

B.E DEGREE EXAMINATION: NOVEMBER 2009

Second Semester

CIVIL ENGINEERING

U07CE202: Construction Materials

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions

PART A (10 x 1 = 10 marks)

1. The _____ rocks are which exhibit distinct layers which can be separated
A) Unstratified B) stratified C) massive D) fossil containing rocks
2. Refractory bricks resist
A) Shocks and vibration B) dampness C) high temperature D) chemical actions
3. The setting of hydraulic lime and cement is facilitated by presence of
A) water B) fire C) air D) soil
4. Le Chatelier's method can be used to determine
A) Fineness of aggregate B) soundness of cement
C) Compressive strength of cement D) quantity of calcium
5. Bleeding of concrete is said to occur when
A) Excess water comes upon the surface of the concrete
B) Fine particles collect at some places in the structure
C) Coarse particles get separated from finer materials
D) Porous layer formed
6. Good concrete in plastic state should have
A) Segregation B) shrinkage C) bleeding D) good workability
7. A 3-ply ply wood may have thickness of
A) 3 to 6 mm B) 6 to 10 mm C) 10 to 12 mm D) 12 to 15 mm
8. _____ varnish is the most durable
A) Water B) Oil C) Turpentine D) Spirit
9. Soluble glass is
A) Concentrated brine B) hydrochloric acid C) ethyl alcohol D) aqueous sodium silicate
10. _____ is a kind of high quality earthenware
A) Terra-cotta B) Stone C) Rock D) Aluminum

PART B (10 x 2 = 20 Marks)

11. Name the different kinds of bricks.

12. Name any four tests for stones.
13. List out the properties of cement.
14. Classify the mortars.
15. What is the important of slump test in cement?
16. Mention the ratio of mix used or R.C.C work.
17. Differentiate between veneer and plywood.
18. What are the different types of varnishes?
19. What is meant by the term refractories?
20. Classify the composite materials.

PART C (5 x 14 = 70 Marks)

21. (a) Describe in brief the different tests applied to test the suitability of stones.

(OR)

- (b) i) Enumerate the qualities of good bricks (5)
ii) Explain the tests to which bricks are generally subjected (9)

22. (a) i) What are the constituents of limestone? (7)
ii) Explain the classification of lime (7)

(OR)

- (b) i) Describe in detail “bulking of sand”. (7)
ii) State the properties of good mortar. (7)

23. (a) Enumerate and discuss briefly the various steps required for preparation of plain cement concrete.

(OR)

- (b) Discuss the properties, advantages and disadvantages of reinforced cement concrete.

24. (a) Enumerate various defects in timber.

(OR)

- (b) i) Enumerate the properties of distemper. (7)
ii) What are the ingredients of a varnish? (7)

25. (a) Discuss the general properties of glass and give the classification.

(OR)

- (b) i) What are the characteristics of good tiles? (6)
ii) Describe the various types of tiles. (9)
