Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/B.TECH (CE)/SEP. SUPPLE/SEM-8/CE-803/2012

2012
CONSTRUCTION MANAGEMENT, TECHNOLOGY & DEPARTMENTAL PROCEDURE

Time Allotted : 3 Hours   *Full Marks* : 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words
as far as practicable.

GROUP – A
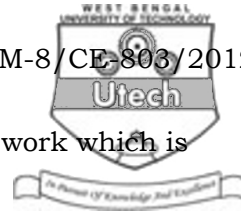## (Multiple Choice Type Questions)

1.   Choose the correct alternatives for any *ten* of the following :

$10 \times 1 = 10$

   i)   Gantt chart is also termed as

   a)   Time chart   b)   Bar chart

   c)   Estimation chart   d)   Activity chart.

   ii) CPM is a .... based network.

   a)   activity   b)   event

   c)   time   d)   lag.

   iii) Rate quoted itemwise per cent over or below is termed as

   a)   item rate contract

   b)   tern key contract

   c)   percentage rate contract

   d)   itemwise per cent contract.

SS-420   [Turn over

iv) Security deposit of any contract is retention money taken at the time of

   a) tender acceptance

   b) certification of bills

   c) completion of project

   d) tender submission.

v) Earnest money is retention money recovered from

   a) engineer

   b) tenderer who's tender is accepted

   c) tenderers

   d) contractors.

vi) Pert is a type of networking where time estimation is done as per .... of occurrence approach.

   a) normal distribution   b) α distribution

   c) β distribution   d) π distribution.

vii) Contract is an agreement where .... parties are required.

   a) less than two   b) greater than two

   c) minimum two   d) always two.

viii) Price variation of any item is claimed due hike in

   a) material price   b) price of petrol

   c) price index   d) market index.

ix) Arbitral tribunal is a body consisting of arbitrator .... numbers.

   a) 2   b) 3

   c) odd   d) even.

x) In CPM the path is termed as critical having

   a) no slack   b) longest path

   c) both (a) & (b)   d) none of these.

xi) Lum-sum contract is best applied for work which is

   a) easy to measure

   b) difficult to measure

   c) itemwise defined

   d) not measured but defined.

xii) A person who provides technical advice in the project is known as

   a) engineer   b) technical assistant

   c) technician   d) contractor.

GROUP – B

(Short Answer Type Questions)

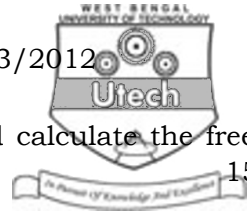Answer any *three* of the following.   3 × 5 = 15

2. What is contract ? Distinguish between item rate contract percentage rate contract.

3. What is tender ? What are the essential features of contract ? What is N.I.T ?

4. Write short notes on Earnest money and Security deposit. What is L.D. ?

5. Distinguish between PERT and CPM.

6. What are the provisions for the fire safety for a residential building as per municipal law ?

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following :   3 × 15 = 45

7. What do you mean by arbitration ? What are the essential qualifications of a arbitrator ? What are the grounds to challenge arbitrator ?   5 + 5 + 5

8. Prepare network for the given project and calculate the free float, total float and independent float. 15

Activity	Duration (days)	Predecessor
A	7	–
B	4	A
C	5	A
D	7	A
E	5	C
F	10	C
G	8	E, B
H	9	F
I	6	F
J	12	D, I
K	5	G, H
L	7	K, J

9. What is NIT ? What are the differences between Tern key contract and Item rate contract ? What are the special features of cost-plus contract ? What are the disadvantages of cost plus contract ? 2 + 5 + 5 + 3

10. What are the requirement of toilet and living room of a residential building ? What is FAR ? What are the provisions of the building law of FAR ? A land having an area of 6 kathas is located beside a road of 2.4m wide. What is the maximum covered area available for building ? 5 + 2 + 4 + 4

11. Form the network with the following information and find out the expected time of completion of the project along with critical path. Calculate also the variance, standard deviation of each activity. 15

Event	Predecessor	T_0	T_L	T_p
A	–	2	5	8
B	A	8	11	20
C	A	4	7	16
D	A	4	9	20
E	B	3	5	13
F	B, C	7	10	13
G	D	3	7	17
H	F, G	2	3	10
I	E, H	2	4	6