DR. KALAM POLYTECNIC COLLEGE, AVANAM

DEPARTMENT OF CIVIL ENGINEERING

UNIT-I

PART A

1. Define estimate?
2. What are the different types of estimate?
3. Define sub estimate?
4. What is meant by group system?
5. What is meant by taking of quantity?
6. What is out of turn work?
7. What is typical pay method?
8. What is carpet area method?
9. What are the different type of approximate estimate?
10. Define complete estimate?
11. State the unit for measurement for the following 1) sand 2) cement
12. What is meant by handling charge?
13. Define main estimate?

PART B

1. What are the necessity of estimate?
2. Write any five dutys of quantity surveyor?
3. What are the importance of fair estimate?
4. Write short notes on unit of measurement?
5. Write short notes on group and trade system?
6. State the unit measurement following material 1) cement 2) steel 3) paint 4) brick
7. Define supplementary estimate?
8. Write short notes on 1) schedule of rate 2) cost of conveyance 3) approximate cost
9. 4) measurement book
10. State how detection made opening for masonry work?

PART C

1. Determine the material required for the given item of work
2. B.W in C.M 1:5 using normal size brick-1m^3
3. Determine the material required for the given item of work
4. Cement concrete 1:2:4-1m^3 using 20 mm aggregate
5. The plinth area of proposed sloped roof building is 82m^2 the height of main wall above floor level is to be 3m and rise of roof above the wall 1.2m.the cube rate for a similar building is arrived at RS 615/m^3.find out the approximate cost of building.
6. The actual expenditure incurred in the construction of a flat roofed residential building having a plinth area of 100 mm^2 and height 3 m is RS 500000.It is proposed to construct another similar building in the same locality with a plinth area of 85m^2 and height 3.45m. estimate the approximate cost for proposed building assuming the increase in the cost of material and labour by 20 %.
7. The actual expenditure incurred in the construction of single store residential building of plinth area 80m^2 is found to be RS 300000. In which 60 % towards the cost of material and the remaining is towards the cost of labour. It is now proposed to construct a similar building of same height and specification with a plinth area of 110m^2 at place

where the cost of material is 10 % more and the cost of labour is 50 % less.estimate approximately cost of the proposed building.

UNIT-II

PART A

1. Define trapezoidal rule?
2. What is meant by irregular section?
3. What is level section?
4. What is meant by two level section?
5. What are the different rules used to compute area of irregular section?
6. State the prismoidal formula find out the volume of irregular section?

PART B

7. State the expression to compute the area of cross section for a level section
8. Write with a neat sketch show the two level section and state the formula for finding its area
9. Explain any one method of calculating area of an irregular boundary
10. Differentiate between a level section and two level section
11. Describe simpson's rule or prismoidal rule
12. Write short notes on volume of irregular fig.

PART C (TEN MARK QUESTIONS)

1. Calculate the area of irregular boundary with the offsets given below at an interval of 10m,0,2.50,3.50.
2. The following offsets were taken at 20m interval from a survey line to an irregular boundary line 4.50, 4.30, 6.50, 5.50, 7.50.calculate the area by Simpsons rule
3. Perpendicular offsets are measured from a straight line to an irregular boundary at irregular intervals and are recorded. Determine the area of land enclosed between the straight line and boundary.

Chainage(m)	0	20	50	75	100	150	170	200
Offsets (m)	0	5.6	8.4	8.8	104	7.4	6.2	0

4. An a embankment is 2m high,80m long and 10m wide at its top.the side slope is 2:1.determine the cost of turfing of its sloping side at a rate of RS 40/m^2.
5. An embankment of width 10m and side slopes $1_1/2$:1 is required to be made on a ground which is level in a direction transverse to the center line . the central heights at 40m intervals are as follows 0.90, 1.25, 2.15, 2.50, 1.85, 1.35 and 0.85.calculate the volume of earth work according to i)prismoidal rule ii) trapezoidal rule.
6. The height of an embankment of formation width 10m with side slopes 1.5:1 are found to be 3m ,4m and 5m at 0m ,30m and 60m.length by prismoidal formula assuming the ground as level in the transverse directions
7. A cutting is to be made for the formation of railway track with side slopes of 1:5 and formation width of 10m . the ground is having a transverse slope of 1 in 10 (10:1).the depth of cutting along the center line of formation will be 1.5m, 2.4m , and 1.2m at three consecutive sections based at 30m a part. calculate the volume of earth work in cutting in this 60m length using prismoidal formula.

UNIT-III

PART A (TWO MARK QUESTIONS)

1. What is data?
2. What is sub data?
3. What is main data?
4. What is lead statement?
5. What is standard data book?
6. Find out the quantity of cement in C.M.1:5.
7. Write the material component of surki mortar.

PART B (THREE MARK QUESTIONS)

8. What are the points to be consider while preparing data?
9. Prepare the sub data for cement motar 1:3 – $1m^3$

   The cost of cement – 4000/ton

   Sand –RS 300/m^3

   Mixing charge – RS 70/m^3
10. Define observed data.give two example.
11. Give an example for sub data.
12. When will you provide lumpsum provision in abstract estimate? Give two examples
13. Prepare the sub data for lime mortar 1:2

    Cost of sand – RS 400/ m^3

    Lime –RS 700/m^3

    Grinding charge – RS 100 /m^3
14. Find out the rate of surki mortar 1:1/2:1.5

    Cost of lime -750/m^3

    Surki- 400/m^3

    Sand -250/m^3

PART C (TEN MARK QUESTIONS)

1. Prepare the data for the following items of works from the particulars given below.

   Brick work in superstructure in C.M 1:4 -$1m^3$

   Brick work using 1st class brick in cement mortar 1:4-$10m^3$

   Brick 190x90x90 cm -5000 Nos

   Cement mortar 1:4 - $2.2m^3$

   Mason 1 st class -3.5 Nos

   Mason 2 nd class - 10.60 Nos

   Mazdoor 1st class - 7.10 Nos

   Mazdoor 2 nd class - 21.20 Nos

Cost of labour required

Cement - 4100/tone

Sand -150/m^3

Mixing charge -60/m^3

Mason 1 st class -Rs 300/each per day

Mason 2 nd class - Rs 250/ each per day

Mazdoor 1st class - Rs 200/ each per day

Mazdoor 2 nd class - Rs 150/ each per day

2. Cement concrete 1:4:8 flooring work -1m^3

Broken stone 40mm size -9.5m^3

Cement mortar 1:4 - 3.8m^3

Mason 2 nd class - 1.80 Nos

Mazdoor 1st class - 17.7 Nos

Mazdoor 2 nd class - 14.1 Nos

Cost of labour required

Cement - 4100/tone

Sand -150/m^3

Mixing charge -60/m^3

Broken stone 40mm size-400m^3

Mason 2 nd class - Rs 250/ each per day

Mazdoor 1st class - Rs 200/ each per day

Mazdoor 2 nd class - Rs 150/ each per day

UNIT-IV

PART A (TWO MARK QUESTIONS)

1. What is meant by taking off ?
2. Name of the various method used to take dimension from the drawing?
3. What is abstract estimate ?
4. What is meant by detailed estimate?

PART B (THREE MARK QUESTIONS)

5. Write short notes on a) individual wall method b) center line method
6. How to enter the dimension from the detailed drawing in the detailed estimate?
7. Explain briefly abstract estimate with example.

PART C (TEN MARK QUESTIONS)

1. Find out the quantities of the following item of work for the residential building shown in fig.

a) Brick work in C.M -1:4 in superstructure

b) Earth filling in basement

c) Celling plastering with C.M 1:3

d) P.C.C 1:4 for foundation

e) Plastering the wall C.M 1:3 12mm thick

f) R.C.C 1:2:4 roof and inlet

g) White washing in side wall and celling

2. Find out the quantities of the following item of work for the residential building shown in fig.

a) Earth work excavation for foundation

b) P.C.C 1:5:10

c) Brick work in C.M 1:4

d) Dam proof course with C.M 1:3

e) R.C.C work 1:2:4 for roof slab lintel cum sunshade

UNIT-V

PART A (TWO MARK QUESTIONS)

1. What is meant by taking off quantities?

2. What is group system ?
3. What is dimension paper?
4. Write the abbreviation for

   a)Bt b)ct c) mtr d) clg e) Ddt
5. Define checking and squaring?
6. What is abstracting?
7. Name the various columns in dimension paper.

PART B (THREE MARK QUESTIONS)

8. Write short notes on taking off quantities.
9. Write any advantages of group system.
10. What are the functions of abstract?
11. What are the uses of abstract sheet?
12. What is meant by cancellation and squaring of dimensions?
13. Explain order of abstracting.
14. Write short notes on spacing of dimensions.
15. What is order of taking off? Explain.
16. Explain the order of abstract.

PART C (TEN MARK QUESTIONS)

1. Explain briefly the method of writing bill and checking the bill.
2. Explain how to enter the dimensions paper,cancellation of dimension and squaring the dimensions.
3. How to enter the dimensions in detailed estimate from and preparing abstract? With an example.
4. Take out the quantities for the following items by group system in given fig.

a) P.C.C 1:4:8 for foundation.

b) R.C.C 1:2:4 for roof slab.

c) Brick work in C.M 1:4 for super struct.

d) Floor finishing with C.M 1:3.