



Name :
Roll No. :
Invigilator's Signature :

CS/M.TECH (EE)/SEM-3/MHU-301/2011-12

2011

**BASICS OF PEDAGOGY &
ACADEMIC MANAGEMENT**

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 the following :

$$10 \times 1 = 10$$

- i) Contribution means
 - a) Revenue-fixed cost
 - b) Revenue-variable cost
 - c) Fixed cost-variable cost
 - d) Fixed cost + variable cost.
- ii) In order to take inflation into account we should do the following with the discount rate
 - a) Decrease it
 - b) Increase it
 - c) Keep the same value
 - d) Inflation has nothing to do with discount rate.



- iii) PERT assume the statistical distribution for the individual activities as :
- a) Poisson distribution b) Normal distribution
 - c) Binomial Distribution d) None of these.
- iv) Which average is affected most by extreme values
- a) A.M b) H.M
 - c) Mode d) Median.
- v) If the points of a scatter diagram form a straight line going downward from right to left we conclude that there is
- a) Perfect negative correlation
 - b) Perfect positive correlation
 - c) Simple positive correlation
 - d) No correlation.
- vi) The doc charges paid during import of goods is a
- a) Direct material cost b) Indirect material cost
 - c) Overhead cost d) None of these.
- vii) Rent of a factory shed is a
- a) Administrative overhead cost
 - b) Production overhead cost
 - c) Sales and distribution cost
 - d) All of these.



viii) A company has undertaken a TQM Project. It is a

- a) Compliance project b) Emergency Project
- c) Operational project d) Strategic Project.

ix) Characteristics of a good Trademark

- a) Short & easy to remember
- b) Easy to pronounce
- c) Satisfy the requirement of registration
- d) All of these.

x) Under the Act a Patentee can

- a) sell the patent
- b) grant licence to others
- c) assign the patent to any others
- d) all of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.

$$3 \times 5 = 15$$

2. Derive the relationship between Total float, free float, independent float and head and tail slack.



3. ABC Co. decided to invest Rs. 12000 for a project which is expected to give return of Rs. 24000 over next six years. The discount rate 8%. There are two options of receiving the yearly income.

Option-A	Option-B
Rs. 6000/ for 1st and 2nd year	Rs. 5000/ for 1st, 2nd, 3rd and 4th year
Rs. 4000/ for 3rd and 4th year	Rs. 2000/ for 5th and 6th year
Rs. 2000/ for 5th and 6th year	

4. What is CPV analysis ? Derive the equation of BEP for a proposal.
5. Distinguish between primary and secondary data with example.
6. The following is the table which gives you the distribution of marks secured by some students in an examination :

Marks	0-20	21-30	31-40	41-50	51-60	61-70	71-80
No. of students	42	38	120	84	48	36	31

Calculate median marks ? The percentage of failure if the minimum for pass is 35 marks.

7. What is a Patent ? Who can apply for a Patent ? What are the rights of a Patentee ? 1 + 1 + 3
8. What is a Trade mark ? What are the functions of a Trademark ? 2 + 3



GROUP – C

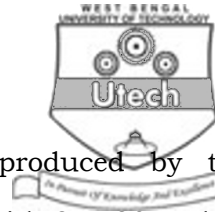
(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

9. What do you understand by the term management ? What are the different functions of management ? Explain the different skills that managers should have and how it is distributed in the hierarchies of the Organization.
10. What is a project ? Explain the different stages of life cycle of a project ? How a project differs from a programme ?
11. What is learning ? Describe Classical Conditioning of learning ? In what extent it differs from Operant Conditioning of Learning. Explain with example. $3 + 7 + 5$
12. a) Calculate Person's Coefficient of correlation between advertisement cost and sales as per data given

Adv. Colst	39	65	62	90	82	75	25	98	36	78
Sales (Lakhs)	47	53	58	86	62	68	60	91	51	84

- b) Prove r lies between $+1$ to -1 . $8 + 7$



13. a) The average number of articles produced by two machines per day are 200 and 250 with S.D 20 and 25 respectively on the basis of records of 25 days production. Can you regard both the machines equally efficient at 1% level of significance ?

b) What is Type-I and Type II Errors ? 10 + 5

14. a) develop the network for the project having the following activities and immediate predecessors

Activity	Immediate predecessors
A	None
B	None
C	B
D	A, C
E	C
F	C
G	D, E.F

b) PERT Network is shown below (Time is in days).

Determine :

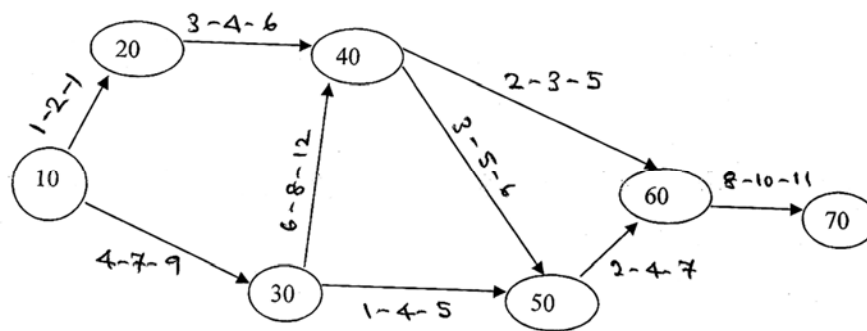
- i) Critical path and duration of the project.
- ii) What is the probability that the project will complete in 35 days ?



- iii) What is the probability that the project will not complete by 35 days ?

(Given for $Z = 0.58$; Probability = 0.719

$Z = 0.59$; Probability = 0.72)



(Note : 3-4-6 means a-m-b)

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