

Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)

T.E. (Civil) Examination
End Semester Examination 2016

AM 343: CONCRETE TECHNOLOGY

Time: Three Hours

19 NOV 2016

Max.Marks:60

“Verify the course code and check whether you have got the correct question paper”

N.B.:-

1. All questions are compulsory
2. Assume suitable data if necessary and state it clearly
3. Use of non-programmable calculator is allowed

Q.1

- a) Explain Tornebohm’s minerals and its effect on properties of cement (related graphs are compulsory) 6
OR
b) Explain PPC and differentiate between rapid hardening cement and rediset cement. 6
c) Identify admixture and additive 6

Q.2

- a) Find fineness modulus and draw grading curve of aggregate for following observations
Weight of sample=2000 grams 6

Sieve size	20 mm	10 mm
Weight retained grams	1830	170

- b) Experiment with aggregate to find specific gravity 6
OR
c) Identify- Angular aggregate, moisture content, bulk density, flakiness index, elongation index, aggregate impact value 6

Q.3

- a) Experiment with concrete to carry out Vee-Bee consistometer test 6
OR
b) Identify - batching of cement, setting time of concrete, 375 NT, chute, tremie, Compaction by spinning 6
c) Explain in detail process of manufacture of concrete 6

Q.4

- a) Compare static modulus of elasticity with dynamic modulus of elasticity of concrete 6
b) Experiment with concrete to find compressive strength -cylindrical compressive strength and cube compressive strength of concrete 6
OR
c) Identify shrinkage of concrete, creep, durability, permeability, transition zone, Carbonation 6

Q.5

- a) Summarize steps to be used for IS code method of concrete mix design for M 20 grade. 6
b) Distinguish between normal strength concrete and high strength concrete, Write in short special methods of making high strength concrete. 6