Q1]
Considering two Projects – A and B. Project A has a probability of 20% to net a profit of $200,000 while having an 80% probability to cause a loss of $35,000. On the other hand, Project B has a 70% probability to generate a profit of $60,000. But it has 20% probability to incur a loss of $40,000 and 10% probability to incur a further loss of $15,000.
Based on the given case, draw a decision tree and calculate the EMV (Estimated Monetary Value) for both projects. Also decide which project you consider better based on the EMVs calculated.

Q2]
Explain in short the four steps in the Cost Management Process ? Considering the actual cost for a WBS item is $5000 and it has earned value of $ $2500, calculate its cost variance and is the item under or over budget ?

Q3]
Draw an AOA diagram from the following table and determine the activity with the highest slack time and ultimately the critical path in the project (5+10)

Activity	Predecessor	Duration	Activity	Predecessor	Duration
A	-	1	**F**	B	4
B	-	2	**G**	C	6
C	-	3	**H**	D, E	6
D	A	4	**I**	G	2
E	B	5	**J**	F, H, I	3

Q4]
Determine the Net Present Value (NPV) of the following two projects and answer which project can be recommended based on a discount rate of 10%. (6 + 6 + 3)

Description	**Project A**	**Project B**
Initial Investment	75,000	75,000
Estimated Life (in Years)	5	5
Scrap Value	1000	2000

Cash flow for Project A and B in the five years life span

Years	**1**	**2**	**3**	**4**	**5**
Project A	50,000	50,000	35,000	6,000	4,000
Project B	60,000	40,000	20,000	15,000	8,000

Q5]
Based on the table below draw an AOA network diagram. Also identify the critical path.(10 + 5)

Activity	Predecessor	Successor	Duration
A	-	C	2
B	-	E,D	5
C	A	F	3
D	B	G	12
E	B	H	5
F	C	H	3
G	D	I	4
H	E,F	I	2
I	G,H	-	4

Q6]
Use the table below to draw PDM and calculate the critical path along with TF and FF of each activity.

Activity	Predecessor	Duration
A	-	5
B	A	4
C	A	5
D	B	6
E	C	3
F	D,E	4

How to Draw PDM
https://www.youtube.com/watch?v=TmXBZk6y1IU

Forward Pass/ Backward Pass for critical Path
https://youtu.be/4oDLMs11Exs?si=ICMxWQTWm7LVjuo-

Total Float / Free Float
https://youtu.be/NDa-Fq5jeuM?si=o_3qcuLcFaidz5jx