

University of Mumbai

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021 to 20th January 2021

Program: Civil Engineering

Curriculum Scheme: Rev 2016

Examination: TE Semester V

Course Code: CE-DLO5063 and Course Name: Building Services & Repairs

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	A threshold limit of _____ percent total (acid-soluble) chloride by weight of cement for Chloride Content
Option A:	1.20
Option B:	3.60
Option C:	0.20
Option D:	0.50
2.	Which of the following is not a Deterioration Mechanism by Chemical Agents?
Option A:	Freezing & Thawing
Option B:	Chloride Ingress
Option C:	AAR
Option D:	Carbonation
3.	Which of the following statements is/are true for the ultrasonic test?
Option A:	Complicated shapes can be easily scanned
Option B:	Equipment used for ultrasonic testing is portable
Option C:	Waves generated are health hazardous
Option D:	Waves generated are health hazardous and complicated shapes can be easily scanned
4.	Concrete UPV ranging 3.0 to 3.5 km/s is categorized as..
Option A:	Excellent Quality
Option B:	Good Quality
Option C:	Medium Quality
Option D:	Doubtful
5.	The repair material should not have which property as listed below
Option A:	Low shrinkage and expansion properties
Option B:	Good Permeability
Option C:	Good bond strength
Option D:	Good Workability and Durability
6.	Concrete containing fibrous material which increases its structural integrity is known as..
Option A:	PMM
Option B:	Vacuum Concrete

Option C:	SCC
Option D:	FRC
7.	Stainless steel is the name given to a family of corrosion resistant steels containing a minimum of ___% chromium.
Option A:	5
Option B:	7.5
Option C:	10
Option D:	11.5
8.	Deterioration occurs over a _____ period
Option A:	Short
Option B:	Long
Option C:	Few Months
Option D:	Few Days
9.	_____ a process of injecting mixture of cement, sand and water at a high pressure in the cracks , joints, voids.
Option A:	Grouting
Option B:	Guniting
Option C:	Shotcrete
Option D:	Patch repair
10.	The surface hardness is generally given by the following NDT
Option A:	Half Cell Potentiometer
Option B:	Carbonation
Option C:	UPV
Option D:	Rebound Hammer
11.	Which of the following traps is commonly known as nahni trap?
Option A:	Floor trap
Option B:	Gully trap
Option C:	Silt trap
Option D:	Grease trap
12.	Lambert is the unit of
Option A:	Illumination
Option B:	Brightness
Option C:	Luminous Intensity
Option D:	Specific Output
13.	With the help of _____ the materials are transported with a continuous flow at comparatively high speeds.
Option A:	Trucks
Option B:	Conveyors
Option C:	Dumpers
Option D:	Elevators
14.	_____ is used to measure flows to domestic buildings
Option A:	Rain gauge

Option B:	Water meter
Option C:	Water tank
Option D:	Drainpipe
15.	Candela is the unit of
Option A:	Specific output
Option B:	Wavelength
Option C:	Luminous flux
Option D:	Luminous intensity
16.	In a house drainage system, the pipe through which human excreta flows is called
Option A:	Vent pipe
Option B:	Soil pipe
Option C:	Waste pipe
Option D:	Rainwater pipe
17.	On what basis are fire and water tube boilers are classified?
Option A:	Depending the combustion products formed
Option B:	Depending the state of fuel
Option C:	Depending on the steam formation rate
Option D:	Depending tubular heating surface
18.	The ratio of the lumens actually received by a particular surface to the total lumens emitted by a luminous source is known as
Option A:	Utilization factor
Option B:	Depreciation factor
Option C:	Specific output
Option D:	Luminous intensity
19.	Earthing is necessary to give protection against:
Option A:	Voltage fluctuation
Option B:	Overloading
Option C:	High temperature of the conductors
Option D:	Danger of electric shock
20.	The system of plumbing consisting of One Soil and Waste pipe and One Vent Pipe where traps of all water closets, basins etc. are completely ventilated is known as?
Option A:	Single stack system
Option B:	Partially ventilated single stack system
Option C:	One pipe system
Option D:	Two pipe system

Q2 (20 Marks)	Solve any Two Questions out of Three	10 marks each
A	<i>Write short notes on</i> i) Grouting ii) UPV Test	
B	<i>List down the components of Sub-station and draw a layout of typical substation.</i>	
C	<i>Explain the methods of corrosion prevention.</i>	

Q3. (20 Marks)	Solve any Two Questions out of Three	10 marks each
A	<i>Write a short note on classification of lighting.</i>	
B	<i>What are the causes of seepage in concrete structures?</i>	
C	<i>Draw and explain water supply system of a residential building.</i>	