JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

T3 EXAMINATION- December 2018

B.Tech Semester 6

Dr - Sakshi Khanna

COURSE CODE: 10B11PD611 MAX. MARKS: 35

COURSE NAME: PROJECT MANAGEMENT

COURSE CREDITS: 3 MAX. TIME: Two hrs

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Why is learning curve analysis important to cost estimation in project management? (5 marks)
2. Compare and contrast: (5 marks)
   a. Resource loading with resource levelling.
   b. Termination by starvation with Termination by extinction.
3. In preparing a budget, what indirect costs should be considered? (4 marks)
4. What is "slack" and why is it important? (3 Marks)
5. Given the following information (times are in weeks) draw the AON. (6 marks)

Activity	Predecessor	Time
A	-	3
B	-	5
C	A	7
D	B	2
E	C,D	6
F	B	4
G	B	8
H	C	4
I	E,F	3

Also determine:

(a) The ES, LS, EF, and LF for each activity.
(b) The slacks on all activities.
(c) The critical activities and path.

6. Draw the AOA Diagram and determine the critical path, probability of completing the project a week before project completion time for the following: (6 marks)

Activity	Time in weeks		
	a	m	b
1--2	2	4	6
1--3	6	6	6
1--5	6	12	24
2---3	2	5	8
2--4	11	14	23
3--5	8	10	12
3--6	3	6	9
5--6	9	15	27
4--6	4	10	16

7. The following data were obtained from a study of the times required to conduct a consumer test panel: (6 marks)

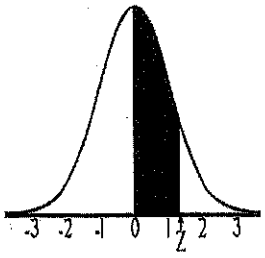
	Crash Schedule		Normal Schedule	
Activity	Time	Cost (Rs.)	Time	Cost (Rs.)
1-2	3	6	5	4
1 - 3	1	5	5	3
2 - 4	5	7	10	4
3 - 4	2	6	7	4
2 - 6	2	5	6	3
4 - 6	5	9	11	6
4 - 5	4	6	6	3
6 - 7	1	4	5	2
5 - 7	1	5	4	2

Note: Costs are given in thousands of Rupees, time in weeks.

(a) Find the all-normal schedule and cost.

(b) Find the all-crash schedule and cost.

(c) Find the *least-cost* plan.



	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0	0.004	0.008	0.012	0.016	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.091	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.148	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.17	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.195	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.219	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.258	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.291	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.334	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.377	0.379	0.381	0.383
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.398	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.437	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.475	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.483	0.4834	0.4838	0.4842	0.4846	0.485	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.489
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.492	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.494	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.496	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.497	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.498	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.499	0.499