

# Final term paper

Name : Asad ullah

Class : BE (C)

Section : A

ID # 7697

Subject: Construction Management

Date: 22/6/2020

Instructor: Dr, Muhammad  
Zeeshan Adad.

Name # Asad ullah

ID # 7697

①

②

① No 1 :-

You have a team of project manager reporting to you. Recently a new manager relatively in experiences has joined your team. Considering his level of experience you

to identify the number of communication channel now?

Given data :-

Number of communication channel = 6

Additional stake holder = 2

Required data :-

Identify the number of communication channel after increasing the scope of work.

Solution No 1 :-

As we know that number of communication channel

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

2



(2)

The number of communication people involved in six communication channels.

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

$$12 = n(n-1) = n^2 - n$$

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

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

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

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

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

$$(n-4) = 0$$

$$n = 4$$

$$n+3 = 0$$

$$n = -3$$

So the number of people involved = 4. As there are additional stake holder so total number of people are

$$n = 4 + 2$$

$$n = 6$$

P.T.O

(3)

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

$$\frac{6(6-1)}{2} = 3(5)$$

Now communication channel

$$\boxed{= 15} \text{ Ans}$$

— X — X — X — X — X — X



Name # Asad Ullah  
 ID # 7697

(1)

Question No # 2

if you have a project of 10 packages for each packages planned value

is ahead (behind schedule of over | under budget)

BCWS      ACWP      % progress      BCWP = EV

100,000	120,000	100%	$100,000 \times 100 = 100,000$
100,000	110,000	100%	$100,000 \times 100 = 100,000$
100,000	80,000	90%	$100,000 \times 90 = 90,000$
100,000	125,000	80%	$80,000$
100,000	75,000	50%	$50,000$
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
<b>1,000,000</b>	<b>510,000</b>		<b>320,000</b>



(2)

Cost Variance = EV - AC (Actual Cost)

1)  $100,000 - 120,000 = -20,000$

2)  $100,000 - 110,000 = -10,000$

3)  $90,000 - 80,000 = 10,000$

4)  $80,000 - 125,000 = -45,000$

5)  $50,000 - 75,000 = -25,000$

6)  $0 - 0 = 0$

7)  $0 - 0 = 0$

8)  $0 - 0 = 0$

9)  $0 - 0 = 0$

10)  $0 - 0 = 0$

$\Sigma = -90,000$  over budget

$$CPI = \frac{EV}{AC}$$

$$\frac{320,000}{510,000}$$

$$0.627$$

it has spent 38% more than it should spent till this data.



(3)

Schedule Variance

$$= EV - PV$$

$$1) 100,000 - 100,000 = 0$$

$$2) 100,000 - 100,000 = 0$$

$$3) 90,000 - 100,000 = -10,000$$

$$4) 80,000 - 100,000 = -20,000$$

$$5) 50,000 - 100,000 = -50,000$$

$$6) 0 - 100,000 = -100,000$$

$$7) 0 - 100,000 = -100,000$$

$$8) 0 - 100,000 = -100,000$$

$$9) 0 - 100,000 = -100,000$$

$$10) 0 - 100,000 = -100,000$$

$$\Sigma = -580,000 \Rightarrow$$

Behind schedule

$$SPI = \frac{EV}{PV} = \frac{320,000}{10,000} = 0.32$$

This project must have 68% accomplished more than actually has at this point.

(4)

Thus, the project is behind.

Schedule and over budget.



Name # Asad Ullah  
ID # 7697

①

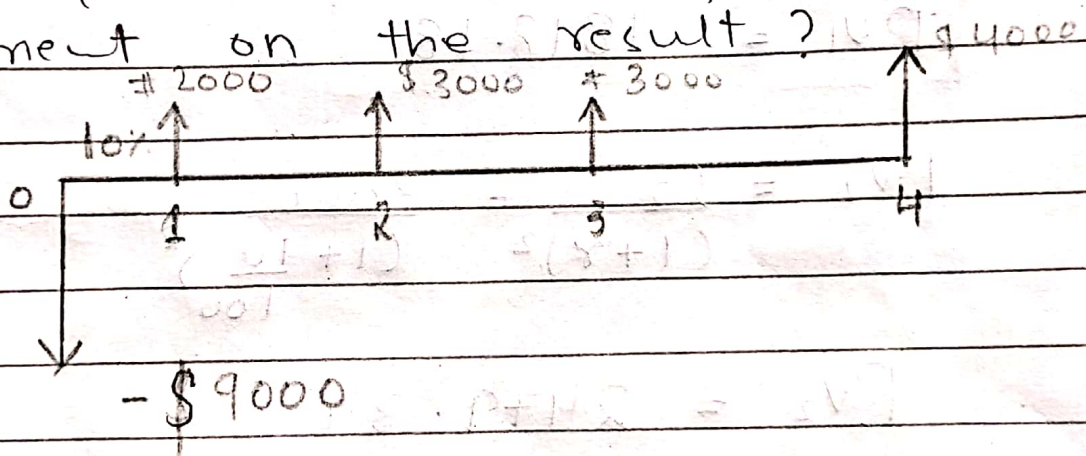
### Question # 03

A company is planning to invest 900 \$ in a project today.

The project is expected to have life of four year.

The expected cash flow for next four year is shown and the discount rate is 10%. (calculate net present value (NPV) and

comment on the result?)



Solution :-

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

-  $C_0$  = Initial Investment

$C$  = Cash Flow

$r$  = discount rate

$T$  = Time

$C_1$  = 2000

(2)

$$C_2 = 3000$$

$$C_3 = 3000$$

$$C_4 = 4000$$

$$PV_0 = -C_0$$

$$PV_0 = -9000$$

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

$$PV_1 = 1818.18$$

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

$$PV_2 = 2479.34$$

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

$$PV_3 = 2253.94$$

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

$$PV_4 = 2732.05$$



(3)

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

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

$$NPV = \text{\textcircled{0}} \text{\$ } 283.51$$

Ans

Name # Asad ullah

ID # 7697

①

Question No # 4

Ans :- Identify your stakeholders

Start by brainstorming who your stakeholder are, As part of this think of all the people who are affected by your work, who have influence or power over it or have interest in its successful or unsuccessful conclusion.

The table below identifies some of the people who might be stakeholders in your job or in your project.

Your boss	Shareholder	Government
Senior executives	Alliance Partner	Trade Association
Your co-workers	Suppliers	The press
Your team	Lenders	Interest groups
Customers	Analysts	The public
Your family	Key Contributor	Key Advisor



2

## 2) Prioritize your Stakeholders.

You may now have list of people and organization that are effected by your work. Some of these may have the power either to block the work or to advance it. Some may be interested in what you are doing while other may not care. So you are doing while other may not care, So you are doing while other may not care. So you need to work out who you need to prioritize.

You can map out your stake holders, and classify them according to their power over your work and their interest in it, on a power/interest grid (our interactive screen app makes this step easy to accomplish, or you can download a template of the grid by clicking on the "download temp button at the end of this article")



(3)

## Figure 1: power / Interest Grid for Stakeholder

Prioritization:-

Keep Satisfied	manage closely
Monitor (minimum effort)	keep Informed

The position that you allocate to a stakeholder on the grid shows you the action you need to take with them.

- high power, highly interested people (manage closely): you must fully engage these people and make the greatest effort to satisfy them.
- high power, less interested people (keep satisfied) put enough work in with these people to keep them satisfied



(4)

low power less interested people (monitor) again monitor these people, but don't bore them with excessive communication.

Your boss for example, likely has high power and influence over your project and high interest in them. your family however, may have high interest in them but won't have power over them.

### 3) understand your key stakeholders.

You now need to discover how your key stakeholder feel about your project. You also need to work out how best to engage them, and how to communicate with them.

Question that can help you understand your stakeholder include.

- what financial or emotional interest do they have in the outcome of your work?



(5)

Is it positive or negative.

- what motivates those most of all?
- what information do they want from you and what is the best way of communicating with them.
- what is their current opinion of your work? Is it based on good information?
- who influences their opinion generally, and who influence their opinion of you? Do some of these influence therefore become important stakeholder in their own right.
- if they aren't likely to be positive, what will win them around to support your project?

X

X

X





Q no # 5

For a project of residential house what are the different stages to be considered in the risk management checklist.

Ans:- Checklist for risk management

Stage 1:- Initiation

- Assemble Risk management resources.
- Appoint the team leader and ensured breadth of Skill/Experience within the team.
- Assign Risk management responsibilities appropriate to task.

Stage 2

proposal Familiarization.

Specify objectives and criteria.

②

- Familiarise the team with the proposal, assemble documentation and define the key objective.
- Assess the proposal in relation to agency's objective and strategies.
- Determine assessment criteria for proposal.
- Define key element (target (20-50) element, item or activities) to structure analysis.

### - Stage 3

### Risk Analysis

- identify risks
- prepare a comprehensive schedule of risks for each element.
- Describe each risk and list the main assumption
- Assess risk likelihoods and consequences.
- Assemble data on risk and their consequences.
- Assess risk likelihoods.



(3)

- Assess risk impacts.

id

identify significant risks.

- Rank risk to reflect impact and likelihoods.

- where applicable, estimate risk factor.

- Discard / accept minor risks.

- identify moderate risk for management measures.

- identify major risks for detailed risk action planning.

## Stage 4

### Risk response planning

- identify feasible responses.

- for each moderate and major risk, identify the lessible response.

- Responses may include:

a) Risk prevention

b) Impact mitigation.

c) risk transfer and insurance.

d) risk acceptance.

Select the best response.

→ Evaluate the benefits and cost

- select the preferred response.

4

## Stage # 5

### Reporting :-

- For designated proposal, produce the risk management plan.
- For other project, 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) Timing
- undertake periodic review and performance evaluation.