Registration No :

Total Number of Pages : 04　　　　　　　　　　　　　　　　　　　**B.Tech**
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　PCI5D002

5th Semester Regular / Back Examination 2018-19
QUANTITY SURVEYING & ESTIMATING
BRANCH : CIVIL
Time : 3 Hours
Max Marks : 100
Q.CODE : E550
Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.
The figures in the right hand margin indicate marks.

Part- I

Q1　**Short Answer Type Questions (Answer All-10)**　　　　　　　**(2 x 10)**
　a)　What are the purposes of detailed estimate?
　b)　Write the unit of following works :
　　　　a.　cement mortar rubbing
　　　　b.　wood work in partition
　c)　What are the necessities of detailed specifications?
　d)　Define lead and lift.
　e)　What is Notice Inviting Tender?
　f)　List out the necessities of the valuation of a property.
　g)　What do you mean by security deposit and running bill.
　h)　Define different types of floats
　i)　What is slack?
　j)　What are the errors in a network diagram?

Part- II

Q2　**Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**　**(6 x 8)**
　a)　Write short note on long wall and short wall method of estimation.
　b)　What is rate analysis? Rate analysis depends on which factors?
　c)　Find out the rate analysis of cement concrete 1:5:10 in foundation with brick ballast 40mm.
　d)　Give the rate analysis of half brick (10 cm thick partition wall) with 1:3 cement mortar.
　e)　What is specification? Write the general specification of 2nd class building.
　f)　Write detailed specification of Damp proof course 2.5cm c.c 1:1.5:3.
　g)　Write detailed specification of Random rubble stone masonry.
　h)　Calculate the earthwork for the construction of an approach road using Prismoidal formula.
　　　　Height at one end = 1.20m. Centre 2.10m and height on the other end 8.0m. formation width 10.0m.
　i)　Write short note on 'measurement book'.
　j)　What do you mean by contract document? List out the documents that should attached to the contract agreement.
　k)　What are the difference between PERT and CPM?
　l)　What is three time estimation in PERT?

Part-III
Long Answer Type Questions (Answer Any Two out of Four)

Q3　Estimate the quantities of following items of work for a building as shown in Fig 1 :　**(16)**
　　a)　Earthwork excavation in foundation
　　b)　Damp Proof Course
　　c)　First class brick work in foundation and plinth.

Q4 Estimate the following quantities of a culvert as shown in Fig 2.   **(16)**
     a)   earthwork in excavation
     b)   Cement concrete 1:3:6
     c)   I-class brick work in 1:4
     d)   RCC work 1:2:4 in slab

Q5 Estimate the cost of earthwork for a portion of a road from the following data:-   **(16)**
Road width at the formation surface is 8 metre. Side slopes 2:1 in banking and 1.5:1 in cutting. Length of chain is 30 metre.

Chainage….	20	21	22	23	24	25	26	27	28	29	30
Ground level…..	71.20	71.25	70.90	71.25	70.80	70.45	70.20	70.35	69.10	69.45	69.70
Formation level	70.00										

Formation level: 70.00 ← Upward gradient of 1 in 200 →

Take the rates of earthwork as Rs.325/- per % cu m in banking and Rs. 375/- per % cu m in cutting.

Q6 Three time estimates (t_o, t_l, t_p) of each activity of a project are given below: **(16)**

Activity	t_o	t_l	t_p
1-2	2	5	14
1-3	3	12	21
2-4	5	14	17
3-4	2	5	8
4-5	1	4	7
3-5	6	15	30

     a)   Draw the network diagram
     b)   Find the expected duration and variance of each activity.
     c)   Calculate early and late occurrence times for each event.
     d)   Determine the expected project duration.
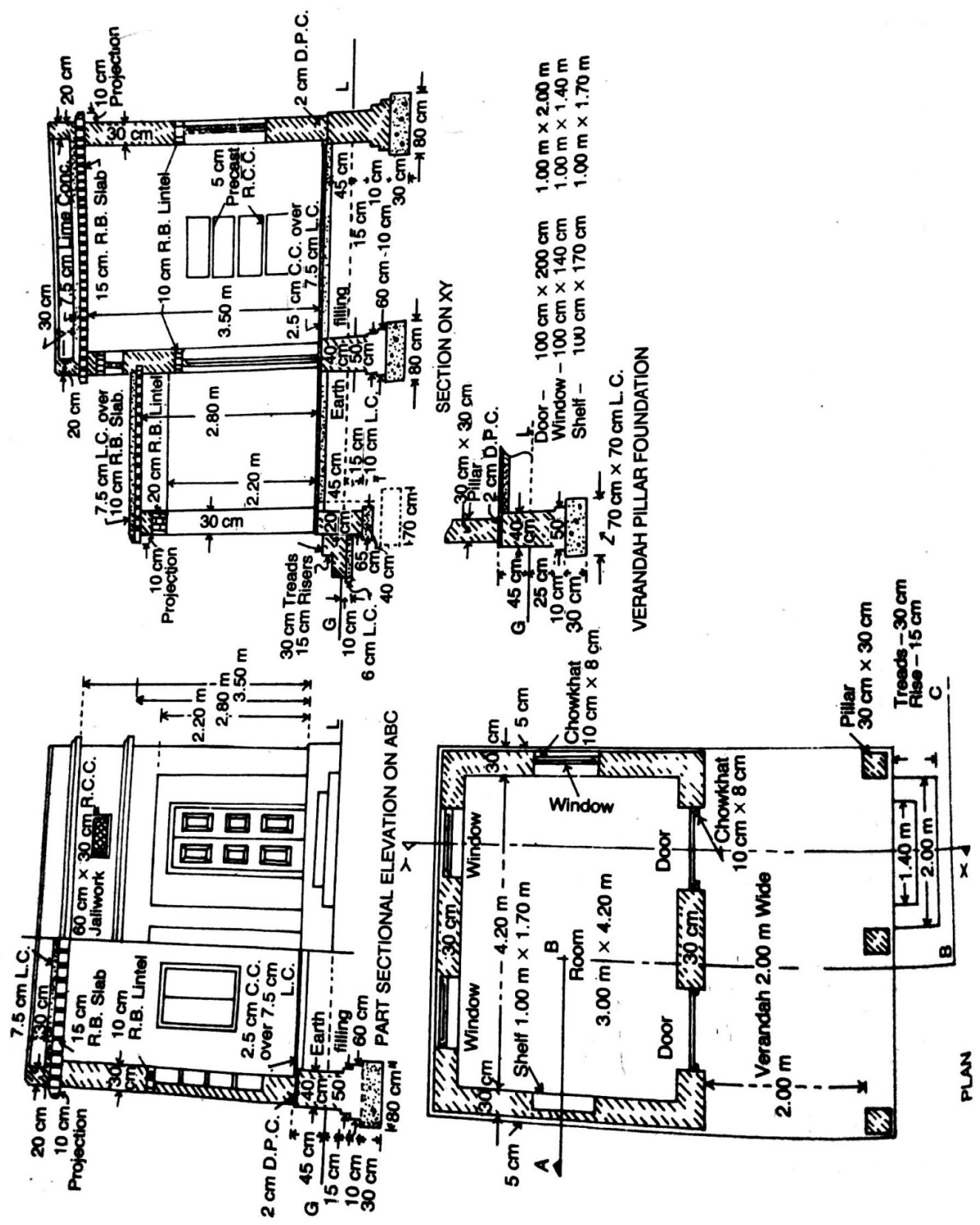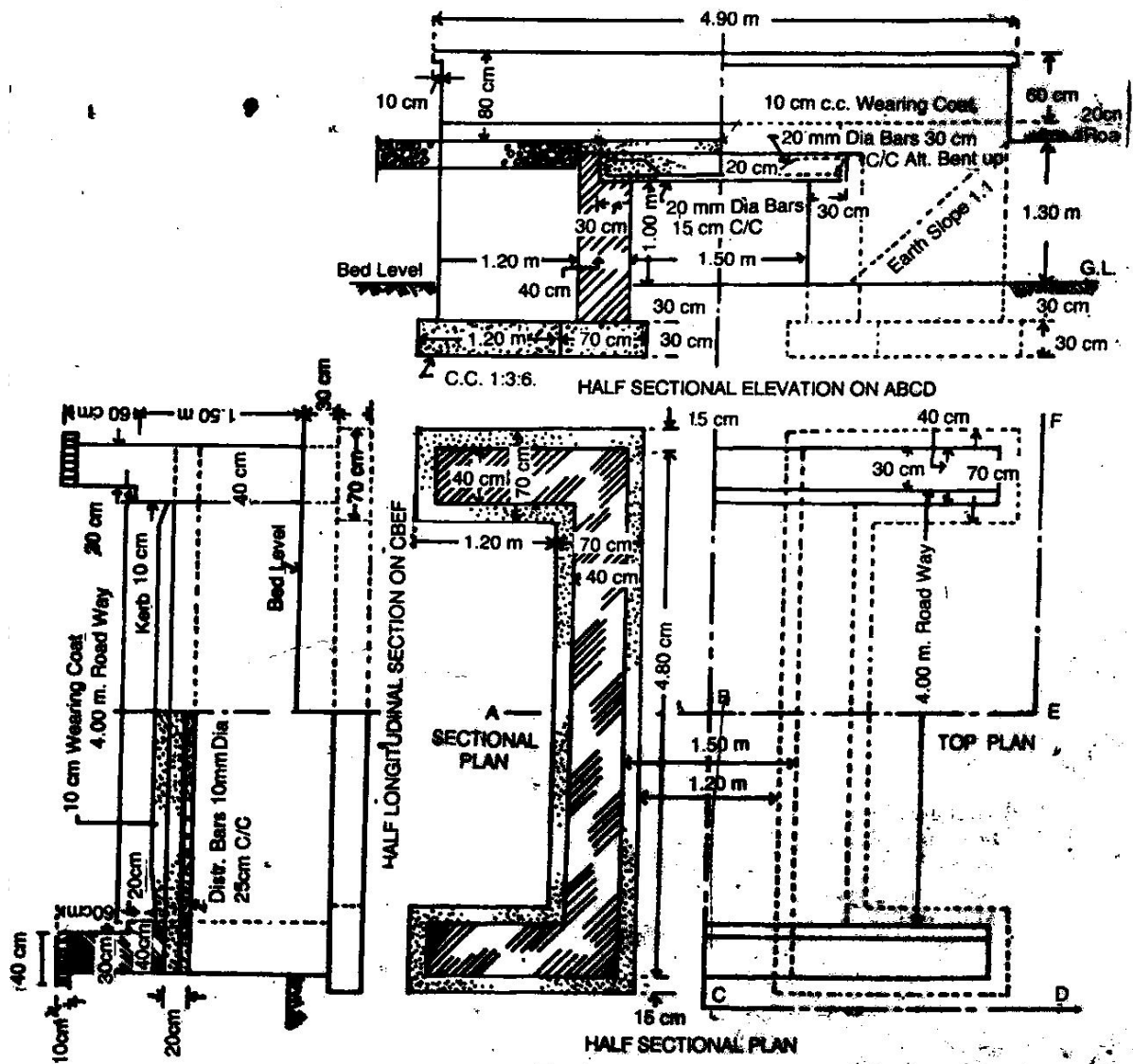   e)   Find the variance and standard deviation of the entire project.

Fig-1

HALF SECTIONAL ELEVATION ON ABCD

HALF LONGITUDINAL SECTION ON CBEF

HALF SECTIONAL PLAN

SECTIONAL PLAN

TOP PLAN

Fig-2