

CBBCS SCHEME

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15ARC/ENG46

Fourth Semester B.Arch. Degree Examination, Dec.2019/Jan.2020 Specification, Quantity and Costing of Buildings

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is an Estimate? Why are estimates prepared in a Building Project? (08 Marks)
b. Explain the following:
i) Detailed Estimate
ii) Supplementary Estimate
iii) Revised Estimate. (12 Marks)

OR

- 2 Write detailed technical specification for the following:
a. Earthwork excavation for foundation. (06 Marks)
b. Providing and laying PCC 1:2:4 for Roof slab. (07 Marks)
c. Providing and constructing Burnt brick masonry in cm 1:6 for super structure using table moulded bricks. (07 Marks)

Module-2

- 3 a. What is a Tender Document? What are the essential contents of Tender? (08 Marks)
b. Write short notes on the following:
i) Earnest Money Deposit and Security Retention.
ii) Measurement book and its importance at site.
iii) Safety norms to be followed at site and its importance.
iv) Administrative sanction and Technical Sanction. (12 Marks)

OR

- 4 a. Explain at least three standard test results on cement and fine aggregates considered as a part of specification. (12 Marks)
b. What are different safety norms followed during the "DEEP EXCAVATION" process at site (08 Marks)

Module-3

- 5 a. What is Rate Analysis? How is Rate analysed from the 1st principles explain briefly? (10 Marks)
b. Prepare the rate for below mentioned item of work from 1st principles. Providing and Constructing burnt brick masonry in CM 1:6 for super structure. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 6 The basic cost of material is Rs.350/- Bag of cement, fine aggregate \rightarrow 3500 Rs/mt³
20mm and drum size coarse aggregate \rightarrow 980 Rs./mt³
Brick (Table moulded) – 8.00 Rs./No.
Prepare a detailed rate analysis from the 1st principles for.
- P/L PCC 1:3:6 for foundation Plinth as DPC using 20mm and dam size coarse aggregates. (07 Marks)
 - P/L PCC 1:1 $\frac{1}{2}$:3 for Roof slab using 20mm and dum size coarse aggregates. (07 Marks)
 - Providing and laying plastering to ceiling in cm 1:4 with line. (06 Marks)

Module-4

- 7 The sketch 1 enclosed shows the details of 2 Bed room unit. Prepare a detailed estimate for below mentioned item of work only by C_t Method:
- Earthwork excavation for foundation in hard soil. (05 Marks)
 - P/C SSM in CM 1:6 for foundation and Basement (07 Marks)
 - P/F Door frame and shutters (03 Marks)
 - C_t line diagram and net length. (05 Marks)

OR

- 8 For the same sketch 1, calculate the below mentioned items of work:
- P/C 30cms thick burnt brick masonry in CM1:6 for super structure (only main walls). (09 Marks)
 - Providing and laying PCC 1:2:4 for Roof slab using 20mm and drum size coarse aggregates. (06 Marks)
 - Providing and laying plastering to ceiling in CM 1:4. (05 Marks)

Module-5

- 9 Estimate the cost of Earthwork for a portion of Road 400mts long from following data:

Chainage in meters	1000	1040	1080	1120	1160	1200	1240	1280	1320	1360	1400
RL in mts	51.00	50.90	50.50	50.80	50.60	50.70	51.20	51.40	51.30	51.0	50.60
RL of formation	52.00	← Down word gradient →									

1 in 200

Formation width = 10mts, Side slopes 2:1 in Banking, 1.5:1 in cutting. (20 Marks)

OR

- 10 The Accompanying sketch 2 (Fig.Q.10) shows the details of septic tank. Prepare a detailed estimate for following details shown below:
- Earthwork excavation for foundation in hard soil. (05 Marks)
 - P/L PCC 1:4:8 for foundation using 40mm and drum size coarse aggregate. (02 Marks)
 - P/C BBM in cm 1:4 for side wall of septic tank. (08 Marks)
 - P/L PCC 1:2:4 for cover slab using 20mm and downsize CA. (04 Marks)

ALL DIMENSIONS ARE IN METRES

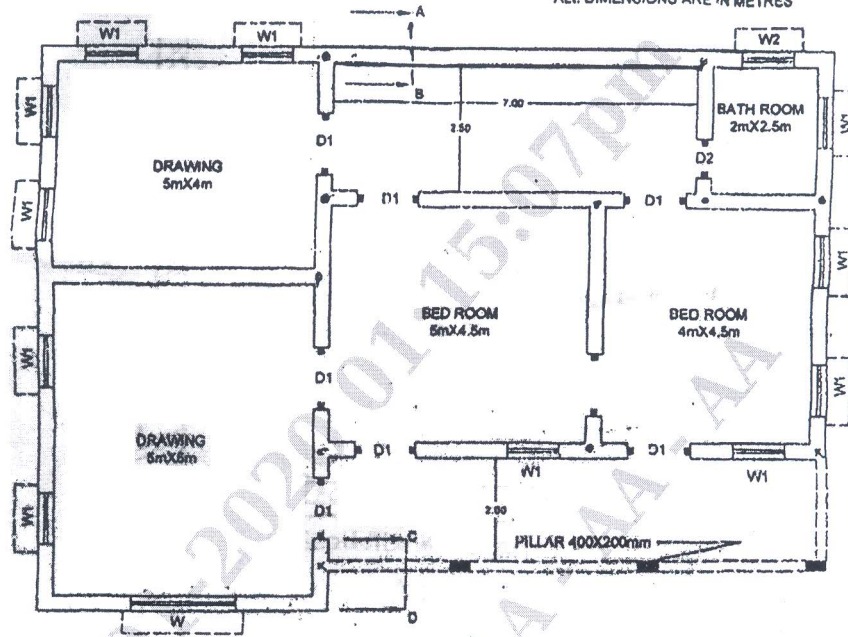
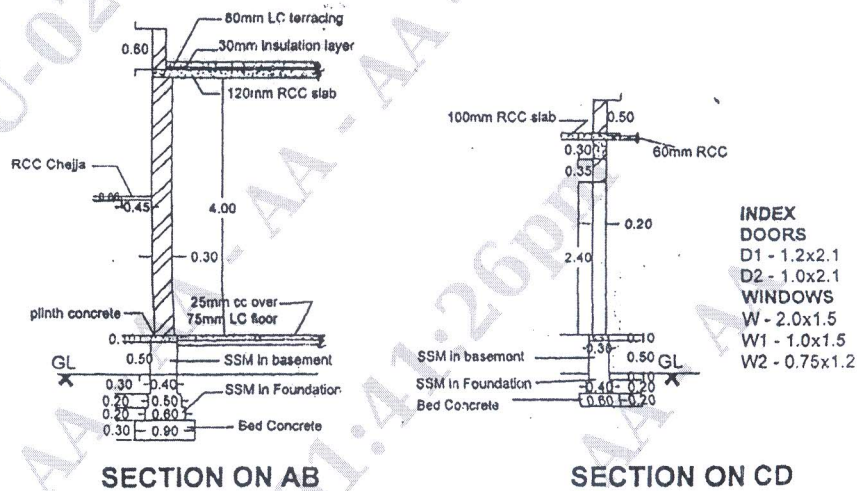


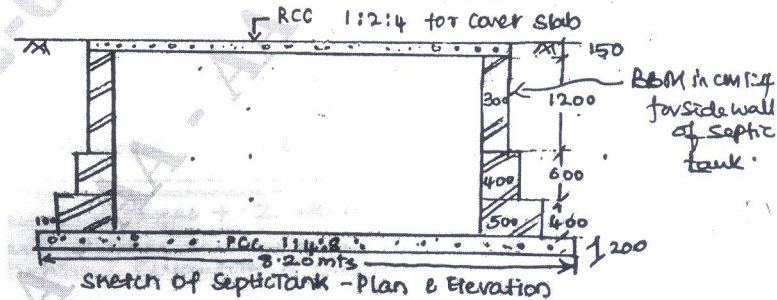
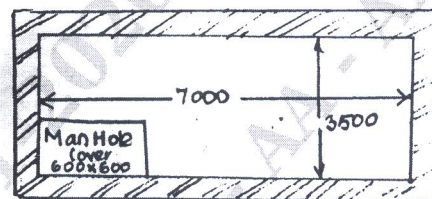
Fig.Q.1(i)



SECTION ON AB

SECTION ON CD

(Sketch - 1) Fig.Q.1(ii)



Sketch of Septic Tank - Plan & Elevation

All dimensions are in mm.

(Sketch - 2) Fig.Q.10
