

M.E./M.Tech. DEGREE EXAMINATIONS, JANUARY 2022.

First Semester

Construction Engineering and Management

CN4101 – MODERN CONSTRUCTION MATERIALS

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Give the classification of metals.
2. What is plywood?
3. Enlist the various types of polymer finishes.
4. What are dry walls?
5. What is reinforced polymer?
6. Give four uses of FRP.
7. What do you mean by self compacting concrete?
8. What is high strength concrete?
9. Give any two examples for smart materials.
10. Write the significance of nanoconcrete.

PART B — (5 × 13 = 65 marks)

11. (a) What are the various forms of new steel alloy? Explain any two.

Or

- (b) Explain the properties and advantages of aluminum and its products.

12. (a) What are the different waterproofing compounds? Explain any two in brief.

Or

(b) What are the types of non-weathering materials? Explain its uses.

13. (a) Discuss in detail the strengthening of structural element by FRP composites.

Or

(b) Discuss in detail about the types of plastics, manufacturing process and uses.

14. (a) Discuss the preparation and properties of fibre reinforced concrete in detail.

Or

(b) Describe the preparation and properties of geopolymer concrete.

15. (a) Elaborate on the barrier faced in adoption of smart materials in construction industry.

Or

(b) Discuss various smart materials uses in the construction industry.

PART C — (1 × 15 = 15 marks)

16. (a) What are the tests carried out in fresh stage of self compacting concrete? Explain any two with neat sketches.

Or

(b) Discuss the environmental concerns in using plastics and polymers in construction industry.

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