

Diploma in Quantity Surveying		
NVQ Level 05 – Semester II		
Quantity Surveying Practice - II	F45T001M12	Three Hours

SECTION “A” – Compulsory

01. You are a Consultant Quantity Surveyor who have been appointed to prepare an outline cost plan for a new two storey office building in which the expected tender date is December 2016 (Index 312). The cost analysis from a similar building project in which tenders were received in January 2013 (Index 225) is going to be followed for preparing the cost plan. Further information is as below.

Data of new project

- a. Gross Floor Area (GFA) = 1500 m²
- b. Area of ground floor slab = 800m²
- c. External wall area is increased by 11% of length.
- d. Communication and security installation is required at the cost of Rs. 145, 000.00
- e. Total floor area is going to be tiled with ceramic tiles in which the current market price is Rs. 1600.00. per m².

Data of analyzed project

- a. Tender date : January 2013
- b. Contract: Followed SBD 2, 12 months contract period.
- c. Floor area: ground floor 800m², first floor 800m². Total floor area 1600m².
- d. Refer “Attachment 1” for the cost analysis.

Assumptions

1. Quality of frame is same in both buildings.
2. Quality of substructure is same in both buildings.
3. Both buildings are located in same area.

Prepare the outline cost plan for proposed project. You can make sensible assumptions if required and they should be clearly stated. (30 Marks)

02. (i) State five (05) functions of a BOQ. (05 Marks)

(ii) Prepare a BOQ based on SLS 573 including the Grand Summary sheet for the given measured quantities in “Attachment 2”. (No need of Abstract Sheet and Preliminary Bill). (25 Marks)

SECTION “B” – Answer any two (02) questions

03. Your client is going to fix the doors for his new building (Expected life span is 50 years). There are 10 door openings in the building with same size (1000mm x 2000mm). He is thinking about “Hardwood Door” and “Plywood Door” types available at the market. Recommend him the best door type by using Life Cycle Cost analysis. Use following information. Discount Rate is 10%.

	Hardwood Door	Plywood Door
Size	1000mm x 2000mm	1000mm x 2000mm
Life span	30 years	20 years
Initial Cost	Rs. 70,000	Rs. 47,000
Replacement cost	Rs. 40,000	Rs. 30,000
Painting cost	Rs. 4,000 in every 10 years	Rs. 4,000 in every 6 years
Cleaning cost	Rs. 2,500 per door per annum	Rs. 2,500 per door per annum
Cost for preparing the surface for new door at replacement	Rs. 2,500 per door	Rs. 2,500 per door

Assume: Paintings may not done at replacement year. Cleaning may done in regularly at every day. (20 Marks)

04. (i) What are the importance of budgeting and content of a client’s budget? (4 Marks)

(ii) “Research and Development (R&D) organizations are very important for the development of construction industry in a country”. Explain this statement. (4 Marks)

(iii) How the building morphological factors can be used to reduce the cost of a building. Explain your answer with figures and examples. (12 Marks)



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05. Write short notes on all of the followings.

- (i) Cost Analysis
- (ii) Consultant of construction team
- (iii) Preamble Notes
- (iv) Prime Cost and Provisional Sum

(5 x 4=20 Marks)

Attachment 1

Elemental Cost Analysis of previous building

Element	Cost per m2 of GFA (Rs. '000)	Group elemental total cost
1. SUBSTRUCTURE	24.32	24.32
2. SUPERSTRUCTURE		73.76
2A Frame	21.92	
2B Upper Floors	11.20	
2C Roof	10.90	
2D Stairs	1.72	
2E External Walls	12.98	
2F External Windows & Doors	9.02	
2G Internal partitions	3.70	
2H Internal Doors	2.32	
3. FINISHES		6.77
3A. External Wall Finishes	2.62	
3B. Floor Finishes	1.61	
3C. Ceiling Finishes	2.54	
4. FITTING AND FURNISHING	0.96	0.96
5. SERVICES		14.20
5A. Sanitary Appliances	1.35	
5B. Services Equipment	-	
5C. Disposal Installation	1.28	
5D. Water Installation	1.05	
5E. Heating & Ventilation System	-	
5E. Electrical Installation	9.82	
5F. Gas Installation	-	
5G. Fire Installation	-	
5I. Special Installation	-	
5J. Builder's Work in Connection with Services	0.70	
6. External Works		23.13
6A. Site Works	12.30	
6B. Drainage	8.82	
6C. External Services	2.01	
6D. Minor Building Works	-	
Preliminaries		14.62
Total		157.76



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Attachment 2

15.00 15.00	Excavating top soil for preservation ave. depth 0.15m.	62.00 0.50	Surface treatment compacting bottom of excavations with 1 ton roller.
	&		
	Disposal of excavated material on site 30m from excavation for reuse. ----- x 0.15 = ----- m3	62.00 0.50 0.40	Concrete (1:2:4) 40mm max size agg in fdn, poured on or against earth.
			&
2.00 10.00	<u>Ddt</u> excavating top soil a.b.d.		Ddt backfilling to excavations a.b.d.
	&		&
	<u>Ddt</u> disposal of excavated material a.b.d. ----- x 0.15 = ----- m3		Add disposal of excavated material off site 4km away from site.
	Length 15000 Width 15000 2/30000 Recess 2/2000 4000 Ext girth 64000	62.00 0.95	Brk walls, 215mm thick vertical in Engineering brks BS3921, 10.5N/m2, 215 x 102.5 x 65mm laid in English bond in 1:1:6 cement lime mortar.
	Ddt 4/2 ¹ / ₂ /500 2000 C.L. girth of fdn. 62000		
	Ddt 4/2 ¹ / ₂ /500 2000 Internal girth 60000	62.00 0.22 0.65	Ddt backfilling to excavations a.b.d.
			&
62.00 0.50 1.05	Excavating trenches width exc. 0.3m & max. depth not exc. 2.0 m		Add disposal of excavated materials off site a.b.d.
	&		
	Backfilling to excns avethickness exc. 0.25 m arising from excns.	62.00 0.22	D.P.C. width not exc. 225mm horizontal, single layer of Bitumen BS 743, bedded in 1:3 cement: sand.
64.00 1.20	E.W.S. max. depth not exc. 2.0 m & dist. Between opposing faces not. Exc. 2.0 m.	14.28 14.28 0.20	Hardcore filling to makeup levels ave. thickness not exc. 0.25mm obtained off site.
60.00 1.05			
		2.00 10.72 0.20	Ddt ditto
item	Disposal of surface water		