Register Number: ……..

KUMARAGURU
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GENERAL INSTRUCTIONS TO THE CANDIDATES

1. Candidates are instructed to answer the questions as per Bloom's Taxonomy knowledge level (K_1 to K_6)
2. Candidates are strictly instructed not to write anything in the question paper other than their roll number.
3. Candidates should search their pockets, desks and benches and handover to the Hall Superintendent/ Invigilator if any paper, book or note which they may find therein as soon as they enter the examination hall.
4. Candidates are not permitted to bring electronic watches with memory, laptop computers, personal systems, walkie-talkie sets, paging devices, mobile phones, cameras, recording systems or any other gadget / device /object that would be of unfair assistance to him / her.
5. Corrective measures as per KCT examination policies will be imposed for malpractice in the hall like copying from any papers, books or notes and attempting to elicit the answer from neighbours.

B.E DEGREE EXAMINATIONS: DEC 2015

(Regulation 2014)

Third Semester

CIVIL ENGINEERING

U14CET304**:** Building Construction

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Assertion (A): Black cotton soil is unsuitable for foundations because it's low bearing capacity. CO1 [K_3]

   Reason (R): It has a property to undergo a volumetric change due to variation of moisture content.

   a) Both A and R are True, R is the correct reason of A
   b) Both A and R are true but R is not correct reason of A
   c) A is false but R is true
   d) Both A and R are false

2. Which of the following has the low bearing capacity? CO1 [K_2]

   a) Fine sand loose and dry
   b) Moist clay
   c) Coarse sand loose and dry
   d) Coarse gravel

3. For building on a clayey soil, the minimum depth of foundation is CO1 [K_2]

a) 0.2 to 0.4 m b) 0.9 to 1.6 m

c) 0.6 to 0.9 m d) 0.4 to 0.6 m

4. Which of these statements are correct? CO4 [K_2]

1. A mortar joint having a concave finishing in brick masonry, is called keyed joint.
2. A mortar joint having a recess in it is called ruled joint
3. A mortar joint projecting beyond the face of a masonry wall is called tucked joint

a) 1 b) 1,2

c) 2,3 d) 1,2,3

5. Sequence the following process of pressure grouting CO4 [K_2]

1. Concreting of roof slabs
2. Brick-Jelly lime concrete terracing
3. Erection of form work for slab
4. Construction of parapet wall in terrace

a) 1,3,2,4 b) 3,1,4,2

c) 3,1,2,4 d) 1,3,4,2

6. A bond in which stretcher bricks are laid on edge in alternate courses forming continuous cavity is known as CO2 [K_3]

a) Dutch bond b) Soldier bond

c) Herringbone bond d) Cavity bond

7. Queen post trusses are used when the span is CO3 [K_2]

a) 8 to 12 m b) 5 to 8 m

c) < 5m d) >15 m

8. The biggest disadvantage of brick flooring is that CO3 [K_3]

a) It is very expensive b) It requires skilled workmen

c) It is water absorbent d) It is not fire resistant

9. Which of the following is not an excavating and moving type of equipment? CO5 [K_2]

a) Bull dozer b) Clam shell

c) Scraper d) Dump truck

10. Matching type item with multiple choice code CO3 [K2]

List I	List II
A. Exterior corner of a wall	i. hearting
B. Covering on the exposed top of a wall	ii. face
C. Portion of a wall facing and backing	iii. quoin
D. Surface of the wall exposed to weather	iv. coping

	A	B	C	D
a)	iv	iii	ii	i
b)	ii	i	iii	iv
c)	iii	iv	i	ii
d)	ii	iv	i	iii

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11.	What type of foundation would you propose for a multi-storeyed office building in (i) Very soft soil and (ii) Black cotton soil?	CO1	[K_4]
12.	What are cofferdams? Write the common types of cofferdams.	CO1	[K_2]
13.	Differentiate English bond and Flemish bond.	CO2	[K_2]
14.	Compare the advantages of construction steel roof trusses over timber trusses.	CO3	[K_3]
15.	Why timber floors are mostly used in auditorium?	CO3	[K_3]
16.	List the effects caused due to dampness in building.	CO3	[K_2]
17.	What is shoring? Mention the situations where shoring are needed.	CO4	[K_2]
18.	Differentiate between brick layer's scaffolding and Mason's scaffolding.	CO4	[K_3]
19.	List the fire resisting properties of bricks.	CO4	[K_2]
20.	List the factors affecting the selection of equipment for a building project.	CO5	[K_2]

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

21.	Enumerate the various classes of rubble masonry. List the important points to be kept in view while carrying out rubble work.		CO2	[K_3]
22.	(i) List the different types of piles used for supporting vertical loads.	(4)	CO1	[K_2]
	(ii) How the load bearing capacity of the pile would be determined?	(10)	CO1	[K_3]
23.	(i) Mention the precautions that should be taken for preventing dampness in buildings.	(4)	CO3	[K_3]
	(ii) Describe the various techniques adopted to prevent the defects of dampness.	(10)	CO3	[K_3]
24.	Name the different types of scaffolding and describe any two with neat sketches, which are most commonly used.		CO3	[K_3]
25.	(i) Briefly explain the fir-resistant construction of structural elements in view of fire-safety in buildings.	(8)	CO4	[K_4]
	(ii) Compare the effectiveness of different acoustical materials.	(6)	CO4	[K_3]
26.	Name different compaction equipment. Briefly describe the suitability of each equipment.		CO5	[K_4]

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