength of concrete
(a) Increases (b) Decreases (c) Both (d) None of these
- Aerated Concrete is _____
(a) Very heavy weight (b) Heavy weight (c) Medium weight (d) Light weight
- Density of no fines concrete with light weight aggregate vary from _____ kg/m^3 .
(a) 1600-1900 (b) <300 (c) >2500 (d) >300
- The maximum size of aggregate in High Density concrete
(a) 20mm (b) 30mm (c) 40mm (d) 80mm

8. J ring test is used to determine _____ of concrete
(a) Passing ability (b) Durability (c) Reliability (d) Workability
9. The cylindrical strength of concrete is _____ times the strength of the cube
(a) 10 (b) 1.5 (c) 0.8 (d) 8
10. V funnel test is used to determine _____ of concrete.
(a) Passing ability (b) Filling ability (c) Reliability (d) Workability

PART – B (5 x 2= 10 Marks)

11. Explain High density concrete.
12. Explain Cellular concrete.
13. Write applications of Fibre Reinforced concrete.
14. Define Admixtures.
15. Define aerated concrete.

PART – C (2 x 15= 30 Marks)

16. (a) (i) Explain in detail about self-healing concrete and bacterial concrete. (10)
(ii) what are the advantages of Reactive Powder Concrete. (5)
- Or
- (b) (i) Explain in detail about Shotcrete Process and Under Water Concrete. (11)
(ii) What is meant by Aerated Concrete? (4)
17. (a) Explain in detail about different types of polymer concrete. (15)
- Or
- (b) (i) Write a short notes on Vacuum concrete. (10)
(ii) List out Various types of concrete made with industrial waste. (5)