

Total Pages—3

(Set-R₁)

B.Arch-2nd
Building Material-II

Full Marks : 70

Time : 3 hours

Q. No. 1 is compulsory, answer
any five from the rest

The figures in the right-hand margin indicate marks

1. Answer the following questions : 2 × 10

- (a) Cobalt in meteorites are found in which states? Name the ores from which it is extracted.
- (b) Name the principal ores from which copper can be extracted.
- (c) Why vanadium steel is used for springs. — Give reasons.
- (d) Explain the term 'sherardising'.

(Turn Over)

(2)

- (e) How the porous terra-cotta is made ?
- (f) What is a borosilicate glass ?
- (g) Name the different resins used for varnishing along with their solvents.
- (h) Distinguish between emulsion paint and enamel paint.
- (i) What is polymerization ?
- (j) Give the advantages and disadvantages of light weight concrete.
2. (a) Describe briefly about copper along with its manufacturing process, properties and uses. 5
- (b) State and describe briefly any four preventive measures for corrosion. 5
3. (a) Briefly describe the types of high voltage porcelain, along with its properties and uses. 5
- (b) Briefly describe various forms of Asphalt and enumerate its properties and uses. 5
4. (a) What is Bitumen ? Discuss its various types. 5

B.Arch-2nd/Building Material-II (Set-R₁)

(Continued)

(3)

- (b) Describe the various applications of FRP in building industry. 5
5. (a) Mention various defects in painting. 5
- (b) What is distemping ? Describe its properties. 5
6. (a) Discuss various types of glass and their properties. 5
- (b) Name various thermoplastic and thermosetting resins. 5
7. (a) Discuss the various aluminium alloys. 5
- (b) Discuss the various forms of Bitumens. 5
8. Write short notes on : 10
- (i) Gun metal
- (ii) Pre-cast concrete
- (iii) Cork
- (iv) Nickel silver.

B.Arch-2nd/Building Material-II (Set-R₁)

BE-100

BUILDING MATERIAL - II

2nd Semester (B.Architecture)

Time: 2.00 hours

Full marks: 20

Answer any four out of five questions including Question Number 1, which is compulsory

(Figures in the right hand margins indicate marks)

1. Answer any five of the following : (1 x 5)
 - a. What are carbonaceous materials in the clay?
 - b. _____” a constituent in earth gives plasticity to mould bricks in suitable shape.
 - c. What do you understand by the additive Fly Ash?
 - d. The size of a modular brick should be _____?
 - e. What are facing bricks?
 - f. What is the object of painting or varnishing a surface and where will you prefer a paint to varnish and vice-versa?

2. Discuss the non-ferrous metals as building materials. (5)

3. Write short notes on :
 - a. Cast alloys (1.5)
 - b. Terracotta (1.5)
 - c. Property & use of copper (2)

4. What is a frog? State its importance in clay brick. (5)

5. What is varnish and why is it used? What are the qualities of a good varnish? (5)

(4)

8. Write short notes of the following : $2\frac{1}{2} \times 4$

- (i) Aluminium paints
- (ii) Stoneware
- (iii) Water proofing compounds
- (iv) Heat and sound insulating materials.

Total Pages-4

B.Arch-2nd (Set-1)
Building Materials-II

Full Marks : 70

Time : 3 hours

Answer Q. No. 1 which is compulsory and any five from the rest

The figures in the right-hand margin indicate marks

1. Answer the following questions : 2×10
- (a) Distinguish between Metal and alloy.
 - (b) Differentiate between selective corrosion and uniform corrosion.
 - (c) What are the essential requirements of a floor ?
 - (d) What is blistering ?
 - (e) Differentiate between thermoplastic resins and thermosetting resins.

(Turn Over)

(2)

- (f) What are the properties of a good sealant ?
- (g) What are the ingredients of distemper ?
- (h) What are the properties of soda-lime glass ?
- (i) Why do we use air entraining agents in concrete ?
- (j) Name some admixtures which have been used as retarding agents.
2. (a) Mention the characteristics of aluminum as an important building material. 5
- (b) Discuss the various methods which are usually adopted to prevent the corrosion of ferrous metals. 5
3. (a) What is terracotta ? Discuss the varieties of terracotta. State the advantages, disadvantages and uses of terracotta. 6
- (b) Mention properties and uses of the varieties of high voltage porcelain. 4

(3)

4. (a) Explain the procedure of constructing tiled flooring. 6
- (b) Mention the important guidelines for the use of plastic emulsion paints. 4
5. (a) What are the ingredients of a varnish ? Describe briefly each of them. 4
- (b) What is polymerization ? Describe different methods of Polymerization. 6
6. (a) What is Gypsum ? What are its properties ? What are the advantages of gypsum board over other conventional materials ? 5
- (b) Explain the process of obtaining natural rubber. 5
7. (a) What is light weight concrete ? Explain different methods of making light weight concrete. 5
- (b) What is fly ash ? Explain the effect of fly ash on fresh concrete. 5