

END SEMESTER/RETEST EXAMINATION 2020**ESTIMATING II**

Full marks-70

SEMESTER: 6th

Time -3 hours

*The figures in the margin indicate full marks for the questions.
Answer both part of the question paper.*

PART: A

Marks - 25

10 x 1=10

1. Choose the correct answer from the given options:

- (i) The expected out-turn of brickwork in superstructure in ground floor is:
a. 1.25 Cum
b) 1.5 Cum
c. 1.10 Cum
d) 2.1 Cum
- (ii) For Muster roll, the wages of labourers are drawn in:
a. Form - 22
b) Form - 25
b. Form - 21
d) Form - 25 A
- (iii) Detailed Specification of a work is required to-
a. Describe the quality and quantity of materials
b. Specify the workmanship and method of doing work
c. Specify the equipment's, tools and plants
d. All of above
- (iv) The proposal for administrative approval should be accompanied with the following:
a. Preliminary report and rationale
b) Plan
c. Preliminary estimate
d) All of the above.
- (v) Which of the following does not come under general overheads
a. Salaries of office staff
b) Office telephone bills
c. Travelling
d) None of the above
- (vi) The entries made in a MB should be:
a. Reliable
b) Clear & self-explanatory
c. Avoid of double entry
d) All of the above
- (vii) The contractor has to be deposit % of the estimated cost as earnest money along with his tender.
a. 1%
b) 2%
c. 3%
d) 4%
- (viii) How much of water charge is provided in analysis of rates?
a. 1%
b) 2%

- c. 10%
- d) 1.5%

- (ix) The dry volume of concrete required for 100 sqm of 2.5 cm thick 1:2:4 DPC is
- a. 2.5 M3
 - b) 3.5 M3
 - c. 3.58 M3
 - d) 3.85 M3

(x) Select the correct statement

- a. The slope of cutting is generally more than slope of banking.
- b. The end lap in case of fixing of CGI sheets should be at least 30 cm in the lengthwise direction.

c. In case of hand mixing of cement concrete, fine aggregate and coarse aggregate should be mixed before mixing cement.

d. None of the above

2. Fill up the gap with appropriate word/ words.

10 x 1=10

- (i) The number of sections must be -----to apply Prismoidal Formula for calculating earth quantity.
- (ii) Lift is measured from -----.
- (iii) Among the three methods for calculation of earthwork, the ----- method is most accurate.
- (iv) Filling is the difference of height between -----and -----.
- (v) The no of bricks (of size 22.9 cm x 11.4 cm x 7.6 cm) required for a half brick wall of 10 Sqm is -----.
- (vi) For water charge an amount of -----% is kept in the rate analysis.
- (vii) Expenses incurred for labour welfare and safety measures comes under the category of -----
- (viii) ----- is annual financial statement showing receipts and expenditure.

3.

Answer in single sentence:

5 x 1=5

- (i) What is out turn work of a labour?
- (ii) What is contract agreement?
- (iii) What is form no used for Running Account bill?
- (iv) What is analysis of rate?
- (v) What is muster roll?

PART: B

4. Write the detailed specification of the following (any two):

8

- (i) Earthwork in excavation
- (ii) Plastering over interior walls
- (iii) Reinforced cement concrete

5. Analyse the rate of the following (any two)

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- (i) First class brick work in cement mortar (1:4) in super structure
- (ii) 2.5 cm thick DPC (1:2:4)
- (iii) White washing 2 coats on a coat to new plaster.

6. Estimate the quantities of different items required for the construction of a bituminous road with 3.75 metre wide carriage way for a length of 1 KM over a formation width of 6 metre. Assume appropriate thickness for all the layers. (Estimation of quantity for earth work is not required.)

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7. Estimate the quantity of earth work from the following data:

Road width= 10 m, Side slopes 1.5:1 in cutting and 2:1 in banking length of chain is 30 m.

Chainage 20 21 22 23 24 25 26 27 28 29 30

RL of GL Formation level = 70.00 m, Upward gradient 1 in 200 8

- 8. a) What is item rate contract? State its advantages and disadvantages. 4
- b. Differentiate between Administrative approval and Technical sanction. 3
- c. What action may be taken against a tenderer if he/she fails to commence the work awarded to him/her? 2
- d. What are the precautions to be observed while writing a Measurement Book? 2

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Total No. of printed pages = 6

RETEST/ END SEMESTER EXAMINATION - 2019

Semester : 6th

Subject Code : Cv-601

ESTIMATING-II

Full Marks - 70

Time - Three hours

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

Instructions :

1. All questions of PART-A are compulsory.
2. Answer any five questions from PART-B.
3. Assume any missing data.

PART - A

Marks - 25

Time - One hour

1. Fill up the blanks with appropriate words :

1×10=10

- (a) 2% earnest money is deposited as a guarantee of _____.

[Turn over

- (b) 10% security money is deposited as a guarantee of _____.
- (c) Contract agreement is a _____ signed between contractor and the department.
- (d) _____ specification describes qualities, quantities, and workmanship of an item of works.
- (e) _____ is a proposal from one party and its acceptance by the other.
- (f) Form no. _____ is used as Muster roll.
- (g) Form no. _____ is used as a measurement book.
- (h) Standard size of a brick as per BIS code is _____.
- (i) Unit of payment of earth work in excavation is _____.
- (j) Weight per metre for 20 mm diameter mild steel is _____.

2. Write true or false for the following:

- (a) Lead is a vertical distance for which earth work is estimated. $1 \times 10 = 10$
- (b) In one cubic metre cement 30 bags each of 50 kg is obtained.

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(2)

- (c) Rough estimate, site plan and a note is submitted for an administrative approval.
- (d) In one cubic metre brick work 500 numbers of bricks are obtained.
- (e) Dry volume of cement concrete is smaller than wet volume.
- (f) When GL is higher than BL, canal is called fully in cutting.
- (g) Tender is an offer in writing to execute a work or supply of materials.
- (h) In M20 grade of concrete compressive strength of cement concrete after 28 days of curing is 200 kg/sq. cm.
- (i) Quantity of brick work can be calculated by centre to centre method in building estimate.
- (j) For one standard hook extra length is equal to 18 times of dia. of rod.

3. Choose the correct answer from the options given against each of the following: $1 \times 5 = 5$

- (a) Brick work for 25 cm thick wall is measured in
- (i) sq.m. (ii) cubic metre
- (iii) metre (iv) None of these

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(3)

[Turn over

7. Estimate the quantity of earth work for a portion of road from the following data : 9

Formation width = 10 m

Side slope in banking is 2:1 and in cutting is 1:1

Formation level at 0 chainage is 80.60m

GL(M) : 80.10 79.50 81.50 81.90

CHAINAGE(M) : 0 20 40 60

Rising gradient 1 in 100.

8. What is economical depth of digging? Calculate the economical depth of digging for an irrigation canal partly in cutting and partly in banking from the following data : 2+7=9

Bed width = 4m,

Top width of left bank = 3.5m,

Top width of right bank = 1.6m,

Side slope in cutting = 1 : 1

Side slope in banking = 1.5 : 1

Depth of canal = 2.5m, Free board = 50 cm.

9. (a) What are the points to be observed in writing measurement book?

(b) Write a note on muster roll. 5+4=9

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(6)

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Total No. of printed pages = 7

Cv-601/Est-II/6th Sem/2018/M

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 parts of the question paper.

PART - A

Marks - 25

1. Choose the correct answer from given options :

1×10=10

(i) In case of measurement of earthwork the areas shall be worked out to the nearest :

(a) 0.01m²

(b) 0.001m²

(c) 0.1m²

(d) 0.02m²

[Turn over

(ii) The more accurate method for earthwork calculation is :

- (a) Mean sectional method
- (b) Mid sectional method
- (c) Prismoidal method
- (d) None of the above

(iii) Dry volume of concrete required for 10 cum of RCC work (1:2:4) is

- (a) 12.5 cum (b) 10.5 cum
- (c) 15.2 cum (d) 17.5 cum

(iv) The dry volume of mortar required for 12 mm thick plastering (1:3) is

- (a) 2.0 cum (b) 3.0 cum
- (c) 3.5 cum (d) 4.5 cum

(v) Lift up to 3.6m depth is converted to lead by multiplying

- (a) 10 (b) 20
- (c) 15 (d) 40

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(vi) The built up covered area of a building measured at floor level of any storey is called

- (a) Plinth area
- (b) Floor area
- (c) Carpet area
- (d) None of the above

(vii) The expected turn out of brickwork in cement mortar in foundation and plinth per mason per day is :

- (a) 1.0 cum (b) 1.25 cum
- (c) 2.25 cum (d) 3 cum

(viii) When a contractor is paid certain percentage over the actual cost of the construction as his profit, such contract is termed as :

- (a) Lump sum contract
- (b) Work order
- (c) Scheduled contract
- (d) Cost plus percentage contract

(ix) Annual recei

- (a)
- (b)
- (c)
- (d)

(x) Wh requ wit ten

- (a)
- (b)
- (c)
- (d)

2. Fill up

(i) T fi

(ii) T v e

(ix) Annual financial statement of the anticipated receipts and expenditure is called :

- (a) Balance Sheet
- (b) Financial Statement
- (c) Budget
- (d) Expenditure–receipt Statement

(x) While submitting a tender the contractor is required to deposit some amount of money with the department as guarantee of the tender is known as :

- (a) Security deposit
- (b) Earnest money
- (c) Caution money
- (d) Bank deposit.

2. Fill up the blanks with appropriate words :

1×10=10

(i) The unit of measurement for earthwork in filling in foundation or plinth is _____.

(ii) The trapezoidal formula for measuring volume is based on the assumption that the end sections are _____ to each other.

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(4)

(iii) The capacity of doing work by an artisan or skilled labour in the form of quantity or work per day is known as the _____ of the labour.

(iv) The normal lift allowed for the earthwork in excavation is _____.

(v) _____ indicate the incidental expenses of miscellaneous nature which cannot be reasonably predicted during preparation of estimates.

(vi) The attendance of laborers employed is recorded daily in _____.

(vii) The order of a competent authority sanctioning a properly detailed estimate of the cost of a work of construction or repair is known as _____.

(viii) Works are primarily divided into two categories, namely—Original works and _____ works.

(ix) _____ is a detailed account of claim for works done or supplies made indicating quantities, rates and amount due.

(x) The entries in a Measurement Book should be made in _____.

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(5)

[Turn over

3. Define the following terms in one sentence :

1×5=5

- (i) Analysis of Rate
- (ii) Security deposit
- (iii) Running Bill
- (iv) Tender
- (v) Acquittance Roll.

PART - B

Marks - 45

1. Analyse the rates of the following (any two) :

2×5=10

- (a) R.C.C. works (1 : 2 : 4) with stone ballast of size 20 mm gauge in beam or slab.
- (b) 2.5 cm thick cement concrete 1 : 2 : 4 as DPC.
- (c) 12 mm thick plastering (1 : 4).

2. (a) Differentiate between general and detailed specification. 4

(b) Write down the detailed specification for earthwork in excavation for foundation. 6

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3. (a) Differentiate between Standard Measurement Book and Check Measurement Book. 4

(b) What are the common irregularities in writing Measurement Book? 6

4. (a) What do you mean by "Balancing Depth"? 2

(b) Calculate the balanced earthwork from following data of a canal :

Dist in m 0 50 100 150 200 250 300

RL of ground (m) 98.50 98.20 98.10 98.40 98.45 98.60 98.50

RL of bed 97.00.....downward gradient 1 in 5000

Right side slope of banking = 2 : 1

Left side slope in banking = 1.5 : 1

Height of bank from bed of canal is 2.6m with free board of 40 cm and the canal slope is 1 : 1, width of canal bed = 5m.

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Left side 1:1
Right side 2:1

1.33
1.16
1.27
1.46

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Total No. of printed pages = 3

Cv-601/Est-II/6th Sem/2016/M

ESTIMATING – II

Full Marks – 70

Pass Marks – 28

Time – Three hours

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

Assume any missing data.

Answer any *five* questions.

1. (a) Explain the factors that affect rate analysis. 4
(b) Analyse the rate for any two : 10
(i) R.C.C work in beam, slab etc 1:2:4
(ii) 20 mm thick 1:6 cement plaster
(iii) C.G.I sheet 24 B.W.G roofing.
2. (a) Write down four essential principles of good specification writing. 4
(b) Write down the detail specification of any two of the following : 10
(i) White washing
(ii) First class brickwork
(iii) D.P.C 2.5 cm in 1:1½ : 3 cement concrete.

[Turn over

3. (a) What is lump sum contracts ? Mention its advantages and disadvantages. 1+3+2=6

(b) What is muster roll ? What are the rules should be observed in the preparation of MR? 2+4=6

(c) What is the difference between running Bill and final Bill ? 2

4. (a) Calculate the quantity of earthwork for the road with the following data :

Formation width = 10.0m

Side slopes in cutting = 1:1, in filling = 2:1.

The formation at chainage 0 is 206.0m. The road formation has a downward gradient 1 in 100.

Chainage (m)	RL of ground (m)
0	208.00
100	207.70
200	202.40
300	201.60

(b) Calculate the quantity of metal required for 7.0m wide macadam road for one kilometre length. The thickness of one layer is 80 mm, when compacted. 4

2

5. (a) A channel has a bed width 8.0m, F.S.D 3.00m; height of banks above F.S.L (Free board) 1.00m; bank width 4.00m; both side slopes in cutting 1:1 and in filling 1½:1. Calculate the balance depth of channel. 6

(b) Work out the quantities of reinforcement for R.C.C lintel having clear span 2m and has 20 cm bearing on either side of wall. The lintel has 2 Nos. of main bar (10 mm ϕ) and 2 Nos. of anchor bar (10 mm ϕ). The lintel has 6 mm ϕ vertical stirrups at 150 mm c/c. The size of lintel 25 cm \times 15 cm. 8

6. Write short-notes on (any four) : 4 \times 3½=14

(a) Budget

(b) Contract agreement

(c) Mid sectional formula

(d) Lead and lift

(e) Technical sanction.