

University of Mumbai

Examination 2020

Program: Civil Engineering

Curriculum Scheme: Rev2016

Examination: Third Year

Semester V

Course Code: CE-DLO 5062 and Course Name: Advanced Concrete Technology

Time: 1 hour

Max. Marks: 50

For the students:- All the Questions are compulsory and carry equal marks .

Q1.	Which chemical composition has highest content in OPC?
Option A:	Alumina
Option B:	Silica
Option C:	Lime
Option D:	Iron Oxide
Q2.	Which cement contains high percentage of C3S and less percentage of C2S?
Option A:	Rapid Hardening Cement
Option B:	Ordinary Portland Cement
Option C:	Quick Setting Cement
Option D:	Low Heat Cement
Q3.	Which apparatus is generally used to measure the soundness of the cement?
Option A:	Vicat Apparatus
Option B:	Le-Chatelier apparatus
Option C:	Soundness meter
Option D:	Duff Abrams apparatus
Q4.	What is the initial setting time?
Option A:	The time at which cement paste loses its elasticity
Option B:	The time at which cement paste loses its plasticity
Option C:	The time at which cement paste gains its plasticity
Option D:	The time at which cement paste gains its elasticity
Q5.	Which compound liberates lower heat?
Option A:	C2S
Option B:	C3S
Option C:	C3A
Option D:	C4AF
Q6.	Diameter of Round Steel Fiber lies in the range of
Option A:	0.3mm-0.5mm
Option B:	0.25mm -0.75mm
Option C:	0.155mm - 0.41mm
Option D:	0.25mm - 0.90mm
Q7.	Aerated Concrete is a type of one of the following concrete
Option A:	Very heavy weight
Option B:	Heavy weight

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Option C:	Medium weight
Option D:	Light weight
Q8.	What is the Specific gravity of Light Weight concrete
Option A:	<2.4
Option B:	2.4-2.8
Option C:	>2.8
Option D:	>3
Q9.	Which of the following compressive strength for concrete is required from structural consideration?
Option A:	Nominal
Option B:	Minimum
Option C:	Maximum
Option D:	Approximate
Q10.	For the given slump and maximum size of coarse aggregate, which of the following quantity can be determined?
Option A:	Slump value
Option B:	The maximum size of aggregate
Option C:	The amount of mixing water
Option D:	The minimum water-cement ratio
Q11.	In ACI Method, Maximum size of aggregates should not be larger than
Option A:	1/5 the minimum dimension of structural members
Option B:	1/4 the minimum dimension of structural members
Option C:	1/3 the minimum dimension of structural members
Option D:	1/6 the minimum dimension of structural members
Q12.	Which cement is used for mainly building construction where strength required with age?
Option A:	Rapid Hardening Cement
Option B:	Low Heat Cement
Option C:	Portland Pozzolana Cement
Option D:	Quick Setting Cement
Q13.	With the increase in aspect ratio of fibre reinforced concrete
Option A:	Relative strength increases
Option B:	Relative strength decreases
Option C:	Relative strength increases and then decreases
Option D:	Relative strength decreases and then increases
Q14.	In Fibre Reinforced concrete, which of the following fibre have high tensile strength value?
Option A:	Steel fibre
Option B:	Nylon fibre
Option C:	Polypropylene fibre
Option D:	Glass fibre

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Q15.	Which of the following fibres have very high impact strength?
Option A:	Carbon fibre
Option B:	Steel fibre
Option C:	Coir fibre
Option D:	Nylon fibre
Q16.	For fibre reinforced concrete, the toughness is increases to _____ times as compared to plain concrete
Option A:	5 to 10
Option B:	10 to 20
Option C:	10 to 40
Option D:	30 to 50
Q17.	The most effective orientation of fibres on Fibre reinforced concrete is
Option A:	Parallel to the direction of load
Option B:	Perpendicular to the direction of load
Option C:	Randomly spread
Option D:	45° to the load
Q18.	An ultrasonic pulse velocity test is an
Option A:	Ex-situ, nondestructive test
Option B:	In-situ, nondestructive test
Option C:	Ex-situ, destructive test
Option D:	In-situ, destructive test
Q19.	Which of the following methods of inspection uses high frequency of sound waves for the detection of flaws in the castings?
Option A:	Penetrant test
Option B:	Radiography
Option C:	Pressure test
Option D:	Ultrasonic inspection
Q20.	Which among the following is not a type of Non-destructive testing?
Option A:	compression test
Option B:	visual testing
Option C:	ultrasonic testing
Option D:	Ground penetration radar method
Q21.	Durability of concrete is proportional to
Option A:	Sand content
Option B:	Water cement ratio
Option C:	Aggregate ratio
Option D:	Cement aggregate ratio
Q22.	Strength of concrete increase with
Option A:	Increase with w/c ratio
Option B:	Decrease with w/c ratio

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Option C:	Decrease in size of aggregates
Option D:	Decrease in curing time
Q23.	Concrete is not recommended to be placed at a temperature above
Option A:	20oC
Option B:	30oC
Option C:	40oC
Option D:	50oC
Q24.	IS: 7861 part-1 deals with
Option A:	Hot weathering concrete
Option B:	Cold weathering concrete
Option C:	Air entertained concrete
Option D:	OPC
Q25.	Which one can't be the reason for the shrinkage of concrete?
Option A:	W/c ratio
Option B:	Temperature
Option C:	Cement content
Option D:	Formwork