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AR 1604

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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 10135 Roll No.

B. Arch. Examination 2021-22

(Even Semester)

SPECIFICATION, COST ESTIMATION & BUDGETING

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt each question.

SECTION–A

1. Attempt all parts of the following : 8×1=8

(a) Earthwork in foundation.

(b) Preliminary estimate.

(c) Plinth area method.

[P. T. O.

(d) Purpose of costing.

(e) C. P. W. D. schedule of rates.

(f) Types of specifications.

(g) Abbreviations used in specifications.

(h) Damp proof course.

SECTION – B

2. Attempt any three parts of the following : 4×3=12

(a) What do you understand by the terms general specifications and detailed specifications of a building? Explain the difference.

(b) What is analysis of rates? Work-out the rate per cubic meter of cement concrete 1 : 2 : 4. Assume suitable market rates of materials and labour in your town.

(c) Write short notes on the following :

(i) Work-order

(ii) Measurement Book (M. B.)

(d) Describe and distinguish the following :

(i) Analysis of rates and schedule of rates

(ii) Revised estimate and supplementary estimate

SECTION – C

Note :– Attempt any two questions of the following. 2×20=40

3. (a) Estimate quantities of any four of the following items of works in the building as per given plan and schedule (attached on seperate sheet) :

Schedule :

All dimensions are in millimeters.

All walls are 200 mm thick.

Door $D_1 = 1000 \times 21000$ and $D_2 = 800 \times 2100$

Window $W_1 = 1200 \times 1500$ and $W_2 = 900 \times 450$

Door and windows frame = 100×60

Foundation same for all walls.

Data :

Floor to ceiling height - 3000

RCC roof slab thickness - 120

RCC band at lintel level - 150

Lintel height - 2100 and plinth height - 600

Lime concrete thickness in foundation - 250

Width of foundation - 900

(a) Lime concrete in foundations.

(b) RCC work in roof slab and lintel band.

(c) Plastering outside building including plinth height.

(d) Sab wood in door and window frames.

(e) Distempering inside the room and ceiling.

(f) 25 mm thick DPC in cement concrete (1:2:4)

4. Attempt the following :

(a) State different types of estimate and explain any two.

(b) What are the documents required for preparing detailed estimate of a building? Explain each in brief.

(c) Prepare approximate estimate of a building having plinth area of 1800 sq. mt. using the following :

(a) Plinth area rate = ₹ 12,000 per sq. mt.

(b) Contingencies @ 8%.

(c) Work charge establishment @ 2%.

(d) Water supply and sanitary arrangements @ 20%.

(e) Electrification @ 10%.

(f) Architectural fee @ 3%.

5. Write detailed specifications on the following :

(a) Lime-concrete in foundations

(b) Plastering with cement mortar

(c) Cement concrete (1 : 2 : 4)

(d) First class brick

(e) D. P. C.

Attachment to Question No. 3

PLAN

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