Minoufiya University
Faculty of Eng. & Tech.
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End – of Second Semester Exam.
Academic year 2015 / 2016
Date: 15 / 6 / 2016

Dept: Electric
Year: First
Subject: Economist& Project Management
Code: PRE127
Time Allowed: 2 Hrs.
Total Marks: 50 Marks

Answer The Following Questions :-

Question No. [1] : (15 Marks)

1. A person invested a sum of 5000 L.E. now, 2000 L.E after two years, and 4000 L.E after 5 years. If rate of compound interest of 12 % annually: how much should he earn at the end of the seventh year.

2. The following data is available for equipment being used in a machine shop:-

- Initial cost of machine ..... = 14000 L.E
- Technical life ..... = 6 years
- Installation cost ..... = 2000 L.E
- Economical life ..... = 4 years
- Salvage value ..... = 4000 L.E

Required:

a- Use the straight line method,and declining balance method to calculate the annual depreciation charge , and the book value at the end of each year.

b- Compare between the results after two years from the beginning of its life.

c- If the salvage value of the above equipment is equal to zero. Can you apply the declining balance method to compute the depreciation charge in this case? Clarify.

Question No. [2] : (10 Marks)

You are given the following data for a factory:-

- produced quantity (output) = 100000 units
- Variable cost per unit = 10 L.E
- Fixed costs = 500000 L.E
- Selling price per unit = 20 L.E

Draw a break –even chart showing the break- even point. If the selling price per unit is reduced to 18 L.E, what will be the new break-even point?

Question No. [3]: (10 Marks)

Activity	Immediate predecessor	Optimistic time a	Most likely time m	Pessimistic time b
A	–	4	6	14
B	–	7	8	9
C	A	3	3	3
D	A	5	6	13
E	D	5	6	7
F	B,C	2	5	8
G	B	7	8	15
H	E	1	2	3
I	G,F,H	1	1	1

Assume a project completion time of twenty-three days after the project begins. From the above data, perform the following:

a. Draw the PERT network, labeling activities, and compute ES, EF, LS, and LF.
b. Determine the critical path as well as the total slack and free slack.

Question No. [4]: (15 Marks)

Determine the transportation schedule for the data given in the table:
1- Using Vogel's approximation method.—
2- Check for optimality using stepping stone method.

From \ To	D1	D2	D3	Capacity
Source 1	$4	$3	$3	35
Source 2	$6	$7	$6	50
Source 3	$8	$2	$5	50
Demand	30	65	40	135

With Our Best Wishes

Dr. Ahmed Mosa
Dr. Abd elaziz Kandil