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Section	C
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Q No: 1

Answer

⇒ Given data:

⇒ Number of communication channel = 6

⇒ Additional stake holder = 2

⇒ Required data:

⇒ Identify the number of communication channels after increasing the scope of work = ?

⇒ Solution:

As we know that;

$$\text{Number of communication channels} = \frac{n(n-1)}{2}$$

⇒ The number of people involved in six (6) communication channel ⇒

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

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

$$\Rightarrow 12 = n^2 - n$$

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

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

(2)

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

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

$$\Rightarrow n-4 = 0 \quad \text{or} \quad n+3 = 0$$

$$\Rightarrow n = 4 \quad \text{or} \quad n = 3$$

So The number of people involved = 4

As; There are additional stake holder;

So That Total number of people are:-

$$\Rightarrow n = 4 + 2$$

$$\Rightarrow n = 6$$

Now; The required communication

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

$$= 3(5)$$

$$= 15$$

So; New communication channel = 15

Answer



Q No 9

Answer:

⇒ Given data:

For a project of 10 packages;
for each planned value, Actual Cost
and percentage of completion is given;

⇒ Required data:

Calculate;

* Earned value

* Cost variance

* Schedule variance

* Cost performance Index

* Schedule performance Index

⇒ Solutions:

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=> values are calculated in the following table;

Work Package	BCWS	ACWP	%	BCWP	Cost	Schedule	Cost	Schedule
	Planned Value	Actual Cost	progress	Earned Value	Variance	Variance	performance Index	performance Index
1	100,000	120,000	100	10,000	-20,000	0	0.83	1
2	100,000	110,000	100	100,000	-10,000	0	0.91	1
3	100,000	80,000	90	90,000	10,000	-10,000	1.13	0.9
4	100,000	125,000	80	80,000	-45,000	-20,000	0.64	0.8
5	100,000	75,000	50	50,000	-25,000	-50,000	0.67	0.5
6	100,000	0	0	0	0	-100,000	0	0
7	100,000	0	0	0	0	-100,000	0	0
8	100,000	0	0	0	0	-100,000	0	0
9	100,000	0	0	0	0	-100,000	0	0
10	100,000	0	0	0	0	-100,000	0	0

Comments:

On the basis of CPI:

According to Thumb Rules;

* Work package 1, 2, 4 and 5 are over budget because CPI values is less than 100%.

* Work package 3 is under budget because CPI value is greater than 100%.

On the basis of SPI:

According to Thumb Rules;

* Work package 1 and 2 are on the Schedule

* Work package 3, 4 and 5 are behind Schedule.

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Q No 3

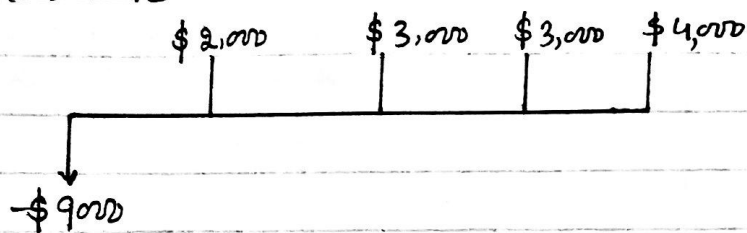
Answer

⇒ Given data:

⇒ Initial investment = 9000 \$

⇒ Discount rate = $r = 10\%$

⇒ The expected cash flow for next four years is



⇒ Required data:

⇒ Net present value = NPV = ?

⇒ Comment on the result.

⇒ Solution:

As we know by formula;

$$\Rightarrow NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_T}{(1+r)^T} \rightarrow \textcircled{A}$$

$$\text{As; } PV_0 = -C_0$$

$$PV_0 = -9000 \$$$

Here; $C = \text{Cash flow}$
 $T = \text{Time}$

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$$C_1 = 2,000 \$$$

$$C_2 = 3,000 \$$$

$$C_3 = 3,000 \$$$

$$C_4 = 4,000 \$$$

Now putting value

$$PV_1 = \frac{C_1}{1+r} = \left(\frac{2000}{1 + \frac{10}{100}} \right)$$

$$\Rightarrow \boxed{PV_1 = 1818.18 \$}$$

$$PV_2 = \frac{C_2}{(1+r)^2} = \frac{3,000}{\left(1 + \frac{10}{100}\right)^2}$$

$$\Rightarrow \boxed{PV_2 = 2479.34 \$}$$

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

$$\Rightarrow \boxed{PV_3 = 2253.94}$$

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

$$\boxed{PV_4 = 2732.05}$$

Now putting value in (A) we get

$$\Rightarrow NPV = -9000 + 1818.18 + 2479.34 + 2253.94 + 2732.05$$

$$\Rightarrow \boxed{NPV = 283.51 \$}$$

Answer

Comment:

A positive NPV means the combined PV of all cash inflows exceeds the PV of cash outflows.

In our Example the NPV of 283.51 \$ suggests that the combined PV of all cash inflows exceeds the PV of cash outflow by 283.51 \$.

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Q4

Answer:

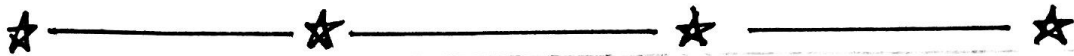
		Level of Interest	
		Low	High
Power	Low	A Minimal effort	B Keep informed
	High	C Keep Satisfied	D Key players

Power/Interest Matrix:

- ⇒ Stake holders in group A: Need only minimum effort and monitoring.
- ⇒ Stake holder in group B: Stake should be kept informed as they may be able to influence more powerful Stake holders
- ⇒ Stakeholder in group C: They are powerful, but level of interest is low. Generally expected to be passive, but may move

info group D on an issue of particular interest.

⇒ Stakeholders in group D: They are both powerful and interested. Their co-operation is of the importance for new strategies.



Q No 5:

Answer:

There are different stages to be considered in the Risk management checklist for a project of Residential house are;

⇒ Stage 1 (Initiation):

★ Assemble Risk management resources.

★ Appoint the team leader and ensure a breadth of skills/experience within the team.

★ Assign Risk Management responsibility appropriate to task.

⇒ Stage 2 (Proposal Familiarization):

★ Specify objectives and criteria.

★ familiarise the team with the proposal, assemble documentation and define the key objectives.

- ★ Assess the proposal in relation to the Agency's objectives and strategies.
- ★ Determine assessment criteria for proposal
- ★ Define key elements (target 20-50 elements items or objectives) 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 assumptions.
- ★ Assess risk likelihoods and Consequences:
 - Assemble data on risk and their consequences.
 - Assess risk likelihoods.
 - Assess risk impacts.
- ★ Identify Significant risks:
- ★ Identify major risks for detailed risk action planning.

⇒ Stage 4 (Risk Response planning):

★ Identify feasible responses:

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

★ Describe each feasible response and list main assumptions.

★ Select the best Response:

- Evaluate the benefits and costs for each response

- Select the preferred Response.

⇒ Stage 5 (Reporting)

★ For designated proposals, produce the Risk Management plan.

★ For other projects, collate and summarize risk action Schedules and measures.

⇒ Stage 6 (Risk management implementation):

★ Implement measures and action Strategies.

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* Monitor the implementation
(a) Assign Responsibilities

(b) Timing

* Undertake periodic review and performance evaluation.

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End