

(Time: 3 Hours)

[Total marks : 80]

NOTE:.

- Question No. 1 is compulsory.
- Attempt any THREE out of the remaining five questions.
- Figure to the right indicates full marks
- Assume any suitable data and clearly state the same.

Q.1a) Explain 14 principles of management laid down by Henry Fayol. 10

b) Following table shows the activities, their interdependence and the durations. 10

Activity	A	B	C	D	E	F	G	H	K	L	M
Preceding activity	-	-	-	A	B	B	C	C	F	G	H,K,L
Duration (days)	5	7	9	4	7	6	9	5	4	6	8

- Draw a A-O-A network
- Work out all activity times and floats
- Identify the critical path and the project duration

Q.2a) A small project is composed of seven activities as given below: 12

Activity	1-2	1-3	2-4	2-5	3-5	4-6	4-7	5-6	6-7
to(days)	3	4	5	10	5	8	9	2	3
tm(days)	6	6	7	12	6	10	10	4	6
tp(days)	9	8	9	16	7	12	11	8	9

Z	-3.0	-2.0	-1.0	0	+1.0	+2.0	+3.0
P (%)	0.13	2.28	15.87	50	84.13	97.72	99.87

- Draw project network
- Find expected duration, standard deviation and variance of all activities.
- Calculate the project duration corresponding to 70% probability?
- What is the probability that the project will be completed 3 weeks earlier than the expected date?

b) i) Differentiate CPM with PERT. 04

ii) Explain Time over run & Cost Over run. 04

Q.3a) Table below shows activities, their durations and labour requirements:

Activity	Duration	Labours
A(10-20)	5	3
B(10-30)	7	4
C(20-50)	5	2
D(30-40)	4	5
E(30-50)	3	3
F(40-50)	7	3

Draw Time scaled version network. Workout daily requirement of labours for all activities. Prepare histograms of EST &LST schedule. Which schedule will you prefer & why? 10

b) i) What is an updating of project? Also explain stepwise procedure of an updating? 08

ii) What is skip numbering? 02

Q.4a) The following table shows the details of activities of a small project.
Calculate the optimum project cost & project duration Indirect cost = Rs. 1500 / day.

Activity	Predecessor	Normal		Crash	
		Time (days)	Cost (Rs.)	Time (days)	Cost (Rs.)
A	-----	9	8000	6	9500
B	-----	5	5000	3	5500
C	B	7	6500	4	10500
D	A	6	7000	4	10000
E	A	5	4500	3	7500
F	D	9	5500	5	9000

- b) i) Explain the functions of human resource management in detail. 08
ii) Define quality assurance. 02

Q.5a) i) Determine NPV of given cash flow stream of a project. Also comment whether Project can be accepted or not? Consider rate of interest as 7%. 06

Year	0	1	2	3	4	5
Cash flow (Rs)	2,00,000	50,000	60,000	60,000	70000	75,000

- ii) Explain Payback period criteria with example. 04
b) What is an accounting? Also explain generally accepted principles of accounting? 10

Q.6) Write notes on following (Any 5) 20

- i) Work Breakdown structure ii) A.B.C analysis iii) Contribution of F.W.Taylor
iv) Journal v) Minimum Wages Act vi) OSHA vii) Dummy & its purposes