Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER - VIII (NEW SYLLABUS) EXAMINATION- SUMMER 2018

Subject Code: 2181501 **Date:04-05-2018**

Subject Name: Project Management

Time: 10:30 AM to 01:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

MARKS

Q.1 **(a)** What is 'Project'? How does it differ from an activity? **03**

(b) Explain in brief the important parameters of project. **04**

(c) What do you understand by project management? Describe the steps required for project management approach. **07**

Q.2 **(a)** How to conceptualize the project? **03**

(b) How to identify the right project? **04**

(c) Explain the concept of feasibility report with suitable example. **07**

OR

(c) What is the role of opportunity scanning and identification in setting up a small enterprise? How would you carry out opportunity analysis for a Paper mill project in Morbi area. **07**

Q.3 **(a)** Explain the term : Financial appraisal. **03**

(b) What are the different factors to be considered during technical appraisal of a project? **04**

(c) What are the short comings of bar charts and what are the remedial measures to reduce them ? **07**

OR

Q.3 **(a)** Explain the term : Social appraisal. **03**

(b) DIC is considered to be a single window service organization for small entrepreneurs. - Describe in detail. **04**

(c) A project consists of 8 activities A,B,C,D,E,F,G and H with their time of completions as follows : **07**

Activities	A	B	C	D	E	F	G	H
Duration (weeks)	3	5	4	2	5	6	4	3

The precedence relationships are as follows :
A and B can be performed in parallel.
C and D cannot start until A is complete.
E cannot start until half the work of activity C is complete.
F can start only after activity D is complete.
G succeeds C.
H is the last activity which should succeed E

(a) Draw the bar chart.
(b) What is the total time of completion of the project?

Q.4 **(a)** What is purpose of using dummy activity? **03**

(b) What are the components of cost of projects? **04**

(c) The time estimates for three activities A, B and C are as follows : **07**

Activity	Optimistic Time	Most likely Time	Pessimistic Time
A	9	11	12
B	5	7	11
C	4	9	11

Determine expected time and variance for each activity. Which activity has more reliable time estimates?

OR

Q.4 **(a)** Discuss the role of Technical Consultancy Organizations. **03**

(b) Define : (i) SSI (ii) Tiny sector industry (iii) Ancillary industry **04**

(c) From the information given below, draw the PERT network : **07**

Activity	Optimistic	Most Likely	Pessimistic
10-20	6	9	18
10-30	5	8	17
20-40	4	7	22
30-40	4	7	16
40-50	4	10	22
20-50	4	7	10
30-50	2	5	8

Determine the critical path, its duration, earliest and latest allowable occurance time and slacks of all events. Also determine the probability of completing the project in (i) 30 days and (ii) 35 days.
Given for Z = -1.066, Pr = 14.35

Q.5 **(a)** What care one should take for better drawing of network diagrams? **03**

(b) Explain in brief the difference between PERT and CPM networks. **04**

(c) The following list of activities must be accomplished in order to complete a construction project: **07**

Activity	A	B	C	D	E	F	G	H	I	J
Time (Weeks)	4	10	6	3	2	8	6	5	7	8
Predecessor	-	-	A,B	A,B	A	C	E,F	D,F	G,H	I

Construct a network diagram for this project. Find critical path and duration of the project. Also find all three kinds of floats for activity E.

OR

Q.5 **(a)** What is Updating of a network? When is it required? **03**

(b) Discuss in brief the resources allocation problem. **04**

(c) Based on the data given below, determine the optimum duration of the project and the corresponding minimum cost. **07**

Activity	Normal		Crash	
	Duration (week)	Cost (Rs.)	Duration (week)	Cost (Rs.)
1 - 2	8	800	6	1550
1 - 3	4	500	2	950
2 - 4	2	700	1	1000
2 - 5	10	900	5	1600
3 - 4	5	600	1	1200
4 - 5	3	600	1	800

The indirect cost of the project is Rs.700 per week. Draw the time-scaled version of network at each step of crashing.

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