

Total No. of printed pages = 8

Cv-601/Est-II/6th Sem/2017/N

ESTIMATING – II

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Assume any missing data.

Answer both part of the question paper.

PART – A

Marks – 25

1. Choose the correct answer from the given option :

1×10=10

(i) Which of the following comes under general overhead :

- (a) Amenities of worker
- (b) Travelling expenses
- (c) Interest on investment
- (d) None of the above

[Turn over

- (ii) The quantities of lime required for one coat of white washing of plastered surface of 100m^2 will be :
- (a) 10 kg (b) 7.5 kg
(c) 5 kg (d) 2.5 kg
- (iii) The volume of cement in one bag is :
- (a) 0.0647m^3 (b) 0.0530m^3
(c) 0.0257m^3 (d) 0.0347m^3
- (iv) The amount required to be deposited by a contractor while submitting a tender is known as :
- (a) Fixed deposit (b) Caution deposit
(c) Security deposit (d) Earnest money
- (v) If a bar is cranked at both ends at 45° , then total length of the bar is :
- (a) $L + 0.42d$ (b) $L + 0.27d$
(c) $L + (2 \times 0.27d)$ (d) $L + 2 \times 0.42d$
- (vi) Lift more than 6m is converted into lead by multiplying by :
- (a) 10 (b) 20
(c) 30 (d) 40

(vii) The formal acceptance by the administrative department concerned of the proposal for incurring expenditure is known as :

- (a) Technical sanction
- (b) Expenditure sanction
- (c) Administrative approval
- (d) Cut off motion

(viii) For first and final bill, the bill form used is :

- (a) Form-26
- (b) Form-24
- (c) Form-28
- (d) Form-27B

(ix) The expected out-turn of cement concrete per mason per day is :

- (a) 3.25 cum
- (b) 10.00 cum
- (c) 5.00 cum
- (d) 1.25 cum

(x) The specification which forms a part of the contract document is :

- (a) Detailed specification
- (b) Standard specification
- (c) General specification
- (d) Open specification

2. Fill up the blanks with appropriate words :

1×10=10

- (i) The contract in which the contractors are required to quote a fixed sum for execution of a work in all respect is called _____ contract.
- (ii) The numbers of bag of cement required per 100 sq.m of 20 mm thick D.P.C work with cement mortar is _____.
- (iii) The depth of earth work either in banking or cutting at any place along the road centre is the difference between the _____ and ground level.
- (iv) Earth work calculated by _____ formula is more accurate any may be used where greater accuracy is required and the rates are high.
- (v) The weight per meter run of 25 mm diameter Tor steel is _____ kg.
- (vi) _____ of the Muster roll is used for keeping records of all unpaid wages.

(vii) _____ measurement book is maintained by the Sub-divisional officer with the sole purpose of checking the measurement made by the Junior Engineer.

(viii) _____ is a document in proof of payment to contractor.

(ix) _____ is an offer in writing to execute some work or supply at certain rates and conditions.

(x) For measurement of earth work, areas shall be worked out to the nearest _____ m².

3. Answer in a sentence each : 1×5=5

(i) What do you mean by the term "Economical Depth of Digging" ?

(ii) What do you mean by the term "Contract" ?

(iii) Why water charges are considered during rate analysis of any item ?

(iv) What is Specification ?

(v) When revised estimate is carried out ?

PART – B

Marks – 45

Answer *all* the questions.

1. Analysis the rates of any *two* items of the following : 5×2=10
 - (a) Cement Concrete work 1 : 2 : 4
 - (b) First class brickwork in foundation and plinth
 - (c) 6 mm thick cement plastering (1 : 3) in ceiling.

2.
 - (a) What are the necessity of Specification ? 4
 - (b) Write down the general specification of first class single storey building. 6

3.
 - (a) What is meant by Measurement Book ? What are the common irregularities in writing Measurement Book ? 1+4=5
 - (b) Name the different types of contract. Explain any one. 2+3=5

4. Estimate the quantity of earth work for a portion of a district road for 320 meter length with the following data : 10

Formation width of the road = 10 meters

Side slope in

Side banking = 2:1 slope in cutting = 1.5:1

Downward gradient = 1 in 200

Formation level at station 1 = 150.00m

Distance between station = 40m

The ground level at different station are as follows :

Station	Ground level (G.L) in meter
1	149.00
2	148.80
3	148.50
4	148.90
5	148.60
6	148.80
7	149.10
8	149.40
9	149.20

- 5 A R.C.C Lintel 30 cm wide \times 15 cm deep \times 1.30m overall depth is reinforced with Tor steel bars 4 numbers. 10 mm diameter with alternate bars bent up with L-hooks at the end. At top two hanger bars are 10 mm diameter straight and L-hooks at ends. There are 6 numbers stirrups of 6 mm diameter M. S bar.

Calculate the quantity of Tor steel only.

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