

SUBMITTED TO

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SECTION :

B

SUBJECT :

"CONSTRUCTION MANAGEMENT"

(1)

ANSWER TO QUESTION # 1

Given data :-

Number of communication
channel = 6

Additional stakeholders = 2

Required ::

Identify the number of
communication channel = ?

Solution :-

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

Putting 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, $n = 4$, $n = -3$

People involved are 4.

And there are additional holders, which is 2.

So, $n = 4 + 2$

$$n = 6$$

channel communication

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

$$= 15^\circ$$

So communication is

$$\boxed{= 15^\circ} \text{ ANK}$$

ANSWER TO QUESTION # 2

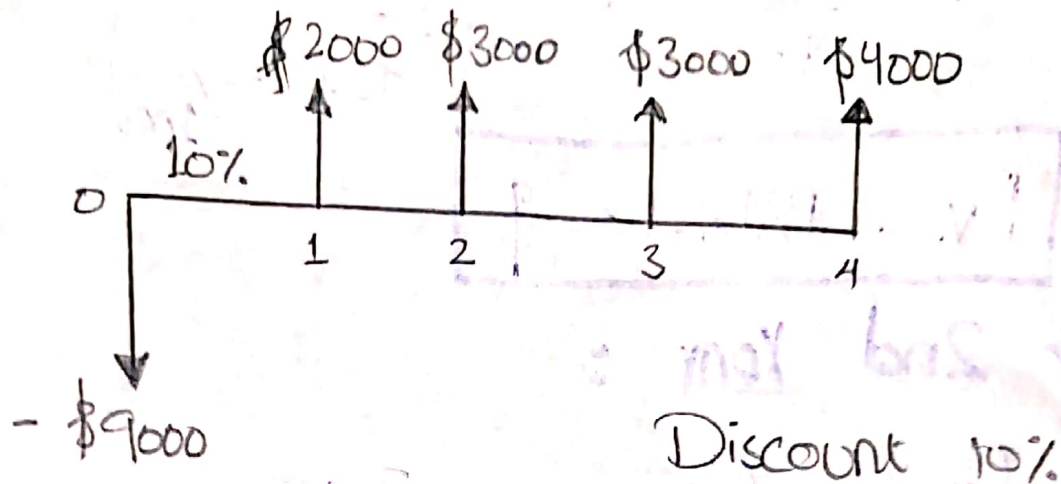
Package	Planned Value (PV) \$	Actual Cost (AC) \$	Pro gress %	BCWP Earned Value (EV) \$	CV EV-AC	CP, SPI	SV EV-PV \$	
1	100,000.00	120,000.00	100%	100,000.00	20,000.00	0.82	1.00	-
2	100,000.00	110,000.00	100%	100,000.00	10,000.00	0.91	1.00	-
3	100,000.00	80,000.00	90%	90,000.00	10,000.00	1.13	0.90	10,000.00
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	0	100,000.00
8	100,000.00	-	0%	-	-	0	0	100,000.00
9	100,000.00	-	0%	-	-	0	0	100,000.00
10	100,000.00	-	0%	-	-	0	0	100,000.00

BAC

Comment :

Project is over budget
and lag Behind.

ANSWER TO QUESTION # 3



Required ::

→ calculate Net present value (NPV)

→ Comment on the result

Solution ::

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

$$P_{V_0} = -C_0$$

$$P_{V_0} = -9000$$

(2)

FOR FIRST YEAR :-

$$P_{V_1} = \frac{C_1}{1+r} = \left(\frac{2000}{1 + 10/100} \right)$$

$$P_{V_1} = 1818.18 \$$$

FOR 2nd Year :-

$$P_{V_2} = \frac{C_2}{(1+r)^2} \Rightarrow \frac{3000}{\left(1 + 10/100\right)^2}$$

$$P_{V_2} = 2479.34 \$$$

FOR 3rd Year :-

$$P_{V_3} = \frac{C_3}{(1+r)^3} \Rightarrow \frac{3000}{\left(1 + 10/100\right)^3}$$

$$P_{V_3} = 2253.94 \$$$

FOR 4th Year :-

$$P_{V_4} = \frac{C_4}{(1+r)^4} \Rightarrow \frac{4000}{\left(1 + 10/100\right)^4}$$

$$PV_4 = 2732.05 \$$$

- C₀ = initial investment

C = cash flow

r = Discount Rate

T = Time

$$C_1 = 2000$$

$$C_2 = 3000$$

$$C_3 = 3000$$

$$C_4 = 4000$$

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. 283.51\$ to the company, so the project is acceptable.

→ As positive NPV mean the combined Pv of all cash inflows exceed the Pv of each outflow.

→ The NPV of 283.51 suggest that the combined Pv of all cash inflow exceed the Pv of cash out-flows by 283.51\$

$$NPV = 283.51 > 0$$

ANSWER TO QUESTION # 4

Power / Interest Matrix :

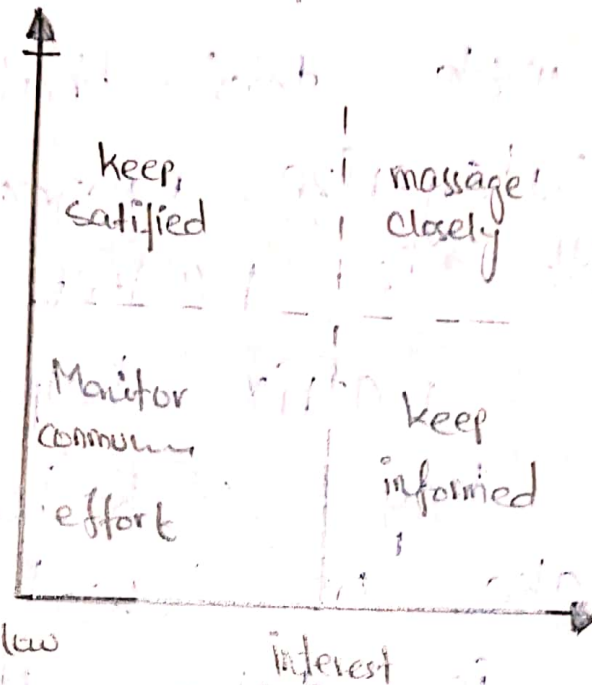
The power/interest matrix is a simple tool that helps to categorize project stakeholder with in project.

This matrix helps to focus on the key stakeholder who can make or break the project. In taken, this power matrix helps us in stakeholder prioritization.

Layout of the Matrix :

The power interest matrix contain four quadrant. Each quadrant gives an identification of the level of stakeholder management the use we will have to employ and may also influence

the type of communication style, the four quadrant of power matrix are shown below.



High Power - High Interest ::

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

High Power - Low Interest ::

These stakeholder needed to be kept in loop, these stakeholder need to keep satisfied even through they aren't interested.

because they yield power, these type of stakeholder should be dealt continuously, because they make use 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 detail of project.

Low Power - Low Interest:

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

ANSWER TO QUESTION # 5

For a project of Residential house different stages to be considered in the risk management are 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.
Familiarization: the team with the proposal, assemble documentation and define the key objective.

~~Assess~~ → Axes the proposal in relation to the agency's objective and strategies.

→ Determine assessment criteria for proposal.

→ Define key element to structure risk analysis.

STAGE # 3

"Risk Analysis"

IDENTIFY RISKS:

→ Prepare a comprehensive schedule of risks for each element.

→ Describe each risk and list the main assumption.

Asses Risk likelihood & consequence:

→ Assemble data on risk and their consequences.

→ Asses Risk like hood.

→ Asses Risk Impact

IDENTIFY SIGNIFICANT RISKS :

→ Ranks to reflect impact and likelihood.

→ Where applicable, estimate risks factor.

→ Discard/accept minor risks

IDENTIFY MAJOR RISKS FOR DETAILED Risk ACTION PLANNING.

STAGE : 04

Identify feasible response

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

→ Responses may include.

- 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 their costs for each response.

→ select the preferred response

→ Develop management measured and schedules.

→ specify Risk management measured moderate risks.

→ Develop risk action schedules for major risks.

a) Additions required

b) Resources

c) Responsibility

d) Timing

STAGE # 5

For designated proposal, produce the risk management plan.

For the other project collate and summarize risk action as scheduled and measure.

STAGE # 6

Risk Management Implementation.

- Implement measure and action strategies.
- Monitor the Implementation
- Assign Responsibilities
- Timing.
- Undertaking periodic review and performance evaluation.