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Subject : Project Management

Section : "B"

Date : 22 June 2020

# Question (1) ANSWER

Given data :-

Number of Communication Channels = 6

Addition Stake holders = 2

Required data :-

Identify the number of Communication Channels after Increasing the Scope of work = ?

Solution :-

$$\begin{aligned} \text{Number of Communication} \\ &= \frac{n(n-1)}{2} \end{aligned}$$

Putting the values

$$6 = \frac{n(n-1)}{2}$$

$$12 = n(n-1)$$

$$12 = n^2 - n$$

$$n^2 - n - 12 = 0$$

$$n^2 - 4n + 3n - 12 = 0$$

$$n(n-4) + 3(n-4) = 0$$

$$(n-4)(n+3) = 0$$

So,

$$n = 4, \quad n = -3$$

People Involved are 4

And there are additional Stake holders, which is "2"

$$\text{So, } n = 4 + 2$$

$$n = 6$$

Channel Communication

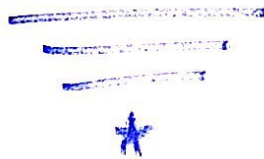
$$= \frac{6(6-1)}{2}$$

↙

$$= 15$$

So communication channel is

" 15 "





# QUESTION

## 2

# ANSWER

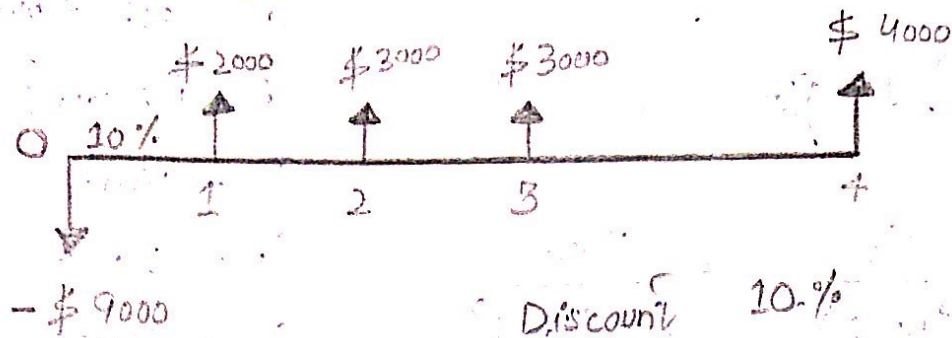
Work Package	BCWS	ACWP	Progress	BCWP	CV	CP1	SP1	SV
	Planned Value (PV) \$	Actual Cost (AC) \$	%	Earned Value (EV) \$	EV - AC \$	EV/AV	EV/PV	EV - PV \$
1	100,000.00	120,000.00	100%	100,000.00	20,000.00	0.83	1.00	-
2	100,000.00	110,000.00	100%	100,000.00	10,000.00	0.91	1.00	-
3	100,000.00	80,000.00	90%	90,000.00	10,000.00	1.13	0.90	10,000.00
4	100,000.00	125,000.00	80%	80,000.00	45,000.00	0.64	0.80	20,000.00
5	100,000.00	75,000.00	50%	50,000.00	25,000.00	0.67	0.50	50,000.00
6	100,000.00	-	0%	-	-	0	0	100,000.00
7	100,000.00	-	"	-	-	0	0	100,000.00
8	100,000.00	-	"	-	-	0	0	100,000.00
9	100,000.00	-	"	-	-	0	0	100,000.00
10	100,000.00	-	"	-	-	0	0	100,000.00

Comment :-

Project is Over Budget and  
lag behind.

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# QUESTION 3 ANSWER



## Required

- Calculate Net present value (NPV)
- Comment On the Result

## Solution:

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \dots + \frac{C_T}{(1+r)^T} \rightarrow \star$$

$$Pv_0 = -C_0$$

$$Pv_0 = -9000$$

For first year ;

$$Pv_1 = \frac{C_1}{1+r} = \left( \frac{2000}{1 + 10/100} \right)$$



$$PV_1 = 1818.18 \$$$

-  $C_0$  = Initial Investment

$C$  = Cash flow

$r$  = Discount Rate

$T$  = Time

$$C_1 = 2000$$

$$C_2 = 3000$$

$$C_3 = 3000$$

$$C_4 = 4000$$

For 2nd year : or

$$PV_2 = \frac{C_2}{(1+r)^2} = \frac{3000}{(1+10/100)^2}$$

$$PV_2 = 2479.34 \$$$

For 3rd year : or

$$PV_3 = \frac{C_3}{1+r^3} = \frac{3000}{(1+10/100)^3}$$

$$PV_3 = 2253.94 \$$$

For 4th year : or

$$PV_4 = \frac{C_4}{(1+r)^4} = \frac{4000}{(1+10/100)^4}$$

$$PV_4 = 2732.05 \$$$



Put the values in equation "A"

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \frac{C_4}{(1+r)^4}$$

$$= -9000 + 1818.18 + 2479.34 + 2253.94 + 2732.05$$

$$NPV = 283.51 \$$$

### COMMENT:

- ★ The profit is 283.51 \$ to the Company, so the project is acceptable.
- ★ The positive NPV means the combined PV of all cash inflows exceed the PV of cash out flow.
- ★ The NPV of 283.51 suggests that the combined PV of all cash inflows exceed the PV of cash outflows by 283.51 \$.

# Question (4) Answer

## Power/Interest matrix

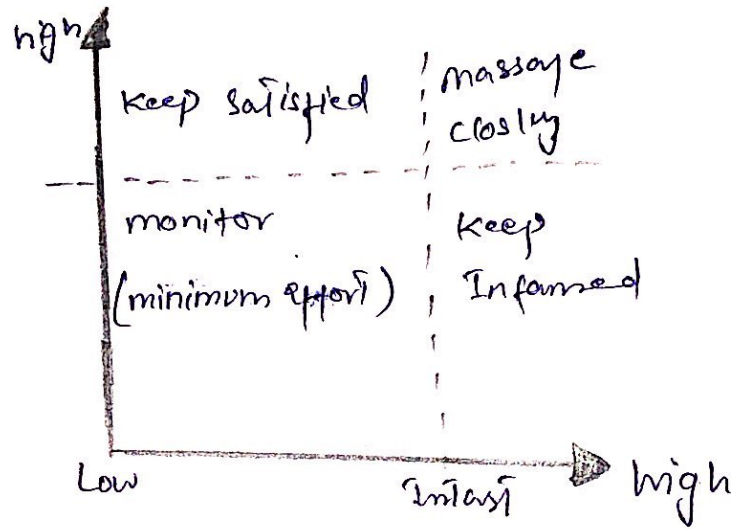
→ The Power/Interest matrix is a simple tool that helps to categorize project stakeholder within in project.

→ This matrix helps to focus on the key stakeholder who can make or break the project in taken, this Power/Interest matrix help us in stakeholder prioritization.

### Layout of the matrix :

The Power Interest matrix contain four quadrant each (quadrant) give an indication of level of stakeholder management the we will have

to employ and may also influence the type of communication style, the four quadrants of power matrix are shown below.



## High Power - High Interest :

These stakeholder are decision makers and have biggest impact on project success and hence we must closely manage their expectation.

## High Power - Low Interest :

These stakeholders needed to be kept in loop, these stakeholder need to keep satisfied



even though they aren't interested because they yield power, these type of stakeholder should be dealt cautiously, because they make use of their power in a not desired way in the project if they become unsatisfied!

### Low Power - high Interest :

These people should be kept adequately informed, and must talk to them to ensure that no major issues are arising. These people can often be very helpful with details of project.

### Low power - low Interest :

monitor these stakeholder but we should not bore them with excessive communication.





## QUESTION 5 ANSWER

For a Project of Residential house different stages to be considered in the risk management areas as under;

### Stage#1 "INITIATION"

- ⇒ Assemble Risk management resources.
- ⇒ Appoint the team leader and ensure a breadth of skills within the team.
- ⇒ Assign Risk management responsibilities appropriate to task.

### STAGE#2 "PROPOSAL FAMILIARIZATION"

- ⇒ Specify objectives and criteria.
- ⇒ Familiarize the team with the proposal.

assemble documentation and define the key objective.

→ Determine assessment criteria for proposal.

→ define key elements to structure the risk analysis.

## STAGE # 08

### "Risk Analysis"

⇒ IDENTIFY RISK:

→ Prepare a comprehensive schedule of risk for each element.

→ Describe each risk and list the main assumption.

- a) Risk Prevention
- b) Impact mitigation
- c) risk transfer and Insurance
- d) risk acceptance.

→ Describe each feasible response and list main assumption

→ Select the best response

→ Evaluate the benefit and cost for each response.

→ Develop management measure and action Schedules.

→ develop risk action Schedules for major risks.

- a) Additions required
- b) Resources
- c) Responsibility
- d) Timing



→ ASSES Risk Likelihoods & Consequences:—

→ Assemble data on Risk and their consequences.

→ ASSES Risk Likelihoods.

→ ASSES Risk Impact.

⇒ Identify SIGNIFICANT Risks:

⇒ Ranks to reflect Impact and likelihoods.

⇒ Where applicable, estimate risk factor.

Identify major Risk for detailed  
Risk action planning

STAGE 04:

Identify feasible responses

→ for each moderate and major risk,  
identify the feasible responses.

→ Responses may include.



## Stage #5 "Reporting"

- For designated proposals, produced the risk management plan.
- for other projects collate and summarize risk action schedules and measure.

## STAGE #6 "Risk Management Implementation"

- Implement measures and action strategies.
  - monitor the implementation
    - a) Assign responsibilities
    - b) Timming
- Undertaking → periodic review and performance evaluation.