Date ___/___/___

3. NETWORK ANALYSIS

Network Analysis → CPM → Critical path method
PERT → Program Evaluation Review Technique.

A Network is a pictorial representation of work or to be performed

Activity: An Activity is any portion of the project which consumes time or resource and has a definite beginning and ending.

Activities are graphically represented by arrows [⟶] (moving forward), always forward moving arrow.

Types/Kinds of Activities:

1. Predecessor/Preceeding Activity. for ② → ④ Activity = ① - ② activity is preceed
2. Successor Activity for ① → ② and ① → ③ activity is successor.
3. Concurrent Activity :- Activities that can be carried out simultaneously ① → ② ① → ③ along with other activities is known as Concurrent Activity.

An activity may be concurrent with one or more than one activitie

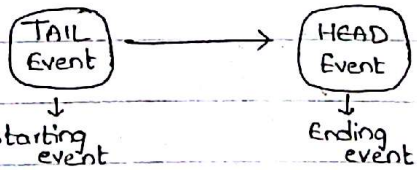
4. Dangling Activity :- An activity which is not connected to the network from both the ends points/events. ⑤ → ⑥

Exception :- Starting event of the project and end event of the project.

5. Dummy Activity :- It is a Hypothetical activity which doesn't consume any kind of resource. It is represented using dotted line. It is use to connect Dangling activity. ④ ⋯⋯ ⑤

Event: The beginning and ending points of an activity or group of activities is known as an Event.

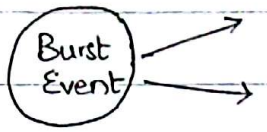
For an activity there will be always 2 Events.



Types of Events:

1. Merge Event: If an event represents joint completion of more than one activity is known as Merge event.

2. Burst Event: If an event represents joint initiation of more than one activity, it is known as Burst Event.



3. Merge & Burst Event: If an event from the where more than one activity starts and more than one activity is completed.

Problems:

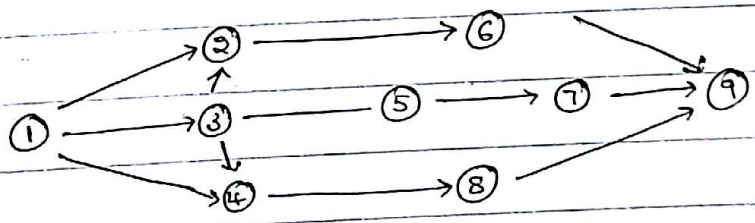
1. Draw a network diagram using following activities.

1-2, 1-3, 1-4, 2-5, 4-5, 3-6, 5-7, 6-7.

2. Draw the network diagram using following activities.

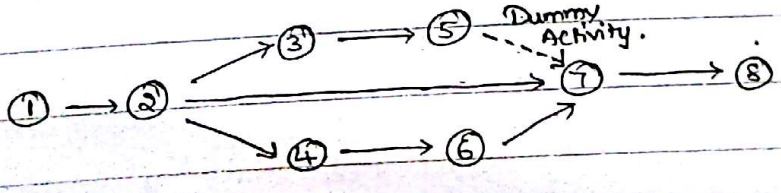
1-2, 1-3, 1-4, 3-2, 3-4, 3-5, 2-6, 4-8, 5-7, 7-9, 6-9, 8-9.

(No two activities should Overlap)



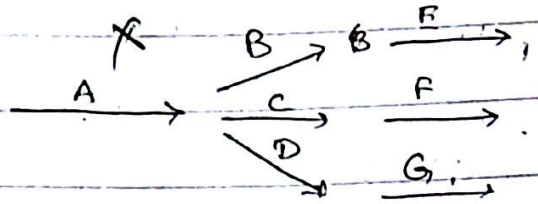
3. Draw network diagram using following activities

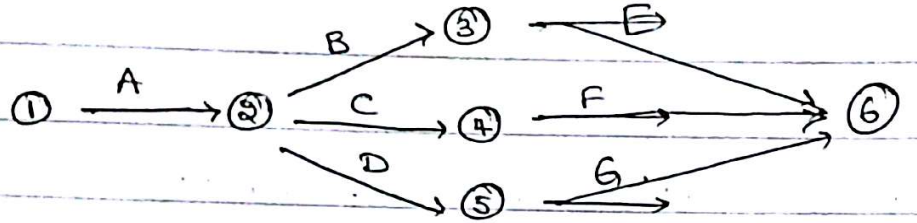
1-2, 2-3, 2-4, 3-5, 4-6, 2-7, 6-7, 7-8.



4. Draw network from the following activities.

Activity	Preceeding Activity.
A	–
B	A
C	A
D	A
E	B
F	C
G	D.





5. Draw the network diagram for the above activities with the following updation.

Activity	A	B	C	D	E	F	G
Predecessor activity.	–	A	A	A	B	C, B	D.