

**Comprehensive Examination (AY 2023-24, I Semester)**  
**IT Project Management (MPBA G523)**

Total Duration: 150 Minutes

Total Marks: 70

Date: 18 Dec, 2023

Instructor: Dr. RAJESH MATAI

**Instructions:**

1. This exam has two parts, A and B. Part A is a closed book, and Part B is an Open book.
2. Duration for each part is 75 Minutes.
3. Once you submit the part A answer sheet, a new answer sheet for part B will be given to you.

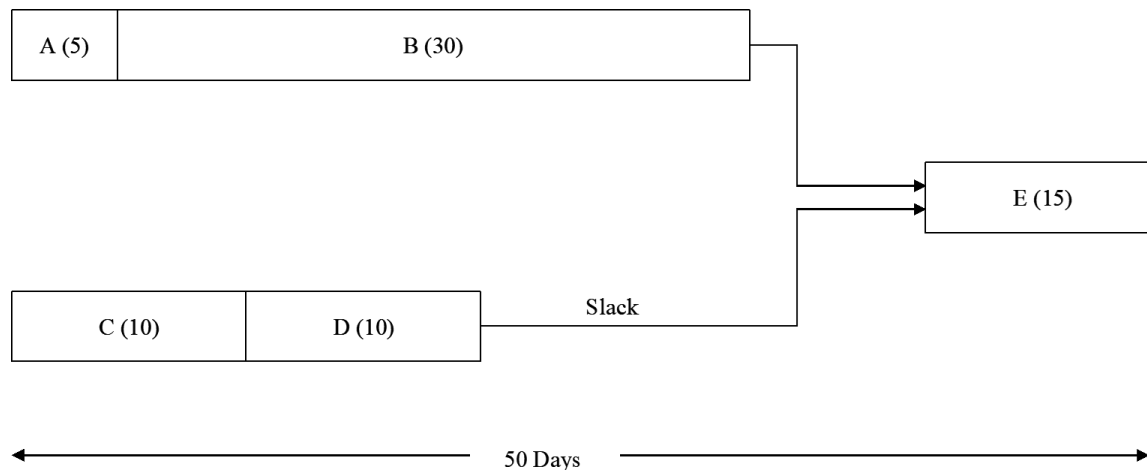
**Part-A (Close book)**

**Duration: 75 Minutes**

**Marks: 34**

Q:1 Consider the following activities and their durations. The original project schedule, using early activity starts, is shown in Figure 1. Reconfigure the network using critical chain project scheduling. (2+2+10=14 M)

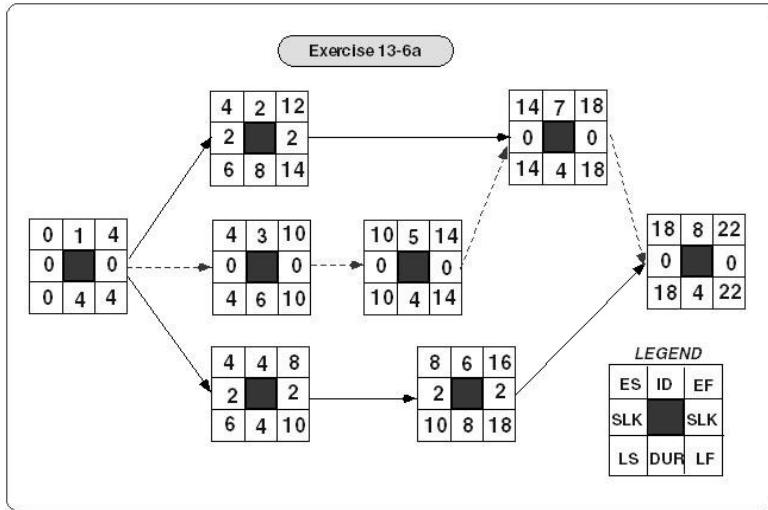
<u>Activity</u>	<u>Duration</u>
A	5 days
B	30 days
C	10 days
D	10 days
E	15 days



**Figure 1**

- a. What is the critical path?
- b. How much slack is currently available in the non-critical path?
- c. Reconfigure the network in Figure 1 as a critical chain network. What is the new duration of the project? How long are the project and feeder buffers?

**Q:2** The following data have been collected for a British health care IT project for two-week reporting periods 10 through 12. Compute the SV, CV, SPI, and CPI for each period. What is your assessment of the project at the end of period 12? (8+8+4=20 M)



Exercise 13-6b

Baseline (PV)  
(00\$)

Task	Dur.	ES	LF	Slack	PV (00\$)	0	2	4	6	8	10	12	14	16	18	20	22	
1	4	0	4	0	8	4	4											
2	8	4	14	2	40			10	10	10	10							
3	6	4	10	0	30			10	15	5								
4	4	4	10	2	20			10	10									
5	4	10	14	0	40						20	20						
6	8	8	18	2	60					20	20	10	10					
7	4	14	18	0	20								10	10				
8	4	18	22	0	30											20	10	
<b>Period PV Total</b>						4	4	30	35	35	50	30	20	10	20	10		
<b>Cumulative PV Total</b>						4	8	38	73	108	158	188	208	218	238	248		

**STATUS REPORT: ENDING PERIOD 10**

<b>Task</b>	<b>%Complete</b>	<b>EV</b>	<b>AC</b>	<b>PV</b>	<b>CV</b>	<b>SV</b>
1	Finished		10			
2	60 %		30			
3	Finished		40			
4	50 %		20			
5	0 %		0			
6	30%		24			
<b>Cumulative Totals</b>						

**STATUS REPORT: ENDING PERIOD 12**

<b>Task</b>	<b>%Complete</b>	<b>EV</b>	<b>AC</b>	<b>PV</b>	<b>CV</b>	<b>SV</b>
1	Finished		10			
2	Finished		50			
3	Finished		40			
4	Finished		40			
5	50 %		30			
6	50%		40			
<b>Cumulative Totals</b>						

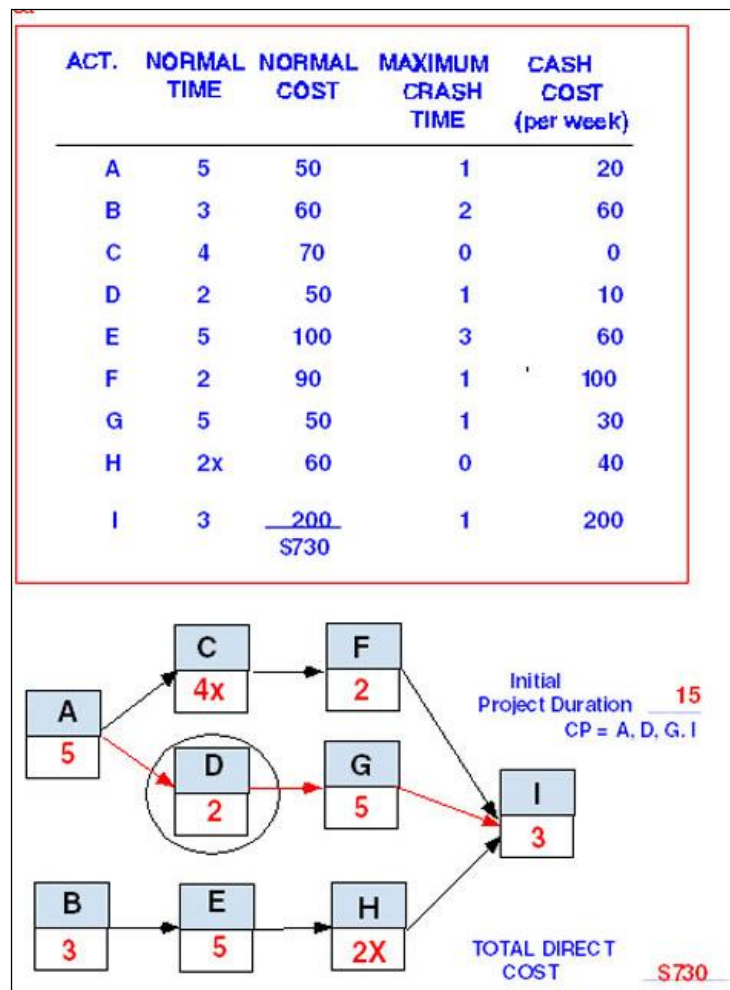
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IT Project Management (MPBA G523)**

**Part-B (Open Book)**

**Duration: 75 Minutes**

**Marks: 36**

**Q:3** Given the data and information that follow, compute the total direct cost for each project duration. If the indirect costs for each project duration are \$90 (15 time units), \$ 70 (14), \$50 (13), \$40 (12), and \$30 (11), compute the total project cost for each duration. What duration represents the lowest total project cost? What is this cost? (10+6=16 M)



**Q: 4** You have prepared the following schedule for a project in which the key resource is a backhoe. This schedule is contingent on having 3 backhoes. You receive a call from your partner, Brooker, who desperately needs 1 of your backhoes. You tell Brooker you would be willing to let him have the backhoe if you are still able to complete your project in 11 months.

Develop a resource schedule in the loading chart that follows to see if it is possible to complete the project in 11 months with only 2 backhoes. Be sure to record the order in which you schedule the activities using scheduling heuristics. Activities 5 and 6 require 2 backhoes, while activities 1, 2, 3, and 4 require 1 backhoe. No splitting of activities is possible. Can you say yes to Brooker's request? (20M)

