			WHY School of A	ł
			CBCS SCHEME	
	USN		Bangalor <sup>®</sup> *	18ARC22
			Second Semester B.Arch. Degree Examination, Jan./Feb.20	21
			Materials & Methods in Building Construction -	• • •
•	Tim	e: 4	hrs. Max. M	Iarks: 100
<ol> <li>On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.</li> <li>Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.</li> </ol>			ote: Answer any FIVE full questions, choosing ONE full question from each me	odule.
is malp		14	SV	
eated a	1		A Verandah $3.0 \times 6.0$ M needs to be provided with a Lean-to roof. The same	e has to be
ages. Il be tr		a.	roofed with Mangalore tiles. Draw the following to suitable scale: Key plan.	(04 Marks)
lank p 50, wi		b. с.	Enlarged part plan. Sketch any two details.	(06 Marks) (06 Marks)
On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Any revealing of identification, appeal to evaluator and /or equations written $e_{g}$ , $42+8 = 50$ , will be t		d.	Detailed section.	(04 Marks)
remaii eg, 42			OR	
on the rritten	2	a. b.	Draw the sectional elevation of steel tubular truss and explain the various parts. Sketch details of AC sheet fixing detail at Purlin.	(10 Marks) (05 Marks)
lines o ions w		c.	Sketch typical detail at ridge.	(05 Marks)
cross r equat			Module-2	
agonal and /oi	3	a.	Explain the followings: Acid resisting cement.	(05 Marks)
aw di		b. c	White cement. Mixing of concrete.	(05 Marks) (05 Marks)
orily dr to eval		d.	Water cement ratio.	(05 Marks)
npulso ppeal i			OR	5 B
trs, coi tion, a	4	a.	List any five types of major construction works and indicate concrete pro- minimum size of aggregate required for each.	portion and (12 Marks)
answe ntifica		b.	Write a brief note on slum test.	(08 Marks)
g your of ide	_	-	Module-3	
pleting ealing	5		A column $230 \times 230$ mm has to be provided with a RCC isolated footing of size $1500 \times 1500$ mm. Draw detailed drawing in suitable scale for the following :	
n com ny rev		a. b.	Plan with reinforcement detail. Section.	(06 Marks) (06 Marks)
: 1. O 2. Ai		с.	Isometric view.	(08 Marks)
Important Note : 1. 2.			OR	
ortant	6	a.	Write short notes on : (with neat sketches) Timber Grillage – plan and section.	(10 Marks)
Imp		b.	Steel Grillage – Plan and section.	(10 Marks) (10 Marks)
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			1 of 2	
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#### Module-4

A stairway in Timber is to be provided in a show room to reach a height of about 4.0 m. Assuming suitable design and data, draw to suitable scale:

- a. Plan,
- Cross section. b.
- c. Longitudinal section.
- d. Any two enlarged Joinery details.

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- A metal stringer staircase with open riser is to be designed for a floor height of 3.15 M. Width of stair is 1.0 M. Draw the followings to suitable scale : (05 Marks)
  - a. Plan.
  - b. Elevation.
  - C. Any 2 details.

#### Module-5

- Explain with neat sketches:
  - Steel spiral staircase a. Plan

### Elevation.

Composite staircase using steel and RCC b. Plan. (10 Marks)

(10 Marks)

(05 Marks)

(10 Marks)

Elevation.

# OR

- 10 A steel fire escape stairs in an Apartment block is to be fitted within a size of 4.0 m width and 7.0 m length, outside the building. Assuming the typical floor height to be 3150 mm (or any other suitable dimension). Draw the followings to suitable scale –
  - Plan. a.
  - Cross section. b.
  - Longitudinal section. C.
  - 2 Enlarged details (sketches). d.

(04 Marks) (04 Marks) (04 Marks) (08 Marks)

2 of 2

7

8

9

(04 Marks) (04 Marks)

(04 Marks)

(08 Marks)