

CST – Cost Estimation

**T018**

Tuesday, 28/11/2017

08:30 – 11:30 AM

WORKFORCE DEVELOPMENT AUTHORITY



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**ADVANCED LEVEL NATIONAL EXAMINATIONS, 2017,  
TECHNICAL AND PROFESSIONAL STUDIES**

**EXAM TITLE: COST ESTIMATION**

**OPTION: Construction (CST)**

**DURATION: 3 hours**

**INSTRUCTIONS:**

*WDA* *Amur*

The paper is composed of **three (3) main Sections** as follows:

**Section I: Fourteen (14) compulsory questions. 55 marks**

**Section II: Attempt any three (3) out of five questions. 30 marks**

**Section III: Attempt any one (1) out of three questions. 15 marks**

**Note:**

***Every candidate is required to carefully comply with the above instructions. Penalty measures will be applied on their strict consideration.***

**Section I. Fourteen (14) Compulsory questions**

**55 marks**

- 01.** What do you understand by valuation? **2 marks**
- 02.** Clearly define the term "Tendering". **2 marks**
- 03.** Once it has been decided to proceed with the tender preparation, and the estimator has become familiar with the documentation, then a visit to the site should be undertaken. List out Six aspects to look at from the site. **6 marks**
- 04.** Describe two types of estimate. **4 marks**
- 05.** Give and explain three factors to consider while preparing a detailed estimate. **6 marks**
- 06.** State Four advantages of an open tendering. **4 marks**
- 07.** Enumerate Five points to consider while selecting the best contractors to invite when Selective tendering method is chosen to be used. **5 marks**
- 08.** Outline five documents to accompany the detailed estimate. **5 marks**
- 09.** Enumerate four purposes of rate analysis. **4 marks**
- 10.** Differentiate two technical terms "Lift" and "lead statement". **4 marks**
- 11.** Differentiate five members of the responsible team to prepare an estimate. **5 marks**
- 12.** With clear definitions differentiate Cost from Price. **3 marks**
- 13.** What is the bill of quantities? **2 marks**
- 14.** State three responsibilities of a quantity Surveyor. **3 marks**

**Section II. Choose and answer any three (3) questions.**

**30 marks**

- 15.** Briefly explain five main purposes of valuation. **10 marks**
- 16.** Outgoings or the expenses which are required to be incurred to maintain the revenue of the building.  
Describe Five different various outgoings. **10 marks**

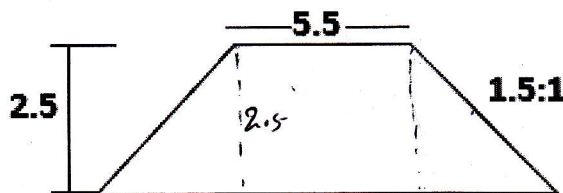
17. Indicate the measurement unit for the construction items listed in the table below: **10 marks**

S/N	Particular items	Unit of measurement
1	Excavation	
2	Flooring	
3	Wall elevation	
4	Foundation masonry	
5	Fence in burnt bricks	
6	Pointing	
7	Ceiling	
8	Electrical distribution	
9	Site clearance	
10	Site installation	

18. Calculate the Quantity of materials (Sand, Cement and Gravel) for the following items:
- C.C (Cement Concrete) with mix ratio (1:2:4) for 20m<sup>3</sup> of work.
  - C.M (Cement mortar) with mix ratio (1:4) for 1m<sup>3</sup> of work.

**10 marks**

19. Find the volume of earthwork in embankment of length 12m. Top width is 5.5m and depth is 2.5m, the side slopes are 1.5:1.



**10 marks**



**Section III. Choose and answer any one (1) question.**

**15 marks**

**20.** The quantities like earth work, foundation concrete, brickwork in plinth and super structure etc., can be worked out by any of following two methods:

- a) Long wall - short wall method
- b) Centre line method.
- c) Partly Centre line and short wall method.

In short describe each of the stated three methods.

**15 marks**

**21.** Clearly exemplify Five methods of valuation.

**15 marks**

**22.** From the Drawing given below determine:

- a) Center line
- b) Earth work excavation
- c) CC (Cement Concrete) Bed
- d) Stone Masonry
- e) Brick Work (do not consider openings).

**15 marks**

