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## GIET UNIVERSITY, GUNUPUR – 765022

B. Tech ( Third Semester – Regular) Examinations, December – 2020

### BPCCV 3030 – CONSTRUCTION TECHNOLOGY

(Civil Engineering)

Time: 2hrs

Maximum: 50 Marks

**The figures in the right hand margin indicate marks.**

**PART – A: (Multiple Choice Questions)**

**(1 x 10 =10 Marks)**

Q.1. Answer ALL questions

- a. A good building stone should not absorb water more than
  - (i) 5%
  - (ii) 10%
  - (iii) 15%
  - (iv) 20%
- b. The ratio of the total floor area inclusive of all the floors to the area of the plot on which builds stands is known as
  - (i) Groundage
  - (ii) Plot Area
  - (iii) Floor Area
  - (iv) Build-Up Area
- c. The resistance of the soil with depth is measured by means of tool known as the
  - (i) Seismometer
  - (ii) Potentiometer
  - (iii) Penetrometer
  - (iv) Ammeter
- d. The use of lightweight concrete results in the reduction of cost to the extent of about
  - (i) 30%-40%
  - (ii) 50-60%
  - (iii) 10-20%
  - (iv) 70-80%
- e. Which roofs are used in hot region?
  - (i) Pitched Roof
  - (ii) Flat Roof
  - (iii) Sloping Roof
  - (iv) Curved Roof
- f. The temporary frame work is known as, and it is useful in construction demolition, maintenance and repair works
  - (i) Underpinning
  - (ii) Shoring
  - (iii) Scaffolding
  - (iv) Grouting
- g. The size of the bulldozer is indicated by the dimensions of its
  - (i) Tyre
  - (ii) Engine
  - (iii) Site
  - (iv) Blades
- h. The concrete is contained in a timber or steel casing for a certain period after its placing, this casing is known as the
  - (i) Tremie
  - (ii) hopper
  - (iii) Shuttering
  - (iv) Grouting
- i. The repair and rehabilitation of damaged or spalled is done by removing the
  - (i) Loose Concrete
  - (ii) Collapsing
  - (iii) Breakage
  - (iv) Bonding
- j. How many types of cracks can occur in a building
  - (i) 3
  - (ii) 4
  - (iii) 2
  - (iv) 6

**PART – B: (Short Answer Questions)**

**(2 x 5 = 10 Marks)**

Q.2. Answer ALL questions

- a. Define construction materials?
- b. What is prestressed concrete? How does it work?
- c. Define and list out the different types of scaffolding.
- d. Mention what are the duties of a construction maintenance worker?
- e. What are compaction and their different method of concrete compaction?

**PART – C: (Long Answer Questions)**

**(6 x 5 = 30 Marks)**

Answer ANY FIVE questions

Marks

3. Explain types of loads? (6)
4. Categorize the fabrication and erection of steel frames. (6)
5. What are the concrete chemicals? Explain in details and discuss its uses. (6)
6. What are the methods and systems of pre-stressing? Explain their advantage of pre-stressed cement concrete? (6)
7. What is Scaffolding? Mention its various components. Name the different types scaffolding and explain any two with neat sketches. (6)
8. Enumerate the procedure of construction types of flooring? (6)
9. Describe the detail of construction process followed for acoustics and fire protection buildings. (6)
10. What are the causes and types of defects in buildings? (6)

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