

5. Consider the following tasks and resource information:

Tasks	Durations (Days)	Resources	Standard Rate	Dependency
T ₁	3	R ₁ ,R ₂		Ind.
T ₂	5	R ₃ ,R ₄		T ₁ (SS)
T ₃	3	R ₂ ,R ₅	R ₁ :\$10/Hr	T ₁ (FS)
T ₄	4	R ₄ ,R ₆	R ₂ :\$12/Hr	T ₂ (FS), T ₃ (SS)
T ₅	10	R ₁ ,R ₃	R ₃ :\$10/Hr	T ₄ (FS)
T ₆	12	R ₂	R ₄ :\$15/Hr	T ₃ (FS)
T ₇	4	R ₄	R ₅ :\$15/Hr	T ₅ (FF)
T ₈	5	R ₅ ,R ₆	R ₆ :\$20/Hr	T ₆ (FS), T ₇ (FS)

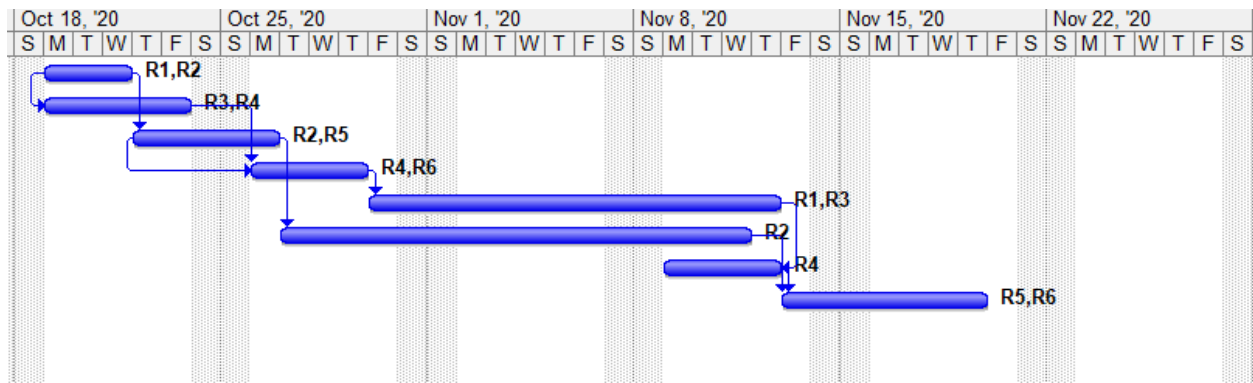
Calculate the usage of the resources (in hours) with assigned tasks and determine manufacturing cost of the project and market price to achieve 25% profit.

SOLUTION:

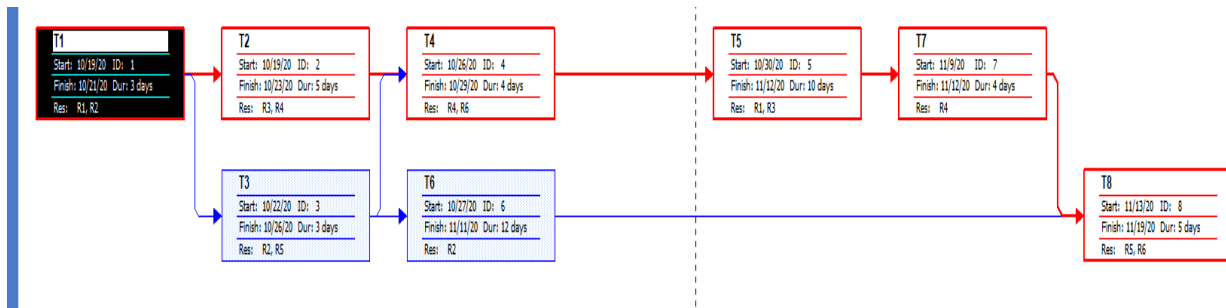
ENTRY SHEET:

	i	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		T1	3 days	Mon 10/19/20	Wed 10/21/20		R1,R2
2		T2	5 days	Mon 10/19/20	Fri 10/23/20	1SS	R3,R4
3		T3	3 days	Thu 10/22/20	Mon 10/26/20	1	R2,R5
4		T4	4 days	Mon 10/26/20	Thu 10/29/20	2,3SS	R4,R6
5		T5	10 days	Fri 10/30/20	Thu 11/12/20	4	R1,R3
6		T6	12 days	Tue 10/27/20	Wed 11/11/20	3	R2
7		T7	4 days	Mon 11/9/20	Thu 11/12/20	5FF	R4
8		T8	5 days	Fri 11/13/20	Thu 11/19/20	6,7	R5,R6

GANTT CHART:



NETWORK DIAGRAM:



RESOURCE SHEET:

	i	Resource Name	Type	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
1		R1	Work	100%	\$10.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
2		R2	Work	100%	\$12.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
3		R3	Work	100%	\$10.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
4		R4	Work	100%	\$15.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
5		R5	Work	100%	\$15.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
6		R6	Work	100%	\$20.00/hr	\$0.00/hr	\$0.00	Prorated	Standard

RESOURCE USAGE SHEET:

	i	Resource Name	Work
1		▢ R1	104 hrs
		T1	24 hrs
		T5	80 hrs
2		▢ R2	144 hrs
		T1	24 hrs
		T3	24 hrs
		T6	96 hrs
3		▢ R3	120 hrs
		T2	40 hrs
		T5	80 hrs
4		▢ R4	104 hrs
		T2	40 hrs
		T4	32 hrs
		T7	32 hrs
5		▢ R5	64 hrs
		T3	24 hrs
		T8	40 hrs
6		▢ R6	72 hrs
		T4	32 hrs
		T8	40 hrs

RESOURCE COST SHEET:

	Resource Name	Cost	Baseline Cost	Variance	Actual Cost	Remaining
1	▢ R1	\$1,040.00	\$0.00	\$1,040.00	\$0.00	\$1,040.00
	T1	\$240.00	\$0.00	\$240.00	\$0.00	\$240.00
	T5	\$800.00	\$0.00	\$800.00	\$0.00	\$800.00
2	▢ R2	\$1,728.00	\$0.00	\$1,728.00	\$0.00	\$1,728.00
	T1	\$288.00	\$0.00	\$288.00	\$0.00	\$288.00
	T3	\$288.00	\$0.00	\$288.00	\$0.00	\$288.00
	T6	\$1,152.00	\$0.00	\$1,152.00	\$0.00	\$1,152.00
3	▢ R3	\$1,200.00	\$0.00	\$1,200.00	\$0.00	\$1,200.00
	T2	\$400.00	\$0.00	\$400.00	\$0.00	\$400.00
	T5	\$800.00	\$0.00	\$800.00	\$0.00	\$800.00
4	▢ R4	\$1,560.00	\$0.00	\$1,560.00	\$0.00	\$1,560.00
	T2	\$600.00	\$0.00	\$600.00	\$0.00	\$600.00
	T4	\$480.00	\$0.00	\$480.00	\$0.00	\$480.00
	T7	\$480.00	\$0.00	\$480.00	\$0.00	\$480.00
5	▢ R5	\$960.00	\$0.00	\$960.00	\$0.00	\$960.00
	T3	\$360.00	\$0.00	\$360.00	\$0.00	\$360.00
	T8	\$600.00	\$0.00	\$600.00	\$0.00	\$600.00
6	▢ R6	\$1,440.00	\$0.00	\$1,440.00	\$0.00	\$1,440.00
	T4	\$640.00	\$0.00	\$640.00	\$0.00	\$640.00
	T8	\$800.00	\$0.00	\$800.00	\$0.00	\$800.00

TOTAL MANUFACTURING COST: \$7928

market price to achieve 25% profit: \$9910

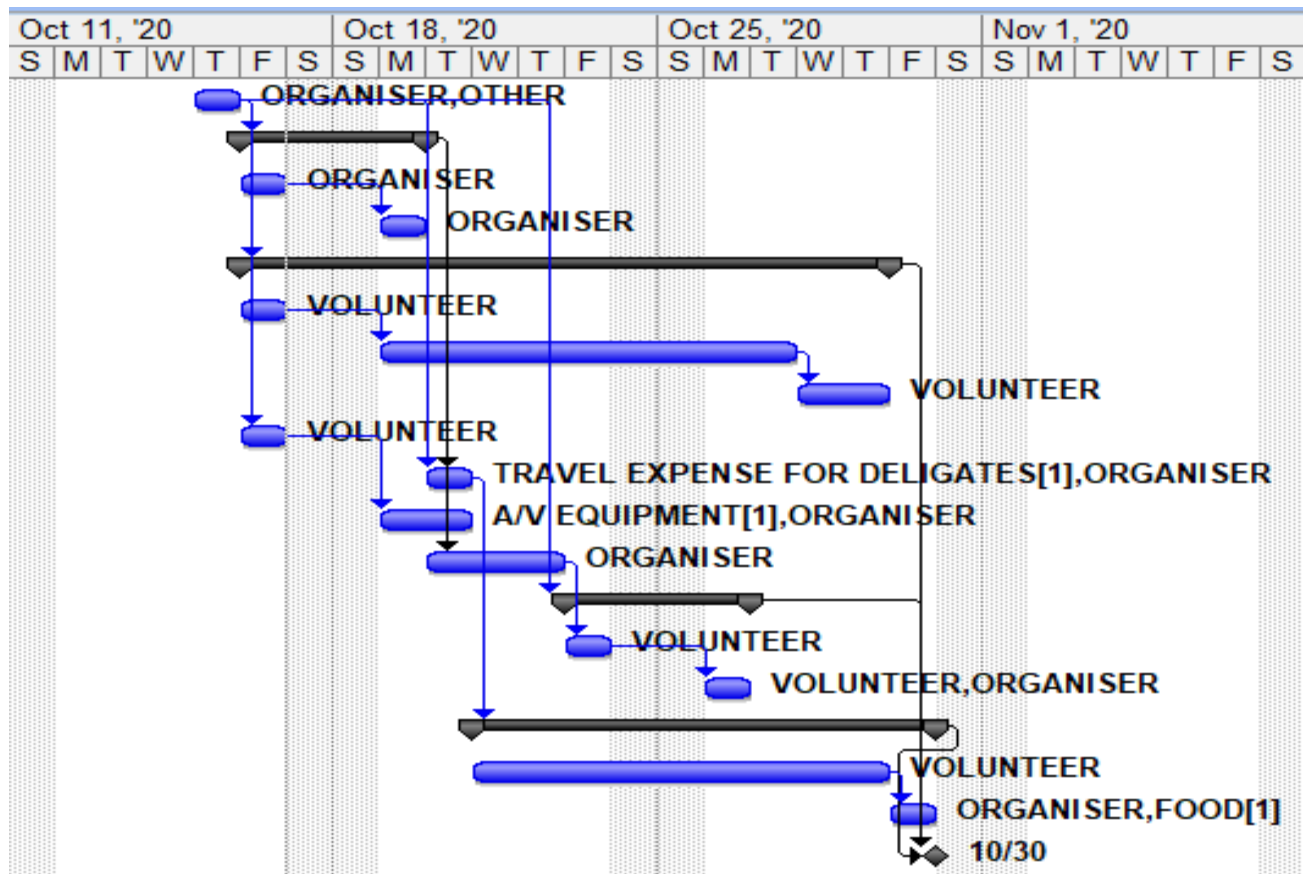
6. An annual seminar of your dept. will be held on 20th January, 2021. Identify the tasks and their dependencies and calculate the budget of the seminar. Draw the Gantt chart and network diagram.

SOLUTION:

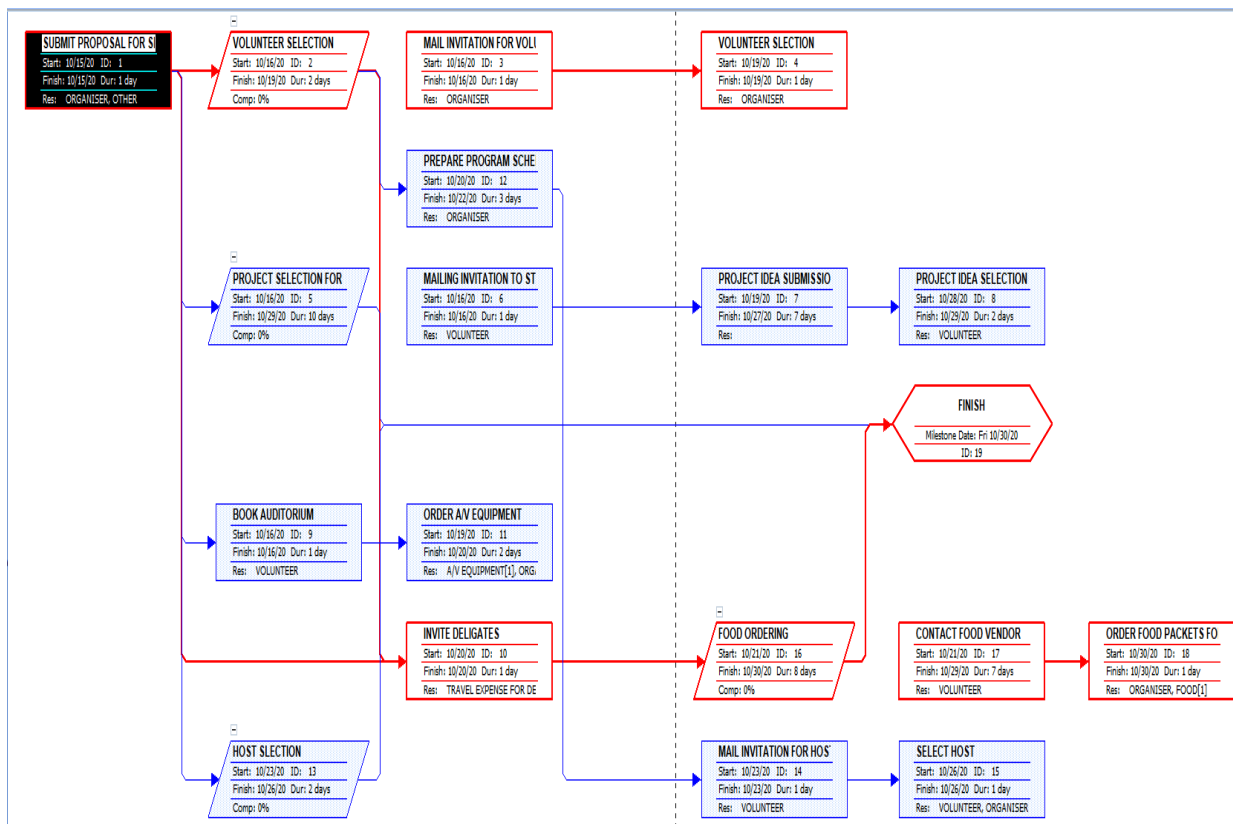
ENTRY SHEET:

	i	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		SUBMIT PROPOSAL FOR SEMINAR	1 day	Thu 10/15/20	Thu 10/15/20		ORGANISER, OTHER
2		▢ VOLUNTEER SELECTION	2 days	Fri 10/16/20	Mon 10/19/20	1	ORGANISER
3		MAIL INVITATION FOR VOLUNTEER	1 day	Fri 10/16/20	Fri 10/16/20		ORGANISER
4		VOLUNTEER SELECTION	1 day	Mon 10/19/20	Mon 10/19/20	3	ORGANISER
5		▢ PROJECT SELECTION FOR SEMINAR	10 days	Fri 10/16/20	Thu 10/29/20	1	
6		MAILING INVITATION TO STUDENTS	1 day	Fri 10/16/20	Fri 10/16/20		VOLUNTEER
7		PROJECT IDEA SUBMISSION	7 days	Mon 10/19/20	Tue 10/27/20	6	
8		PROJECT IDEA SELECTION	2 days	Wed 10/28/20	Thu 10/29/20	7	VOLUNTEER
9		BOOK AUDITORIUM	1 day	Fri 10/16/20	Fri 10/16/20	1	VOLUNTEER
10		INVITE DELIGATES	1 day	Tue 10/20/20	Tue 10/20/20	1,2	TRAVEL EXPENSE FOR DELIGATES[1], ORGANISER
11		ORDER A/V EQUIPMENT	2 days	Mon 10/19/20	Tue 10/20/20	9	A/V EQUIPMENT[1], ORGANISER
12		PREPARE PROGRAM SCHEDULE	3 days	Tue 10/20/20	Thu 10/22/20	2	ORGANISER
13		▢ HOST SLECTION	2 days	Fri 10/23/20	Mon 10/26/20	1	
14		MAIL INVITATION FOR HOSTING	1 day	Fri 10/23/20	Fri 10/23/20	12	VOLUNTEER
15		SELECT HOST	1 day	Mon 10/26/20	Mon 10/26/20	14	VOLUNTEER, ORGANISER
16		▢ FOOD ORDERING	8 days	Wed 10/21/20	Fri 10/30/20	10	
17		CONTACT FOOD VENDOR	7 days	Wed 10/21/20	Thu 10/29/20		VOLUNTEER
18		ORDER FOOD PACKETS FOR VOLUNTEER AND DEI	1 day	Fri 10/30/20	Fri 10/30/20	17	ORGANISER, FOOD[1]
19		FINISH	0 days	Fri 10/30/20	Fri 10/30/20	5, 13, 16	OTHERS[0]

GANTT CHART:






NETWORK DIAGRAM:



COST SHEET FOR PROJECT

	Task Name	Fixed Cost	Total Cost
1	SUBMIT PROPOSAL FOR	\$0.00	\$0.00
2	<input type="checkbox"/> VOLUNTEER SELECTION	\$0.00	\$0.00
3	MAIL INVITATION FOR	\$0.00	\$0.00
4	VOLUNTEER SELECTION	\$0.00	\$0.00
5	<input type="checkbox"/> PROJECT SELECTION FOR	\$0.00	\$0.00
6	MAILING INVITATION FOR	\$0.00	\$0.00
7	PROJECT IDEA SUBMIT	\$0.00	\$0.00
8	PROJECT IDEA SELECTION	\$0.00	\$0.00
9	BOOK AUDITORIUM	\$0.00	\$0.00
10	INVITE DELEGATES	\$0.00	\$140.00
11	ORDER A/V EQUIPMENT	\$0.00	\$70.00
12	PREPARE PROGRAM SCHEDULE	\$0.00	\$0.00
13	<input type="checkbox"/> HOST SELECTION	\$0.00	\$0.00
14	MAIL INVITATION FOR	\$0.00	\$0.00
15	SELECT HOST	\$0.00	\$0.00
16	<input type="checkbox"/> FOOD ORDERING	\$0.00	\$2.00
17	CONTACT FOOD VENDOR	\$0.00	\$0.00
18	ORDER FOOD PACKAGE	\$0.00	\$2.00
19	FINISH	\$0.00	\$0.00

RESOURCE SHEET

		Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code
1		ORGANISER	Work		O		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard	
2		VOLUNTEER	Work		V		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard	
3		FOOD	Material		F			\$2.00		\$0.00	Prorated		
4		A/V EQUIPMENT	Material		A			\$70.00		\$0.00	Prorated		
5		TRAVEL EXPENSE FOR DELEGATES	Material		T			\$140.00		\$0.00	Prorated		
6		DECORATION	Material		D			\$20.00		\$0.00	Prorated		
7		OTHERS	Material		O			\$70.00		\$0.00	Prorated		
8		OTHER	Work		O		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard	

RESOURCE USAGE:

	Resource Name	Cost	Actual Cost
	☐ Unassigned	\$0.00	\$0.00
	PROJECT IDEA SUBMISSION	\$0.00	\$0.00
1	☐ ORGANISER	\$0.00	\$0.00
	SUBMIT PROPOSAL FOR SEMINAR	\$0.00	\$0.00
	VOLUNTEER SELECTION	\$0.00	\$0.00
	MAIL INVITATION FOR VOLUNTEER	\$0.00	\$0.00
	VOLUNTEER SLECTION	\$0.00	\$0.00
	INVITE DELIGATES	\$0.00	\$0.00
	ORDER A/V EQUIPMENT	\$0.00	\$0.00
	PREPARE PROGRAM SCHEDULE	\$0.00	\$0.00
	SELECT HOST	\$0.00	\$0.00
	ORDER FOOD PACKETS FOR VOLUNTEER AND DELIGATES	\$0.00	\$0.00
2	☐ VOLUNTEER	\$0.00	\$0.00
	MAILING INVITATION TO STUDENTS	\$0.00	\$0.00
	PROJECT IDEA SELECTION	\$0.00	\$0.00
	BOOK AUDITORIUM	\$0.00	\$0.00
	MAIL INVITATION FOR HOSTING	\$0.00	\$0.00
	SELECT HOST	\$0.00	\$0.00
	CONTACT FOOD VENDOR	\$0.00	\$0.00
3	☐ FOOD	\$2.00	\$0.00
	ORDER FOOD PACKETS FOR VOLUNTEER AND DELIGATES	\$2.00	\$0.00
4	☐ A/V EQUIPMENT	\$70.00	\$0.00
	ORDER A/V EQUIPMENT	\$70.00	\$0.00
5	☐ TRAVEL EXPENSE FOR DELIGATES	\$140.00	\$0.00
	INVITE DELIGATES	\$140.00	\$0.00
6	DECORATION	\$0.00	\$0.00
7	☐ OTHERS	\$0.00	\$0.00
	FINISH	\$0.00	\$0.00
8	☐ OTHER	\$0.00	\$0.00
	SUBMIT PROPOSAL FOR SEMINAR	\$0.00	\$0.00

BUDGET OF THE SEMINAR: \$2*50 + \$70 + \$140 = \$310