

October/November 2018 Examinations
DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP
ESTIMATION AND COSTING

Year/Sem: III / V (ODD-III)

Max. Marks : 75

Time : 3 hr.

PART-A**(5 x 2 = 10 Marks)****Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.****(ii) All questions carry equal marks.**

- 1 When the Revised estimate is prepared?
- 2 Define Report writing.
- 3 What is meant by observed Data?
- 4 Mention any four purposes of valuation.
- 5 Define Scrap value.
- 6 Write the duties of quantity surveyor (any two).
- 7 Mention the two methods of taking off quantities.
- 8 Mention the quantities of cement and sand required for cm 1:3 - 10m³

PART-B**(5 x 3 = 15 Marks)****Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.****(ii) All questions carry equal marks.**

- 9 The cost of construction of an Industrial Building which has 5 bays of 4m span each and 12m width is Rs.36,48,000/=. Determine the approximate cost of construction of a similar building with 8 bays.
- 10 What is meant by unit cost method of Approximate estimation?
- 11 Mention the importance of specification.
- 12 Mention any three points to be included in the specification.
- 13 What is meant by painting co-efficient? Mention the painting co-efficient for any two items.
- 14 What is meant by outgoings? Mention any four types of outgoings.
- 15 Define lumpsum provision.
- 16 Determine the quantity of Bricks of size 190 x 90 x 90mm required for Brickwork in cement mortar - 1m³.

PART-C**(5 x 10 = 50 Marks)****Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.****(ii) All divisions carry equal marks.**

- 17 A Explain any five types of Estimates. 10

(OR)

 B The actual expenditure incurred in the construction of a flat roofed residential building having a plinth Area 115m² and height 3.30m is Rs.11,50,000/=. It is proposed to construct another similar building in the same locality with a plinth Area of 128m² and height of 3.60m. Estimate the approximate amount required for the proposed building assuming the increase in the cost of materials and labour as 20%. 10
- 18 A Write a detailed specification for Earthwork excavation for foundation. 10

(OR)

 B Write a report to accompany with the estimate for providing a water supply system for a village. 10
- 19 A Prepare the materials requirements schedule for the following work. 10
 i) Reinforced Cement Concrete 1:2:4 for 100 mm thick roof slab -27m³
 As per the standard book, the quantities of materials required for this item are as below:
 Reinforced Cement Concrete 1:2:4 -10m³
 Blue granite metal 20mm size - 9m³
 Cement mortar 1:2 - 4.5 m³
 Steel - 1500 kg

(OR)

B Prepare the Data for the following items of works and furnish the rates:- 10

Flooring with cement concrete 1:4:8 100 mm thick and plastered over with cement mortar 1:3 15mm thick - 10m^2 .

Materials and labour required.

Cement Concrete 1:4:8 using broken stone - 10m^3

Broken stone 20mm size - 9m^3

Cement mortar 1:4 - 4.5m^3

Mason II cl - 1.8 Nos.

Mazdoor I cl - 17.7 Nos.

Mazdoor II cl - 14.1 Nos.

Plastering with Cement mortar 1:3, 15 mm thick - 10m^2

Cement mortar 1:3 - 0.14m^3

Mason I cl - 1.1 Nos.

Mazdoor I cl - 0.5 Nos.

Mazdoor II cl - 1.1 Nos.

Flooring with cc 1:4:8 100 mm thick and plastered with cm 1:3 - 15mm thick - 10m^2

Cement Concrete 1:4:8 using broken stone - 1m^3

Plastering with cm 1:3 15 mm thick - 10m^2

Cost of materials and labours

Cement - Rs. 6000 Per Tonne

Sand - Rs. 750 per m^3

Broken stone - Rs.800 per m^3

Mason I cl - Rs.550 each per day

Mason II cl - Rs.500 each per day

Mazdoor I cl - Rs.450 each per day

Mazdoor II cl - Rs.400 each per day

Mixing charges - Rs.125 per m^3

20 A The built up portion of a I class building on 470m^2 land near a city is 275m^2 . The plinth area rate in the neighbourhood including water supply, sanitary and electrification charges is Rs.2500 per m^2 . The age of the building may be taken as 20 years. The cost of land in the locality is Rs.1250 per m^2 . Assuming a rate of depreciation 1% calculate the present value of the property. 10

(OR)

B A person has invested Rs.45,000 on a plot and Rs.2,15,000 on construction of a building over it expecting 5% return. Assuming the cost of Annual repairs to be Rs.1500/- and other outgoings to be 25% gross rent. Calculate the reasonable monthly rent if the annual sinking fund co-efficient is 0.01. 10

21 A Take out the quantities for the following items of works from the given sketch (Industrial Building with AC sheet roof and Steel trusses)

(i) Earthwork excavation for foundation 5

(ii) P.C.C 1:4:8 for foundation 5

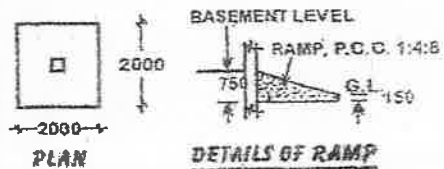
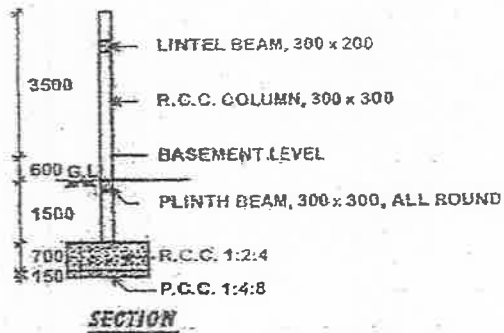
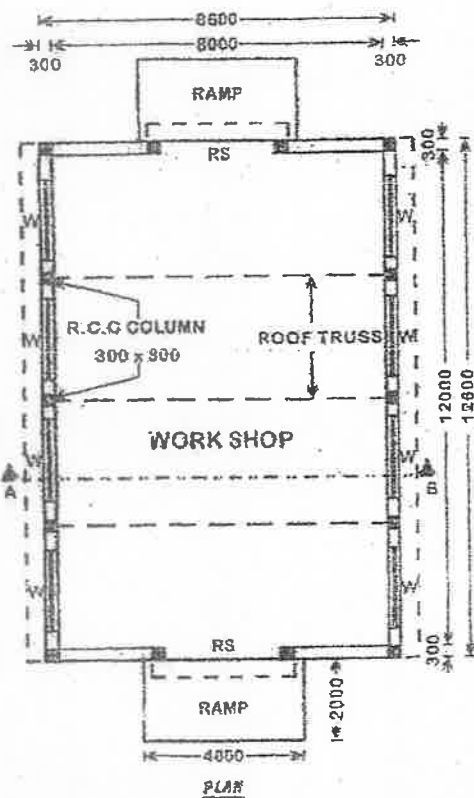
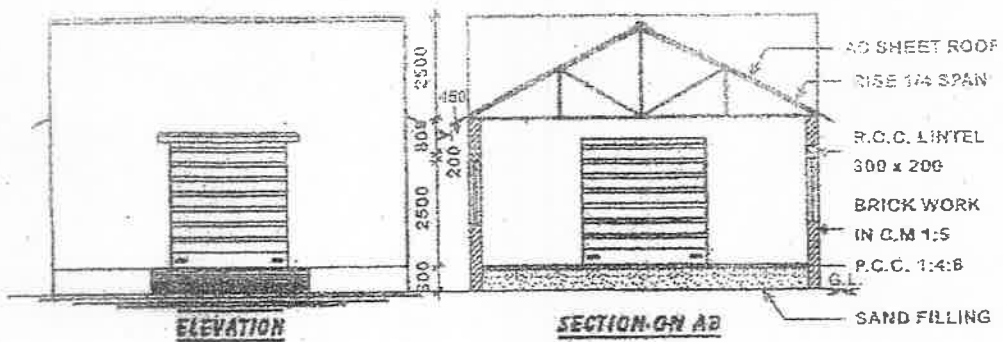
(OR)

B (i) Inside plastering in cm 1:5 12 mm thick 5

(ii) Outside plastering in cm 1:5 12 mm thick. 5

Code: 150-8306

Sketch for the question No. 21(A) or 21(B)



DETAILS OF COLUMN FOUNDATION

REFERENCE	
RS	- ROLLING SHUTTER - 3000 x 2500
W	- ST. WINDOW - 2000 x 1500

INDUSTRIAL BUILDING WITH AC SHEET & STEEL TRUSSES
ALL DIMENSIONS ARE IN M.M.

Code: 15O-8307

ARCH

THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

(Autonomous)

Reg. No.

October/November 2018 Examinations
DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

Environmental Engineering

Year/Sem: III / V (ODD-III)

Max. Marks : 75

Time : 3 hr.

PART-A

(5 x 2 = 10 Marks)

Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.

(ii) All questions carry equal marks.

- 1 Define demand.
- 2 Mention the B.I.S.I standards for the following parameters. i).Hardness ii). Total Solids
- 3 List some of the common coagulants.
- 4 Write any two advantages of continuous water supply system.
- 5 State any two objectives of environmental study.
- 6 State some endangered and endemic species of our country.
- 7 Define disaster and state its types.
- 8 List the equipments to control air pollution.

PART-B

(5 x 3 = 15 Marks)

Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.

(ii) All questions carry equal marks.

- 9 Define design period. What are the factors to be considered while fixing design period?
- 10 How will you maintain the purity of water?
- 11 What are the functions of coagulant?
- 12 What do you mean by food web?
- 13 What is biodiversity hotspot?
- 14 List any four effects of ozone layer depletion.
- 15 State the preventive measures to be taken for earthquakes.
- 16 List the various effective measures to conserve the forest wealth.

PART-C

(5 x 10 = 50 Marks)

Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

(ii) All divisions carry equal marks.

- 17 A From the following data, compute the probable population for the year 2020 by geometrical increase method and incremental increase method. 10

Year	1970	1980	1990	2000	2010
Population	9000	13500	18000	23000	27500

(OR)

- B Enumerate the biological tests for the analysis of water. Explain any two tests. 10
- 18 A What are the various methods of chlorination? Explain them. 10
- (OR)
- B Name the different types of distribution layouts adopted in a public water supply system. Explain any two. 10
- 19 A What is typical food chain? Give example. 10
- (OR)
- B How do you conserve biodiversity? Explain. 10
- 20 A Explain the effects and prevention of land pollution. 10
- (OR)
- B Explain Green house effect and state its consequences and remedial measures. 10
- 21 A Explain the occurrence and effects of Tsunami. 10
- (OR)
- B State the causes for fire accidents and explain how you will escape from fire. 10

THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

(Autonomous)

Reg. No.

October/November 2018 Examinations
DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP
Elements of Interior Design

Year/Sem: III / V (ODD-III)

Max. Marks : 75

Time : 3 hr.

PART-A**(5 x 2 = 10 Marks)****Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.****(ii) All questions carry equal marks.**

- 1 Mention any two importance of Interior Design.
- 2 Mention the four elements of Design.
- 3 Define Anthropometry.
- 4 Mention any four Bed Room furniture.
- 5 What are the uses of room divider?
- 6 What are the uses of indoor plant?
- 7 Mention different types of wall finishes.
- 8 What are the uses of false ceiling?

PART-B**(5 x 3 = 15 Marks)****Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.****(ii) All questions carry equal marks.**

- 9 What are the Principles of Design?
- 10 What do you understand by circulation in building?
- 11 Mention any six Anthropometric Data related in designing Bed Room Interior.
- 12 Sketch and dimension a room divider.
- 13 Sketch and dimension any one furniture used in Bed Room.
- 14 What are the uses of Murals in Interior Design?
- 15 Write short notes on Blinds.
- 16 Draw an integrated service layout for a Bed Room.

PART-C**(5 x 10 = 50 Marks)****Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.****(ii) All divisions carry equal marks.**

- | | | | |
|----|---|--|----|
| 17 | A | What are elements of design? Explain in detail with sketches. | 10 |
| | | (OR) | |
| | B | Explain any four principles of design with sketches. | 10 |
| 18 | A | Explain with sketches the dimension standards of interior elements of dining room. | 10 |
| | | (OR) | |
| | B | Explain with sketches the dimension standards of interior elements of living room. | 10 |
| 19 | A | Explain with sketches the furniture layout for a Kitchen. | 10 |
| | | (OR) | |
| | B | What are the uses of room divider? Sketch different types of room divider. | 10 |
| 20 | A | Explain the methods of laying and details of laying two types of floor finish for any two spaces in a residential building of your choice. | 10 |
| | | (OR) | |
| | B | Explain with sketches the design of a mural and lighting in a hotel reception. | 10 |
| 21 | A | Explain with sketches the central air conditioning system for a restaurant. | 10 |
| | | (OR) | |
| | B | Draw the layout plan for jewellery show room and discuss the decorating ideas. | 10 |
