Experiment Number. 5

Aim :	Draw a project evaluation & Review Technique (PERT) chart using ASANA Tool.
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Theory: About Program evaluation & Review Technique (PERT) chart:

The PERT chart is a project management tool used to schedule, organize & coordinate tasks within a project. It helps managers identify the critical path, estimate the minimum time needed to complete a project. It helps managers &, save resources & time.

Key Components of PERT Chart:

i) Nodes: Represents tasks or events.

ii) Arrows: Shows dependencies between tasks.

iii) Time estimates: Each time is assigned 3 times estimates as:

a) Optismistic time (O): Shortest time to complete a task

b) Most likely time (M): Most probable time duration.

c) Pessimistic time (P): Longest time to complete the task.

Benefits :

i) Identifies the critical path (Longest path of dependent tasks).

ii) Helps manage complex projects with multiple tasks & dependencies.

iii) Improves time management & resource allocation.

Example use : A PERT Chart is used in the projects like software development, construction & research where precise scheduling is neccessary for success.

About the Asana tool: Asana is a popular project management & collaboration tool that helps team organize, track & manage their work. It is designed to streamline workflows, improve the communication & enhance productivity by offering features that allow users to plan projects, assign tasks & moniter progress.

Key Features of Asana Tool :

i) Task management
ii) Project Tracking
iii) Workspaces & Teams
iv) Timeline
v) Collaborative Features.
vi) Integrating Tasks.

PERT For LMS:

Creating a PERT for a library management system (LMS) involves identifying key tasks (events) and their dependencies, then estimating the time for completion.

Tasks involved in the LMS development:

i) Requirement Gathering {A}
ii) System Design {B}
iii) Database Setup {C}
iv) UI Design {D}
v) Backend Development {E}
vi) Integration {F}
vii) Testing {G}
viii) Deployment {H}
ix) User training {I}
x) System Documentation {J}

Time estimation:

Task	Description	Predecessor	Time (O-M-P)
A	Req Gathering	None	2-3-5 Days
B	System Design	A	3-5-8 Days
C	Database Setup	A	2-4-6 Days
D	UI-Design	A	4-6-9 Days
E	Backend deve.	B, C	6-10-14 Days
F	Integration	D, E	3-5-7 Days
G	Testing	F	5-7-10 Days
H	Deployment	G	2-3-5 Days
I	User Training	H	2-4-6 Days
J	System Doumen	G	2-3-4 Days

Conclusion: Thus the PERT chart ensures that critical tasks are completed on time & it allows project managers to focus on dependencies that can cause delays in the Library Management System (LMS).

Critical path (Longest Duration Path):
The critical path in PERT chart shows the sequence of dependent tasks that determines the minimum project completion time. In this case, based on dependencies & time estimates user would identify the longest route from start to end, accounting for each dependency.

Conclusion: Thus the PERT Chart ensures that critical tasks are completed on time & it allows project managers to focus on dependencies that can cause delays in the Library Management System (LMS).