

Register Number:.....

B.E DEGREE EXAMINATIONS: JUNE 2013

Second Semester

CIVIL ENGINEERING

CEE101: Construction Materials

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10x1=10 Marks)

1. Identification marks on bricks during the process of molding is known as _____
a) frog b) projections c) brand name d) markings
2. Impact test is performed on stones to determine the _____
a) porosity b) fineness of grains
c) compressive strength d) toughness of stone
3. Sand is mixed with lime mortar to _____
a) reduce setting time b) reduce cost
c) prevent shrinkage and cracks d) improve strength
4. Bulking of sand is caused due to _____
a) fine clay particles b) surface moisture c) air voids d) silica content
5. Strength of concrete mainly depends on _____
a) quality of sand b) water-cement ratio
c) workmanship (D) quality of coarse aggregate
6. According to ISI the full strength of concrete is achieved after _____
a) 28 days b) 8 days c) 21 days d) 14 days
7. Thermocole is one of the trade name of
a) asbestos b) polystyrene c) cellular concrete d) cork
8. Plywood is specified by size and _____
a) volume b) number of plys c) grain direction d) color
9. Which of the following glass resists heat passing through without affecting the normal passage of light?
a) Anti-actinic glass b) Plate glass c) Wired glass d) Pyrex glass

10. _____ are composed of thin layers of the materials in which the successive layers have different orientation of the grain or fibre.
- a) Laminates b) Plywood c) Fly ash d) Steel

PART B (10 x 2 = 20 Marks)

11. What are the different tests applied to test the suitability of stone for structural use?
12. What are the main classifications of rocks?
13. List any four the characteristics of good sand.
14. What is 'plastering'?
15. Write a note on 'Batching of material'.
16. What are the various types of concrete?
17. Write a note on thermocol.
18. What re the types of paints commonly used for different purposes?
19. Give classification of glass on the basis of purpose.
20. Write short note on fly-ash.

PART C (5 x 14 = 70 Marks)

21. (a) (i) Enumerate the characteristics of a good building stone. (9)
- (ii) Explain how a building stone deteriorates? (5)

(OR)

- (b) Describe in brief the process for the manufactures of bricks.

22. (a) Discuss at length the manufacturing process of ordinary cement

(OR)

- (b) Explain briefly the preparation of cement mortars and lime mortars

23. (a) Explain slump test and mention recommended slumps for concrete for different purposes.

(OR)

(b) Enumerates and discuss briefly the various steps required for the preparation of plain cement concrete.

24. (a) Enumerate important varieties of industrial timbers with its applications

(OR)

(b) (i) Mention the objects of varnishing and point out the characteristics of an ideal varnish. (6)

(ii) What are the different types of varnishes and describe the process of Varnishing on wood work. (8)

25. (a) (i) What are the properties of fibre glass reinforced plastic? (7)

(ii) Mention the applications of FRP in building industry. (7)

(OR)

(b) Classify geosynthetics and discuss their applications
