

The Open University of Sri Lanka
Faculty of Engineering Technology



Study Programme : MASTER OF TECHNOLOGY IN INDUSTRIAL ENGINEERING
Name of the Examination : Final Examination
Course Code and Title : MEX7120 - PROJECT MANAGEMENT
Academic Year : 2014/15
Date : 21st September 2015
Time : 0930 - 1230 hrs
Duration : 3 hours

General instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **seven (7)** questions.
3. Answer **only five (5)** questions. All questions carry equal marks.

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1. Based on your own experience of projects, list up activities that a project manager would carry out to get a project off the ground.
 2. Explain how network analysis is used as a project management tool.
 3. "Effective project progress control is a form of closed loop feedback system". How do you apply the feedback system to manage the progress of a project?
 4. As a project manager how do you ensure success of a project with an imposed project team?

5. a. Critically analyze network crashing versus fast tracking.
- b. A project of shifting of a Museum with different activities, the durations, precedence activities, possible crash times (CT) and the crash costs, (CC) £ per day are as below:

Task ID	Task description	Duration (days)	Precedence	CT	CC/day
01	Project start	0		-	-
05	Close the Museum	1	01	-	-
10	Find store for museum exhibits	15	01	-	-
15	Pack museum exhibits	30	05,10	15	80
20	Move exhibits to store	07	15	-	-
25	Convert museum to art gallery	120	20	40	600
30	Publicize new art gallery	14	25	-	-
35	Move artworks to new gallery	30	25	-	-
40	Convert old gallery to new museum	60	35	20	500
45	Open new art gallery	01	30,35	-	-
50	Move museum exhibits	20	40	05	00
55	Publicize new museum	14	40	-	-
60	Open new museum	01	50,55	-	-
65	Project finish	0	45,60	-	-

- i. What is the shortest duration the project can be completed in this crash program?
- ii. However the stakeholders of the project want to complete the project in 180 days. You as the project manager how would you meet the demand?

6. a. How does a project get complicated?
 b. The planned maintenance activities of a machine are given below:

Activity	Duration (Weeks)	Precedence	Staff
Start	0		
A	8	-	4
B	10	-	4
C	10	-	4
D	10	A	4
E	16	A	6
R	4	B	2
H	14	C	3
S	2	B	1
G	18	C	6
P	8	R,D	3
F	17	R,D	4
T	6	S,H	2
I	5	T,G	3
Q	6	P,E	3
Finish	0	F,Q,I	0

Due to the other tasks in hand, the maintenance manager decided to constrain the staff to 12 persons to perform the maintenance of the machine. In this situation how many more days will be required to accomplish the task?

7. Activities of a new logistics operation are as below:

No	Activity	Duration (weeks)	Precedence	Staff	Cost (£)
1.	Design logistics solution	14	-	6	33,992
2.	Refine logistics solution	32	1	3	68,000
3.	Prepare planning application	04	1	2	12,000
4.	System requirements	68	1	6	369,920
5.	Supplier briefing/negotiation	36	2	2	38,988
6.	Obtain planning consent	10	3	2	00000
7.	Mechanical handling equipment	14	6	4	119,980
8.	Build construction	24	6	4	480,000
9.	Procure tractor units	10	6	3	110,000
10.	Procure trailer units	10	6	2	40,000
11.	Recruit and train people	14	6	5	28,000
12.	Prove new system	2	4 - 11	3	2,000

If the staff is restricted to nine ((9) persons, what would be the Budgeted Cost Work Schedule at the 106th week? (Assume that all costs are equally rated).

*****END OF QUESTION PAPER*****