

Scheme – I

Sample Question Paper

Program Name : Civil Engineering Program Group
Program Code : CE/CR/CS
Semester : Second
Course Title : Construction Materials
Max. Marks : 70

22204

Time : 3 Hrs.

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following. 10 Marks

- a) List any four construction materials used in building construction.
- b) State the role of civil engineer in the field of environmental engineering.
- c) State two properties of lime.
- d) Describe the selection criteria for type of ferrous metal in construction.
- e) Differentiate veneer and laminated board.
- f) List the field tests on cement.
- g) Write any two uses of Ferrocete used in construction.

Q.2) Attempt any three of the following. 12 Marks

- a) Describe the factors for selection of construction material on the basis of economy.
- b) State any four situations where artificial construction materials are used.
- c) State any four characteristics of good building stone.
- d) Classify aggregates according to size.

Q.3) Attempt any three of the following. 12 Marks

- a) Write the field tests performed on bricks for its suitability.
- b) Draw the flow chart for the manufacturing process of cement(dry)
- c) Suggest the type flooring for –fabrication shop, kitchen otta platform, dancing hall, vehicle parking.
- d) State any four uses of steel in construction.

Q.4) Attempt any three of the following. 12 Marks

- a) Define bitumen. State any two properties.
- b) Give two applications of precast concrete blocks.
- c) State the sequential steps followed in brick bat coba method of waterproofing.
- d) Name any two materials used for thermal and sound insulation ,
- e) State the characteristics of an ideal paint.

Q.5) Attempt any three of the following.

12 Marks

- a) Explain the defects in timber with the help of neat sketch.
- b) Write the significance of soil investigation before starting the construction.
- c) Suggest the types of glass to be used for the following,
 - i) Making partition wall.
 - ii) Laboratory apparatus.
 - iii) Sky light of roofs.
 - iv) Jewellery store.
- d) Enlist any four uses of ceramic materials.
- e) State the applications of use of blast furnace slag in construction work.

Q.6) Attempt any three of the following.

12 Marks

- a) Classify mortar; write any two uses of each type.
- b) Write the steps in the preparation of surface for painting.
- c) Write any two uses of baggasse and fly ash in construction.
- d) Write the situations where Ferrocete and artificial sand is used.

Scheme – I

Sample Test Paper - I

(40% of 5-Unit curriculum and 50% of 6-Unit curriculum)

Program Name : Civil Engineering Program Group
Program Code : CE/CR/CS
Semester : Second
Course Title : Construction Materials
Max. Marks : 20

22204

Time : 1 Hour

Instructions: All questions are compulsory

1. Illustrate your answers with neat sketches wherever necessary
2. Figures to the right indicate full marks
3. Assume suitable data if necessary
4. Preferably, write the answers in sequential order

Q.1 Attempt any FOUR.

(08 Marks)

- a) State the scope of construction materials in transportation engineering.
- b) Write any two uses of bamboo in building construction.
- c) State any four properties of good timber.
- d) Differentiate bitumen and asphalt with respect to method of preparation,
- e) Draw neat labeled and dimensioned sketch of traditional brick.
- f) Differentiate plywood and particle board with respect to strength, durability

Q.2 Attempt any THREE.

(12 Marks)

- a) Suggest the flooring tiles for –
 - i) Heavy weight lifting fabrication workshop
 - ii) Kitchen platform (otta) - with justification
- b) Compare asphalt and tar with respect to setting time and use.
- c) Describe the air (natural) method of seasoning of timber.
- d) State any four characteristics of good tiles.

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Scheme – I

Sample Test Paper - II

(60% of 5-Unit curriculum and 50% of 6-Unit curriculum)

Program Name : Civil Engineering Program Group
Program Code : CE/CR/CS
Semester : Second
Course Title : Construction Materials
Max. Marks : 20

22204

Time : 1 Hour

Instructions: All questions are compulsory

1. Illustrate your answers with neat sketches wherever necessary
2. Figures to the right indicate full marks
3. Assume suitable data if necessary
4. Preferably, write the answers in sequential order

Q.1 Attempt any FOUR.

(08 Marks)

- a) State any two uses of asbestos fiber in construction.
- b) Mention any two water proofing material brands available in market.
- c) List constituents of whitewash and state any two types of varnishes.
- d) Fibers used in constructions affect the strength of cement and concrete, give justification.
- e) Write the use of fly ash, construction waste, granite marble powder and blast furnace slag in construction activities.
- f) State any two merits and demerits of lime mortar and cement mortar.

Q.2 Attempt any THREE.

(12 Marks)

- a) State the sequential steps involved in the preparation of cement mortar 1:3.
- b) In following situations suggest the relevant type of paint- window grill, exposed surface of building, living room of a residential building, kitchen.
- c) State manufacturing process of bricks.
- d) Explain role of water cement ratio, proportion of cement and fine aggregates in preparation of mortar.

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