Higher Technological Institute
10th Ramadan City
(6th October Branch)
Department of Civil Engineering

Course : Project Management (CT200 9\) **Term : Oct. /Jan. 2018/2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question 1 **{3 Marks}**

Define the project and mention its characteristics.

Question 2 **{3 Marks}**

Define Work Breakdown Structure (WBS)

Question 3 **{4 Marks}**

Define the following terms: Lead, Lag, Total Float, Free Float.

Question 4 **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

ACTIVITY	PRECEDING ACTIVITY	DURATION
A	-	5
B	-	4
C	A	10
D	B	7
E	B	11
F	C	8
G	D, E, F	4

Question 5 **{10 Marks}**

Calculate and state the critical path (s)

Activity	Preceding activity	Normal duration
A	-	4
B	A	4
C	-	5
D	A , C	8
E	B , C	8
F	D ,E	6
G	E ,F	5
H	G	4

GOOD LUCK

Examination committee: 1-Dr Wafaa Arandah Signature

د. وفاء عرندة

Higher Technological Institute
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Department of Civil Engineering

Course : Project Management (CT200 91) **Term : Oct. /Jan. 2018/2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question (1) **[ILO's: a1]** **{3 Marks}**

Define the project and mention its characteristics.

Answer (1)

Definition: A project is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists.

Characteristics:

1- Scope: Each project is unique and must have a written requirements document that takes into consideration operational needs, level of service, regulatory requirements.

2- Schedule: All projects must have a definite beginning and end. Scheduling means placing project activities in a logical sequence to achieve the required project beginning and end dates.

3- Budget: All projects are constrained by limited monetary funding resources. Consequently, every project needs a budget to initially define its funding requirement.

Question (2) **[ILO's: a1,a2]** **{3 Marks}**

Define Work Breakdown Structure (WBS)

Answer (2)

The work breakdown structure (WBS) is a hierarchical system that represents the construction project in increasing levels of detail to define, organize and display the project work in measurable and manageable components.

Question (3) **[ILO's: a1, a2, b3]** **{4 Marks}**

Define the following terms: Lead, Lag, Total Float and Free Float.

Answer (3)

***LEAD*:** It may be used to indicate that an activity can start before its predecessor activity is completed.

LAG: It is the inserted waiting time between activities, such as needing to wait for completion of curing or testing.

Total-Float (TF): That determines the flexibility of an activity to be delayed without affecting the project end date.

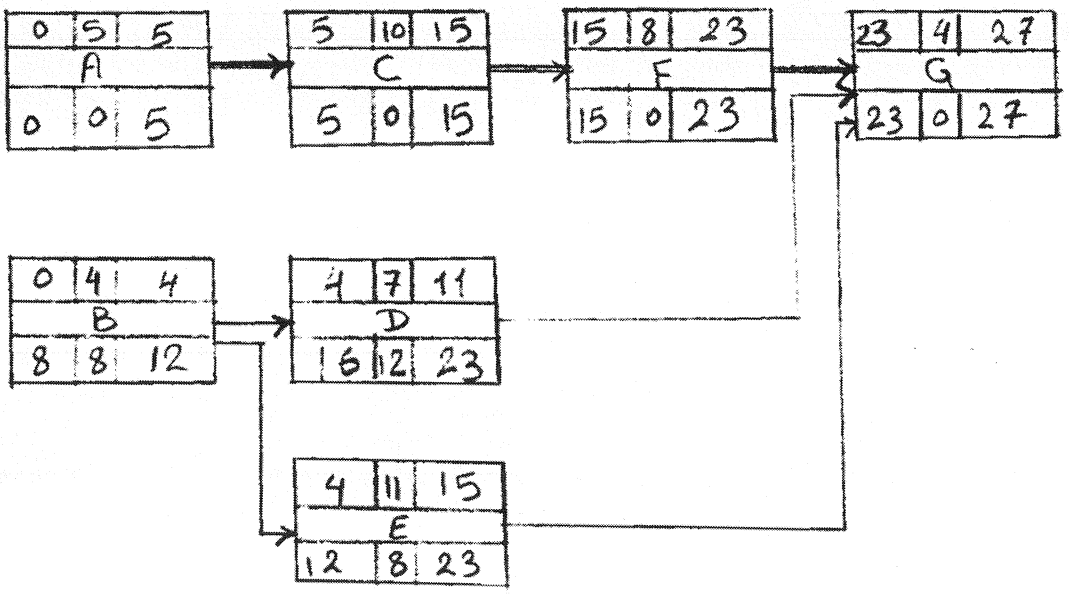
Free-Float (FF): That determines the flexibility of an activity to be delayed without affecting the dates of the successor activities.

Question (4) **[ILO's: a1,a2, b2,c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

ACTIVITY	PRECEDING ACTIVITY	DURATION
A	-	5
B	-	4
C	A	10
D	B	7
E	B	11
F	C	8
G	D, E, F	4

Answer (4)



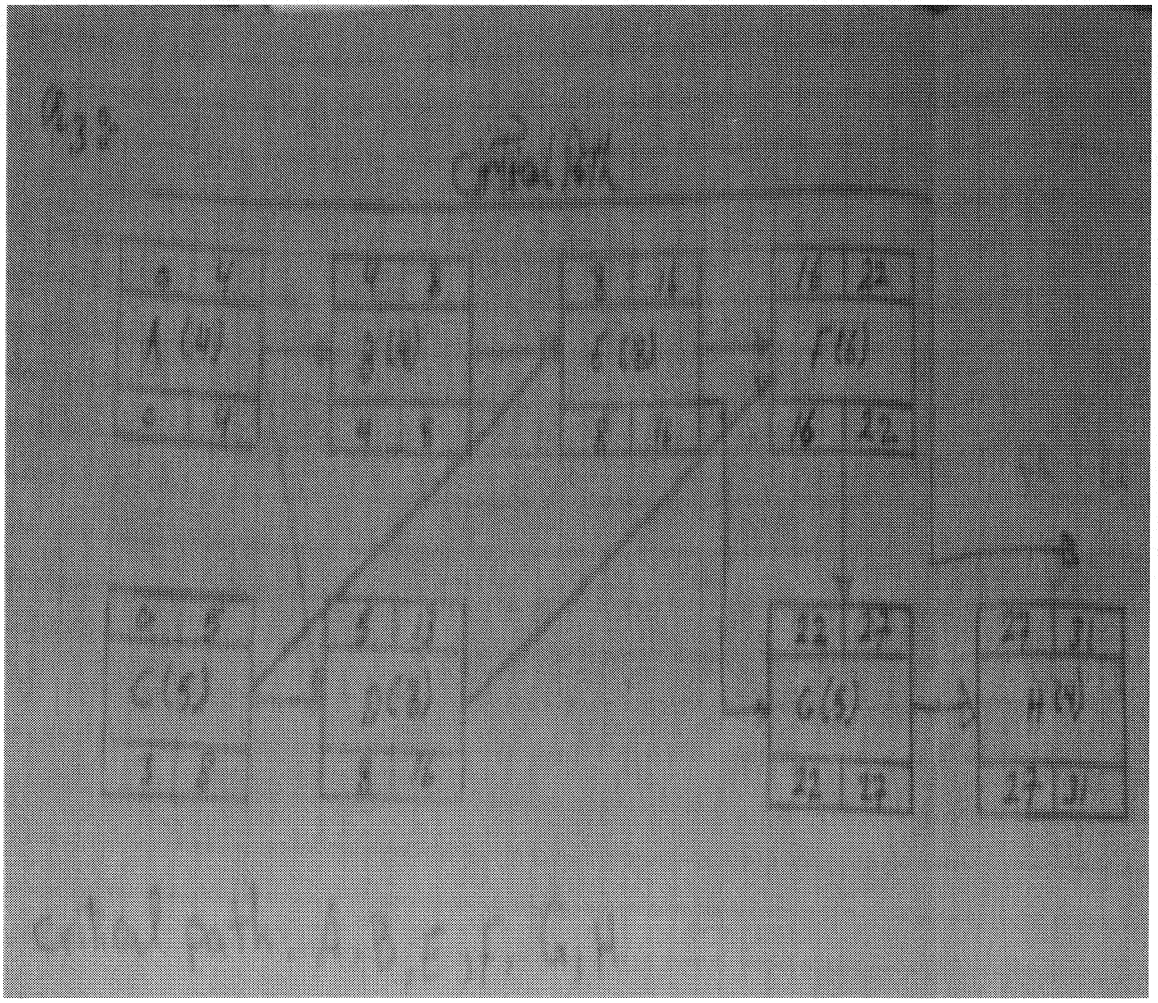
:) critical path is A, C, F, G

Question (5) **[ILO's: a1,a2, b2,c1]** **{10 Marks}**

Calculate and state the critical path (s)

Activity	Preceding activity	Normal duration
A	-	4
B	A	4
C	-	5
D	A , C	8
E	B , C	8
F	D ,E	6
G	E ,F	5
H	G	4

Answer (5)



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Higher Technological Institute
10th Ramadan City
(6th October Branch)
Department of Civil Engineering

Course : Project Management (CT200 ٩٢) **Term : Oct. /Jan. 2018/2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question 1 **{3 Marks}**

Define the project and mention its characteristics.

Question 2 **{3 Marks}**

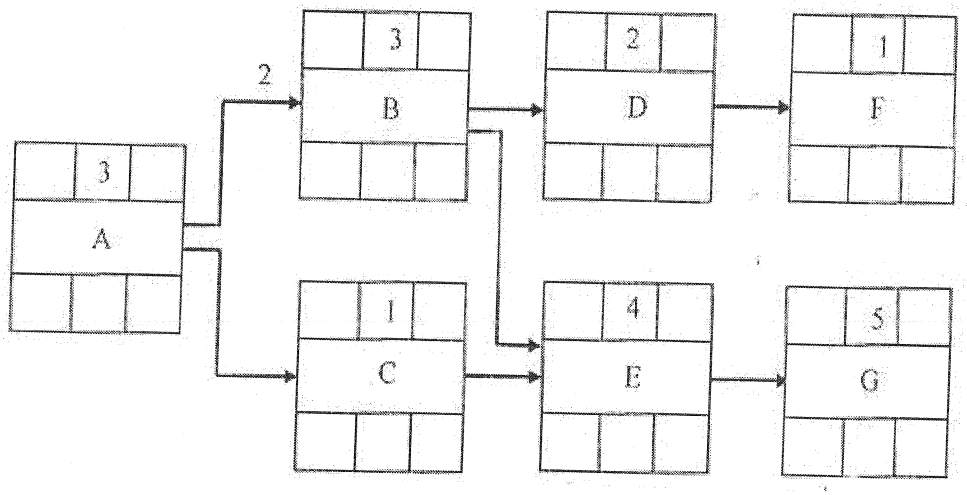
Define Work Breakdown Structure (WBS)

Question 3 **{4 Marks}**

Define the following terms: Lead, Lag, Total Float, Free Float.

Question 4 **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.



Question 5 **{10 Marks}**

Calculate and state the critical path (s)

Activity	Preceding activity	Normal duration
A	-	3
B	-	2
C	A	6
D	A	5
E	C, D	5
F	B ,D	3
G	F	2

GOOD LUCK

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10th Ramadan City
(6th October Branch)
Department of Civil Engineering

Course : Project Management (CT200 9٢) **Term : Oct. /Jan. 2018/2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question (1) **[ILO's: a1]** **{3 Marks}**

Define the project and mention its characteristics.

Answer (1)

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Question (2) **[ILO's: a1,a2]** **{3 Marks}**

Define Work Breakdown Structure (WBS)

Answer (2)

The work breakdown structure (WBS) is a hierarchical system that represents the construction project in increasing levels of detail to define, organize and display the project work in measurable and manageable components.

Question (3) **[ILO's: a1, a2, b3]** **{4 Marks}**

Define the following terms: Lead, Lag, Total Float and Free Float.

Answer (3)

***LEAD*:** It may be used to indicate that an activity can start before its predecessor activity is completed.

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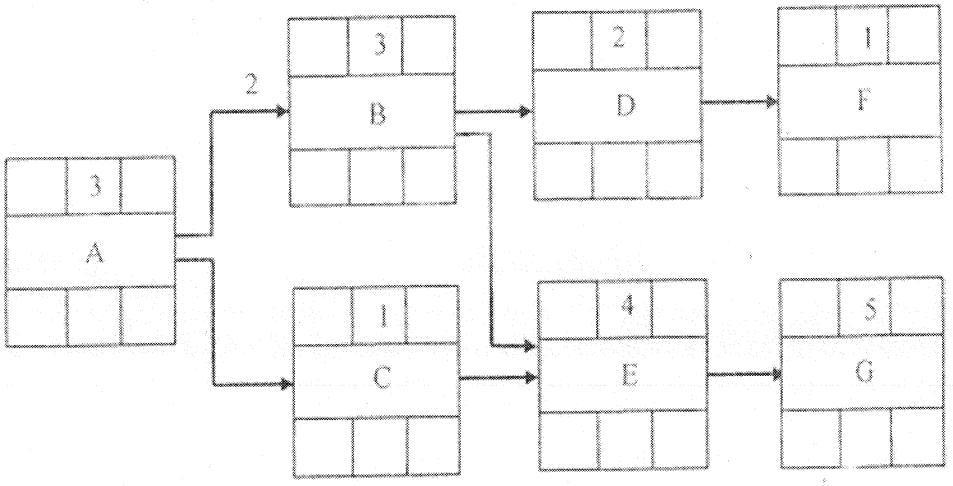
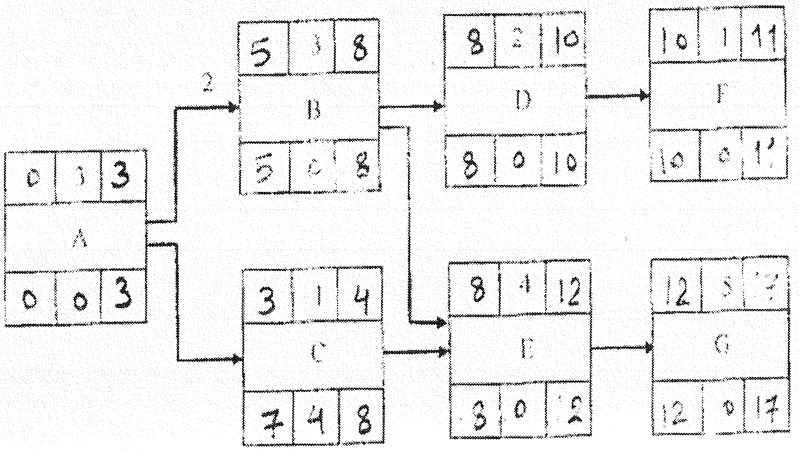
Question (4) **[ILO's: a1, a2, b2,c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.



Answer (4)



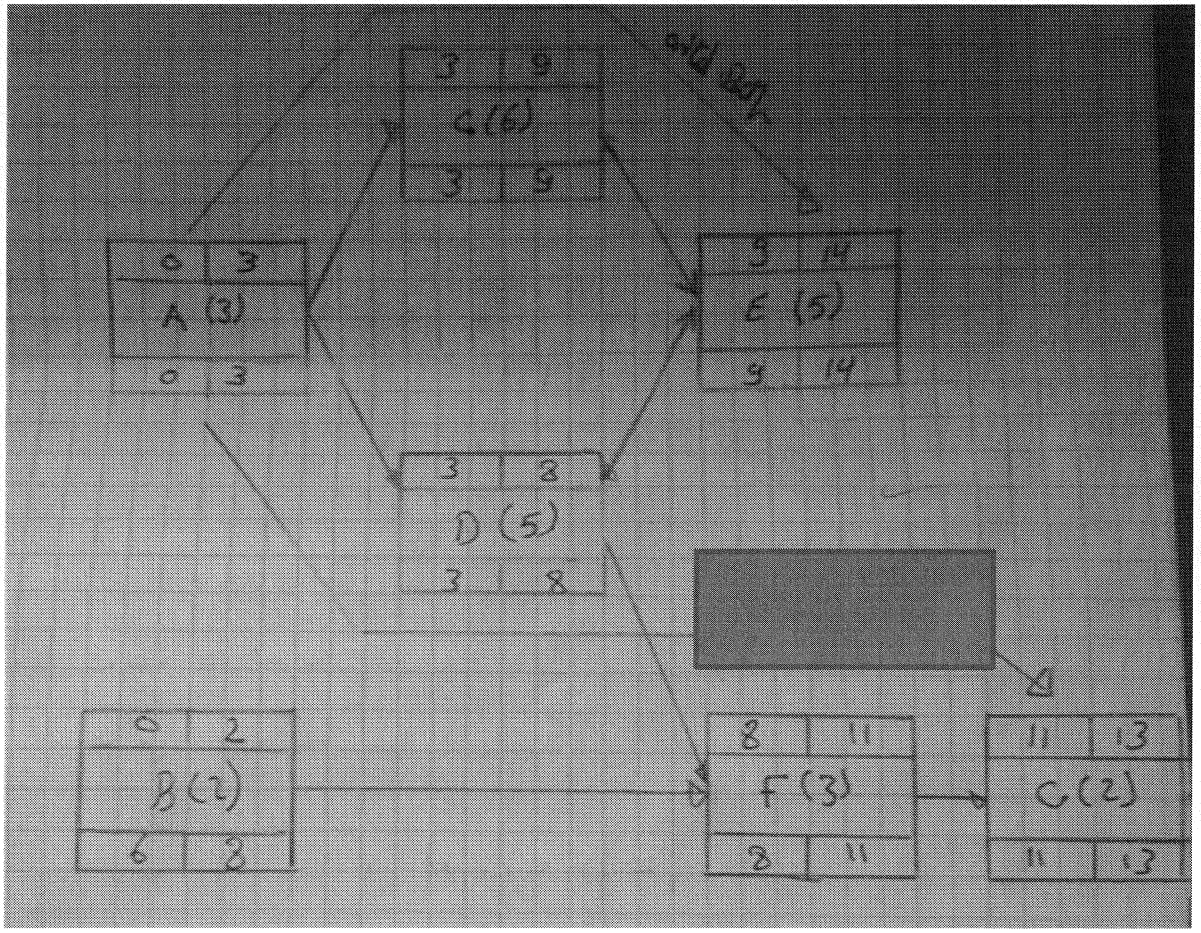
The Critical Path: **(A, B, E, G)**

Question (5) **[ILO's: a1, a2, b2,c1]** **{10 Marks}**

Calculate and state the critical path (s)

Activity	Preceding activity	Normal duration
A	-	3
B	-	2
C	A	6
D	A	5
E	C, D	5
F	B ,D	3
G	F	2

Answer (5)



The Critical Path: **(A, C, E)**

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Examination committee: 1-Dr Wafaa Arandah

Signature

د/ وفاء عرندة

Higher Technological Institute
10th Ramadan City
(6th October Branch)
Department of Civil Engineering

Course : Project Management (CT200 91) **Term : May 2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question 1 **[ILO's: a1]** **{4 Marks}**

a. Define the project and mention its characteristics. {2M}

b. Define Work Breakdown Structure (WBS). {2M}

Question 2 **[ILO's: a1, a2]** **{2 Marks}**

What is project planning importance?

Question 3 **[ILO's: a1, a2, b3]** **{4 Marks}**

Define the following terms: Lead, Lag, Total Float and Free Float.

Question 4 **[ILO's: a1, a2, b2, c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

Activity	Predecessor	Duration (Month)
A	-	2
B	A	2
C	A	2
D	A	2
E	B	1
F	B, D	2
G	F	4

Question 5 **[ILO's: a1, a2, b2, c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

Activity	Predecessor	Duration (days)
A	-	4
B	-	3
C	-	6
D	B	8
E	B	7
F	C	2
G	A, D	9
H	E	5
I	E	4
J	F, I	4

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Examination committee: 1-Dr Wafaa Arandah Signature

د/ وفاء عرنده

Higher Technological Institute
10th Ramadan City
(6th October Branch)
Department of Civil Engineering

Course : Project Management (CT200 91) **Term : May 2019**
Examiner: Dr. Wafaa Arandah **Time : 90 min**

Mid Term Exam

(Answer the Following Questions)

Question 1 **[ILO's: a1]** **{4 Marks}**

a. Define the project and mention its characteristics. {2M}

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3- Budget: All projects are constrained by limited monetary funding resources. Consequently, every project needs a budget to initially define its funding requirement.

b. Define Work Breakdown Structure (WBS). {2M}

- The WBS subdivides the project work into smaller, more manageable pieces of work to be executed by the project team, to accomplish the project objectives and create the required deliverables.
- The WBS organizes and defines the total scope of the project.
- The planned work contained within the lowest-level WBS components, called work packages, can be scheduled, cost estimated, monitored, and controlled.

Question 2 **[ILO's: a1, a2]** **{2 Marks}**

What is project planning importance?

1. Optimize time
2. Optimize the use of resources
3. Eliminate or reduce uncertainty
4. Improve efficiency of the operation
5. Obtain a better understanding of the objectives
6. Provide an early warning of potential problems
7. Provide a basis for monitoring and controlling
8. Enable proactive and not reactive actions

Question 3 **[ILO's: a1, a2, b3]** **{4 Marks}**

Define the following terms: Lead, Lag, Total Float and Free Float.

Free Float [FF] *

هى الفترة الزمنية المتاحة للنشاط ان يتحرك فيها بالزيادة
بدون التاثير على بداية النشاط التالى المرتبط به

FF = Early Start(Act.2) – Early Finish(Activ.1)

Total Float [TF] *

هى الفترة الزمنية المتاحة للنشاط ان يتحرك فيها بالزيادة
بدون التاثير على الزمن الكلى للمشروع

TF = Late Start(Act.1) – Early Start(Activ.1)

Or TF = Late Finish(Act.1) – Early Finish(Activ.1)

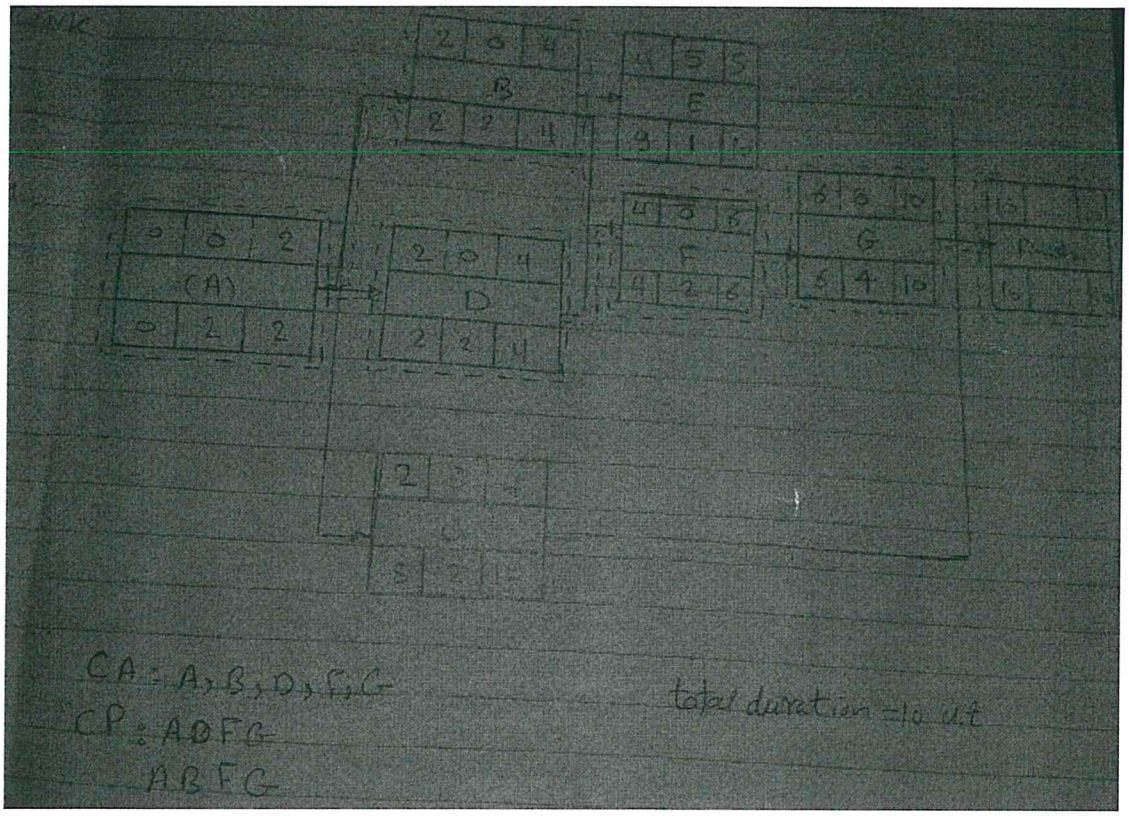
Lag time: is a delay between tasks that have a dependency. For example, if you need a two-day delay between the finish of one task and the start of another, you can establish a finish-to-start dependency and specify two days of lag time. You enter lag time as a positive value.

Lead time: is overlap between tasks that have a dependency. For example, if a task can start when its predecessor is half finished, you can specify a finish-to-start dependency with a lead time for the successor task. You enter lead time as a negative value.

Question 4 **[ILO's: a1, a2, b2, c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

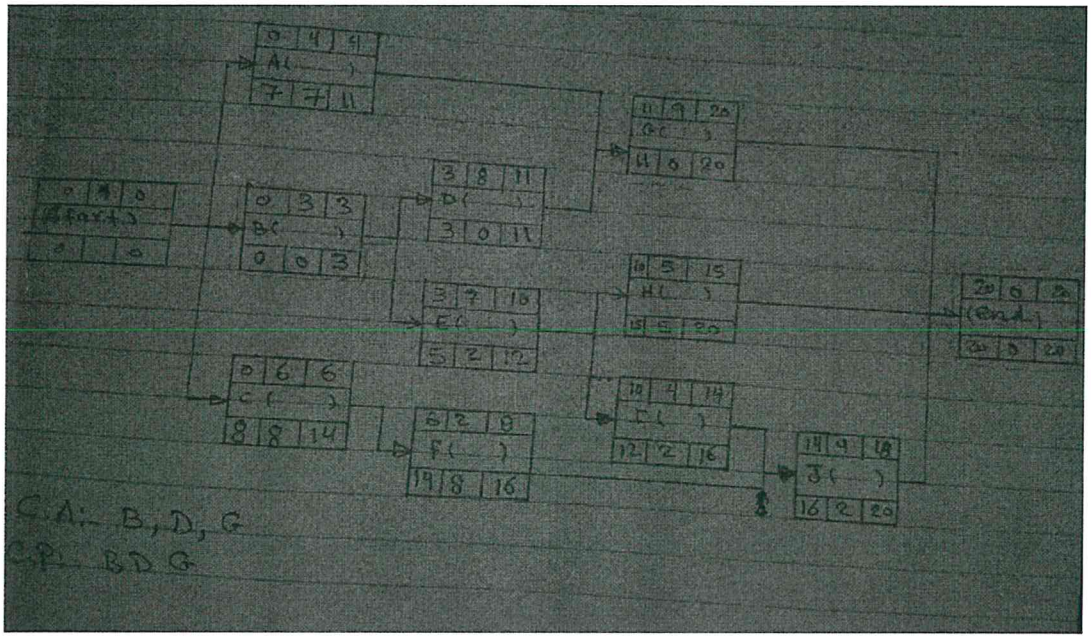
Activity	Predecessor	Duration (Month)
A	-	2
B	A	2
C	A	2
D	A	2
E	B	1
F	B, D	2
G	F	4



Question 5 **[ILO's: a1, a2, b2, c1]** **{10 Marks}**

Calculate Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and Total Float (TF). Then determine the critical Path.

Activity	Predecessor	Duration (days)
A	-	4
B	-	3
C	-	6
D	B	8
E	B	7
F	C	2
G	A, D	9
H	E	5
I	E	4
J	F, I	4



GOOD LUCK

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