

Name: _____

Sample Exam 3**Multiple-choice** (2.5 each question)

1. For each activity PERT analysis requires
 - a. an optimistic time
 - b. a most probable time
 - c. a pessimistic time
 - d. all of the above
 - e. none of the above

2. The three phases involved in the management of large projects are
 - a. planning, scheduling, evaluating
 - b. scheduling, operating, evaluating
 - c. scheduling, designing, operating
 - d. planning, scheduling, controlling
 - e. none of the above

3. A dummy activity is required when
 - a. the network contains two or more activities that have identical starting and ending events
 - b. two or more activities have the same starting events
 - c. two or more activities have the same ending events
 - d. all of the above are true
 - e. two or more activities have different ending events

4. The critical path of a network is the
 - a. shortest time path through the network
 - b. path with the fewest activities
 - c. path with the most activities
 - d. longest time path through the network

5. The optimistic time is the greatest amount of time that could be required to complete an activity.
 - a. True
 - b. False

Problem 1:

The following represent activities in a major construction project.
(All times are in weeks.)

Activity	Time	Immediate Predecessor
A	9	-
B	7	A
C	3	A
D	6	B
E	9	B
F	4	C
G	6	E, F
H	5	D
I	3	G, H

(a) Draw the network to represent this project.

(b) Find the critical path and determine the total project completion time.

Problem 2:

Development of a new deluxe version of a particular software product is being considered. The activities necessary for the completion of this project are listed in the table below. (All times are in weeks.)

Activity	Normal Time	Crash Time	Normal Cost	Crash Cost	Immediate Predecessor
A	2	1	2,000	2,600	-
B	2	1	2,200	2,800	-
C	3	3	500	500	-
D	4	2	2,300	2,600	A
E	6	3	900	1,200	B
F	3	2	3,000	4,200	C
G	4	2	1,400	2,000	D, E

- (a) What is the project expected completion date?

- (b) What is the total cost required for completing this project on normal time?

- (c) If you wish to reduce the time required to complete this project by 1 week, which activity should be crashed, and how much will this increase the total cost?