1. **State the risk opportunities taken by the entrepreneurs.?**
   Solution Link- https://harappa.education/harappa-diaries/entrepreneurial-risks/

2. **Steps to mitigate risks. Creative strategies adopted by the entrepreneurs.**
   Solution Link- https://www.theirmindia.org/blog/5-effective-ways-entrepreneurs-can-manage-risk/

3. **Convergent vs divergent thinking of the entrepreneurs**
   First link- https://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_22
   Second link- https://fourweekmba.com/convergent-vs-divergent-thinking/

4. **A. Draw the network diagram for the project and find the time needed for the completion of the project.**
   B. Determine the critical path of the project network.
   C. Calculate float of activities and slacks of events.
   Solution:- **2nd page**

5. **Explain the concept of operating cost of a project?give examples of operating cost.**
   Solution:- **3rd Page**

6. **State 5 cost reduction methods of the project.** Solution:- **3rd Page & 4th Page**

7. **What is Entrepreneurial Mobility? Is there any relation with Motivation Theories?** Solution:- **4th Page & 5th page**

8.

Activity	Estimated duration in days		
	Optimistic	Most Likely	Pessimistic
1 - 2	2	5	8
1 - 3	4	10	16
1 - 4	1	7	13
2 - 5	5	8	11
3 - 5	2	8	14
4 - 6	6	9	12
5 - 6	4	7	10

Find variances of activities on critical path and its standard deviation for the above example. Solution:- **6th Page**

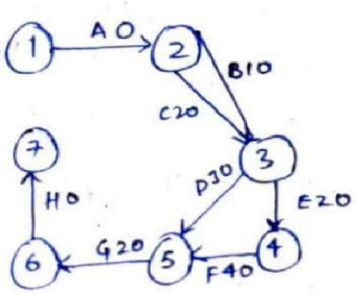
Q1. a) Draw the network diagram for the project and find the time needed for the completion of the project.

b) Determine the critical path of the project network.

c) Calculate the float of activities and slack of events.

Task ID	Task Description	Task Predecessors	Task duration
A	Project start	-	0
B	Buy materials for A	A	10
C	Buy materials for B	A,	20
D	Build A	B, C	30
E	Build B	B, C	20
F	Polish and finish B	E	40
G	Join A and B	D, F	20
H	Project Finish	G	0

Task ID	Duration	Earliest start	Earliest Finish	Latest start	Latest finish	Total float
A	0	0	0	0	0	0
B	10	0	10	10	20	10
C	20	0	20	0	20	0
D	30	20	50	20	50	0
E	20	20	40	20	40	0
F	40	40	80	40	80	0
G	20	80	100	80	100	0
H	0	100	100	100	100	0



- time needed = 0 + 20 + 20 + 40 + 20 + 0 = 100 hrs
- critical activities are A, C, E, F, G, H
- non critical activities are B, D

Q2. Explain the concept of operating cost of a project ? Give examples of operating cost.

ans. Operating costs are the ongoing expenses incurred from the normal day-to day of running a business. It includes costs of good solds (COGS) and other operating expenses - often called selling, general and administrative (SG&A) expenses. Common operating costs in addition to COGS may include rent, equipment, inventory costs, allocated for research and development.

Examples of operating cost -

i) Salaries and benefits of the employees of a company
ii) rent or property purchase costs such as production space rent, warehouses cost, etc.
iii) advertising and marketing fees
iv) Licensing fees
v) Direct materials cost.

Q3. State 5 cost reduction methods of the project.

ans. A cost reduction method is used to improve profitability of the organization. There are five cost reduction methods that can be employed :-

i) Target costing - It is also known as product costing method. Here an attempt at the planning and development phase of a product life cycle is done to attain a specified cost that is decided by management. This approach is to seek the lower costs by a designing a quality product that reduces cost at the production phase.

ii) Activity-based costing - It is a model that identifies the cost pools or activity centers, in an organization and assigns costs to products and services based on the number of events or transactions involved in the process of providing a product or service.

iii) Just in time - It is also known as lean production. It is a 'pull' system of production which means that the actual orders provide a signal for when a product should be manufactured. When there is a demand-pull it enables a company to produce only what is required with correct quantity and correct time.

iv) Enterprise Resource planning - It is a computerised inventory control and production system that was born from material requirements planning systems. It is a system that organizes functions of an institution and assists in account, finance, etc. through creation of databases and graphical user interfaces.

v) Value Engineering (VE) - It is a systematic method to improve the value of goods or products and services by using an examination of function, value as defined in the ratio of function to cost. Value can therefore be increased by either improving the function or reducing the cost.

Q4. What is Entrepreneurial Mobility? Is there any relation with Motivation Theories?

ans. Entrepreneurial Mobility means movement of entrepreneurs from one location to another and similarly from one occupation to another, which affect the pace and pattern of entrepreneurship development.

Entrepreneurial mobility may be classified into two types based on the movement and settlement of entrepreneu

1) Occupational Mobility - means movement or changes in occupation. This may take place in two forms:

a) Inter-generation movement - happens when a person moves or leaves from the principle occupation of his/her father.

b) Intra-generation movement - happens when a person moves or leaves from his own occupation during the operational career.

It has some relation with Motivational Theories. There are some important factors that influence the entrepreneurial mobility:

a) Education - An educated entrepreneur tends to be more mobile than an uneducated one.

b) Training and Experience - An experienced entrepreneur better perceives the available opportunities, better analyses his/her strengths and weaknesses and also understands the complexities involved in running an enterprise. That technical knowledge and experience influences the entrepreneurial mobility.

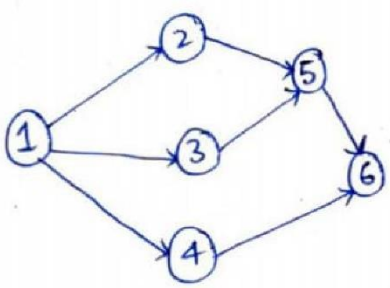
c) Political conditions - The entrepreneurial mobility is also influenced by political factors such as tax policy, employment laws, trade restrictions and tariff.

d) Size of Enterprise - Larger business houses are found more mobile than smaller ones because a large size of enterprise will have the capability to start a new business at a new place.

e) Availability of Facilities - The entrepreneurs may move from the areas with no or less facilities to areas with more facilities

Find variances of activities on critical path and standard deviation for the given example.

Activity	Estimated duration (days)			Expected dur. $t_e = \frac{t_o + 4t_m + t_p}{6}$	Variance (σ^2) $\sigma^2 = \left(\frac{t_p - t_o}{6}\right)^2$
	Optimistic	Most likely	Pessimistic		
1-2	2	5	8	5	1
1-3	4	10	16	10	4
1-4	1	7	13	7	4
2-5	5	8	11	8	1
3-5	2	8	14	8	4
4-6	6	9	12	9	1
5-6	4	7	10	7	1



critical path → 1-3-5-6

Variance along critical path

$\sigma^2 = \sigma^2_{1-3} + \sigma^2_{3-5} + \sigma^2_{5-6}$

$= 4 + 4 + 1$

$= 9$

Standard deviation $= \sqrt{\text{variance}}$

$= \sqrt{9}$

$= 3$