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final exam

construction paper

Question ①

Given

Number of communication channels = 6
Additional stack holder

Req

Identify number of communication channel after increasing scope of work = ?

Sol

As we know that

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

\Rightarrow Number of people involved in 6 communication channels are

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

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

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

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

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

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

$$\textcircled{1} n-4=0 \Rightarrow \boxed{n=4}$$

$$\textcircled{2} n+3=0 \Rightarrow \boxed{n=-3}$$

and No of people involved = 4
and there are additional stake
holders so that total number
of people are

$$n = 4 + 2 = 6$$

Now \Rightarrow required communication
channel = $\frac{6(6-1)}{2} = \frac{30}{2} = 15$

\Rightarrow Number of communication channel
= 15 Ans

QUESTION NO 2

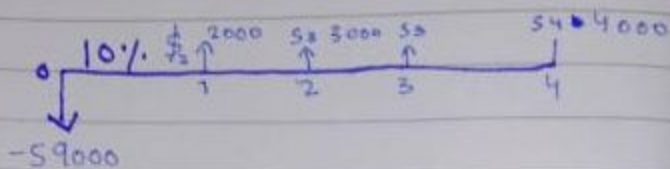
ANSWER:

WORK PAKAGE	P.V	A.C	PROGRESS %	RP	EV	CV	SV	CPI	SPI
				$RP=AWC/WPC$	$EV=PV*RP$	$CV=EV-AC$	$SV=EV-PV$	$CPI=EV/AC$	$SPI=EV/PV$
1	100000	120000	100	1	100000	-20000	0	0.833333333	1
2	100000	110000	100	1	100000	-10000	0	0.909090909	1
3	100000	80000	90	0.9	90000	10000	-10000	1.125	0.9
4	100000	125000	80	0.8	80000	-45000	-20000	0.64	0.8
5	100000	75000	50	0.5	50000	-25000	-50000	0.666666667	0.5
6	100000	0	0	0	0	0	-100000	.	0
7	100000	0	0	0	0	0	-100000	.	0
8	100000	0	0	0	0	0	-100000	.	0
9	100000	0	0	0	0	0	-100000	.	0
10	100000	0	0	0	0	0	-100000	.	0
AVERAGE								0.4293	0.42

$CPI < 1$ SO PROJECT IS OVER BUDGET

$SPI < 1$ SO PROJECT IS BEHIND SHEDDULE

Question ③



Sol

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

$$Pv_0 = -C_0$$

Considerations and Given data

- ⇒ $-C_0$ = initial investments
- ⇒ C = Cash flow
- ⇒ r = Discount rate
- ⇒ Time = T
- ⇒ $C_1 = 2000$
- ⇒ $C_2 = 3000$
- ⇒ $C_3 = 3000$
- ⇒ $C_4 = 4000$

Now As given

$$P_{V_0} = -C_0$$

$$P_{V_0} = -9000$$

$$\Rightarrow P_{V_1} = \frac{C_1}{1+r} = \left(\frac{2000}{1 + \frac{10}{100}} \right) \Rightarrow \boxed{P_{V_1} = 1818.18}$$

$$\Rightarrow P_{V_2} = \frac{C_2}{(1+r)^2} = \left(\frac{3000}{\left(1 + \frac{10}{100}\right)^2} \right) \Rightarrow \boxed{P_{V_2} = 2479.3}$$

$$\Rightarrow P_{V_3} = \frac{C_3}{(1+r)^3} = \left(\frac{3000}{\left(1 + \frac{10}{100}\right)^3} \right) \Rightarrow \boxed{P_{V_3} = 2253.94}$$

$$\Rightarrow P_{V_4} = \frac{C_4}{(1+r)^4} = \left(\frac{4000}{\left(1 + \frac{10}{100}\right)^4} \right) \Rightarrow \boxed{P_{V_4} = 2732.05}$$

Now

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

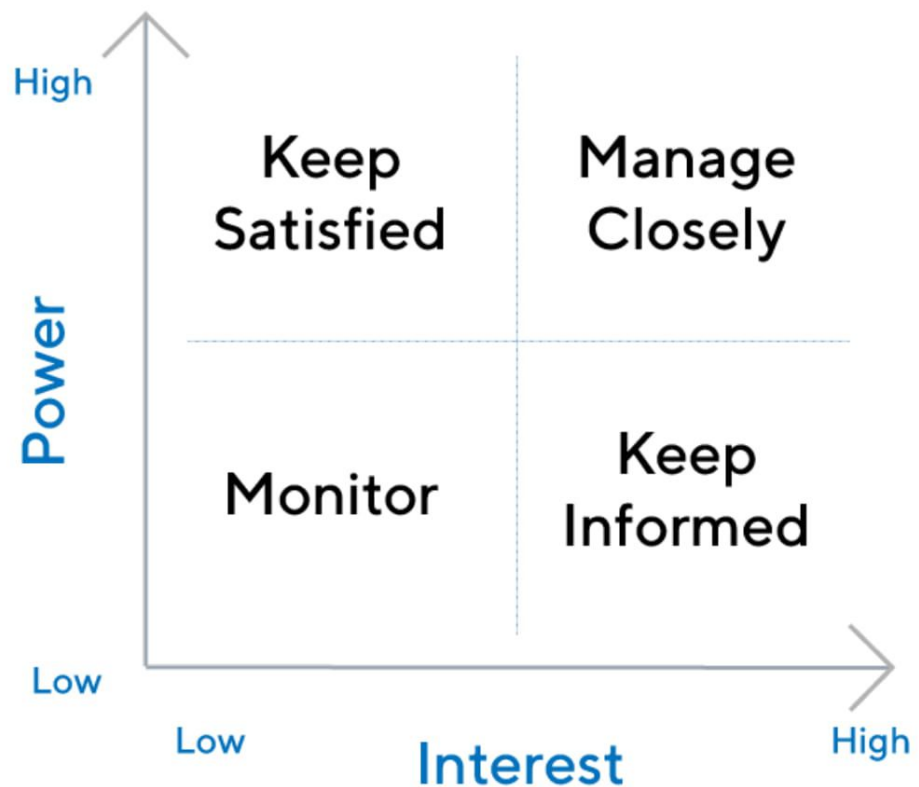
$$= -9000 + 1818.18 + 2479.34 + 2253.9 + 2732.05$$

$$\Rightarrow \boxed{NPV = \$ 283.51} \quad \underline{\underline{\text{Ans}}}$$

QUESTION NO 4

ANSWER

Power-Interest Grid



1. High power, high interest: These are your most important stakeholders, and you should **prioritize** keeping them happy with your project's progress.

2. High power, low interest: Because of their influence in the company, you should work to keep these people satisfied. But because they haven't shown a deep interest in your project, you could turn them off if you over-communicate with them.
3. Low power, high interest: You'll want to keep these people informed and check in with them regularly to make sure they are not experiencing problems on the project.
4. Low power, low interest: Just keep these people informed periodically, but don't overdo it.

QUESTION #5

CHECKLIST FOR RISK MANAAGMENT

=: STAGE 1 INITIATION

- Assemble risk management sources
- Apoint the team leader and ensure a breadth of skills within 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 deline the key objectives
- Asses the proposal in relation to agency,s objectives and strategies
- Determine assessment critereafor proposal
- Deline key elements (target 20-50 elements,items or activities) to structure risk analysis

=: STAGE 3 Risk analysis

1=IDENTIFY RISK

- Prepare a comprehensive schedule of risks for each element
- Describe each risk and list the main assumptions

2=ACCESS RISK LIKELYHOOD AND CONSEQUENCES

- Assemble data on risk and their consequences
- Access risk likelyhoods
- Access risk impacts

3=IDENTIFY SIGNIFICANT RISKS

- Ranks risks to reflects impacts and likelihoods
- Where applicable, estimate risk factors
- Discard/accept minor risks
- Identify moderate risks for management measures

4=IDENTIFY MAJOR RISKS FOR DETAILED RISK ACTION PLANNING

=: STAGE 4 RISK RESPONSE PLANNING

1=IDENTIFY FEASIBLE RESPONSES

- 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

2= DESCRIBE EACH FEASIBLE RESPONSE AND LIST
MAIN ASSUMPTIONS

3=SELECT THE BEST RESPONSE

- evaluate the benefits and costs for each response
- select the preferred response