

University of Mumbai
Examination 2021 under cluster __ (Lead College: __KJSIEIT__)
Examinations Commencing from 1 June 2021

Program: **Civil Engineering**
Curriculum Scheme: Rev - 2019
Examination: SE Semester IV

Course Code: CEC404 and Course Name: Building Materials & Concrete Technology
Time: 2 hour Max. Marks: 80

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Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks.(2 marks each)
1.	Some stones, has obtained from the quarry, possess a smooth surface and hence such a stone surface is termed as the _____
Option A:	Scabbling finish
Option B:	Self-faced finish
Option C:	Axed finish
Option D:	Punched finish
2.	When stones are placed right across the wall at a regular interval is known as
Option A:	Backing
Option B:	Hearting
Option C:	Through stone
Option D:	Support
3.	Which of the following is not a feature of second class bricks?
Option A:	Have small irregularities
Option B:	Water absorption is between 20-25%
Option C:	Rectangular in shape
Option D:	Free from cracks
4.	What is the problem with using flyash bricks?
Option A:	Efflorescence
Option B:	Costly
Option C:	Expand
Option D:	Not sound proof
5.	In concrete masonry, a hollow concrete block has a core-void area greater than _____ of the gross area
Option A:	20%
Option B:	15%
Option C:	30%
Option D:	25%
6.	Chromatic glass is used in:
Option A:	ICU and meeting room
Option B:	Aquariums
Option C:	Mobile screen protectors
Option D:	Floors

7.	The quality of timber does not depend upon:
Option A:	Maturity of tree
Option B:	Time of felling
Option C:	Type of tree
Option D:	Size of tree
8.	How can the quality of timber be checked via sound?
Option A:	Timber struck by hammer
Option B:	Timber tapped by hand
Option C:	Timber knocked by chisel
Option D:	Two timber pieces struck together
9.	At roof slab level over the DPC, _____ are provided.
Option A:	Tiles
Option B:	Concrete
Option C:	P.C.C
Option D:	Rubber sheet
10.	For DPC at plinth level, which grade of concrete is used?
Option A:	M10
Option B:	M20
Option C:	M25
Option D:	M15
11.	The _____ are popularly known as the white ants though they are in no way related to the ants.
Option A:	Termites
Option B:	Ants
Option C:	Bugs
Option D:	Beatles
12.	The entry of _____ termites into buildings takes place through cracks or fissures of even 0.5 mm thickness in concrete and masonry, floor joints, etc.
Option A:	Ground nesting
Option B:	Non subterranean
Option C:	Drywood
Option D:	White ants
13.	Polymer Cement Mortar (PCM) is used primarily for:
Option A:	Repairing concrete structure
Option B:	Stone masonry
Option C:	Tile masonry
Option D:	Brick masonry
14.	The guidelines for preparation for mortar is given in:
Option A:	IS 4455
Option B:	IS 2250-1981
Option C:	IS 3350-1981

Option D:	IS 5567
15.	The function of _____ is to make the paint thin so that it can be easily applied on the surface.
Option A:	Pigment
Option B:	Solvent
Option C:	Carrier
Option D:	Base
16.	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
17.	Which process comes after batching in manufacture process of concrete?
Option A:	Transportation
Option B:	Placing
Option C:	Mixing
Option D:	Compacting
18.	_____ is used as a final coat for surfaces of X-Ray rooms.
Option A:	Gypsum plaster
Option B:	Barium plaster
Option C:	Granite plaster
Option D:	Marble plaster
19.	What is the average particle size of cement?
Option A:	15 microns
Option B:	45 microns
Option C:	75 microns
Option D:	100 microns
20.	The specific gravity for sand is:
Option A:	2.65
Option B:	2.7
Option C:	2.75
Option D:	2.8

Q2.	Solve any Four out of Six. 5 marks each
A	What do you understand by soundness of cement? What factors are responsible for unsoundness of cement?
B	Write a short note on the cellular light weight concrete block.
C	What is meant by workability of concrete? How is it tested?
D	Draw the lay out plan of a RMC plant. Enlist the various components of RMC plant.
E	What are the characteristics of good oil paints?
F	Briefly explain Ultrasonic Pulse Velocity test.

Q3.	Solve any Four out of Six	5 marks each
A	What are the defects in timber? Describe briefly.	
B	What is bulking of sand? How does it affect concrete mix?	
C	Define water-cement ratio. How does it influence concrete strength?	
D	What is the minimum grade of concrete, to be used, specified by IS: 456–2000? How surface moisture of aggregates is accounted for in the mix design?	
E	What is retarder and accelerator? Write their uses.	
F	Briefly explain Rebound Hammer test.	