



**NAVVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Business and Law
Program/s: MBA
Year: 2nd **Semester:** 4th
Examination: End Semester Examination
Examination year: May 2023

Course Code: MG228 **Course Name:** Project Management
Date: 19/05/2023
Time: 10:00 am to 12:00 pm

Total Marks: 40
Total Pages: 03

Instructions:

- All questions are compulsory
- Use of a calculator is permitted ~~not permitted~~
- Distribution table is attached.
- * COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	<p>Vedanta Group has chosen Gujarat for setting up its semiconductor manufacturing plant and has signed two Memorandum of Understanding (MoUs) with the Government of Gujarat to set up a semiconductor fab unit, a display fab unit, and a semiconductor assembling and testing unit in Ahmedabad district of the state. As semiconductors and displays are critical to establishing India as an electronics hub, the investments will help attract suppliers and device assemblers to setup base in India. The Indian semiconductor market was valued at \$27.2 billion in 2021 and is expected to grow at a healthy CAGR of nearly 19 per cent to reach \$64 billion in 2026. Even though the Ministry of IT and Electronics and ISM are yet to approve the first round of applications, Union Minister for Electronics and Information Technology Ashwini Vaishnav was present for the signing of the MoU, and said, "The project is in line with Prime Minister's vision for achieving self-reliance in the field of semiconductor manufacturing. The Gujarat plant will go a long way in helping build \$1 trillion digital national economy." In July last year, the Gujarat government announced the Semiconductor Policy 2022-27, under which the government proposed to offer heavy subsidies on power, water and land tariffs for those interested in investing in semiconductors or display fabrication manufacturing in the state.</p> <p>(a) As a project manager how would you conduct feasibility study for this project? (b) Identify possible risk in this project? Propose different project risk analysis and controlling techniques for this project.</p>	(8) (2+4=6)	CO1, CO2, CO3, CO4	BT1, BT2, BT3
Q.2	<p>The details of project is given in next page. Find the followings: (a) Draw network diagram (AOA Type) (b) Find early start & late start (c) Find critical path and duration (d) Find total float, safety float, free float and independent float for each activity.</p>	(2×4=8)	CO4	BT1, BT2, BT3

Activity Code	Activity	Predecessor(s)	Time (in weeks)
A	Planning	-	3
B	Purchasing	A	6
C	Excavation	A	9
D	Sawing	B	3
E	Placement	C,D	2
F	Assembly	E	3
G	Infill	F	2
H	Out-fill	F	4
I	Decoration	G,H	3
J	Finishing	G,H,I	2

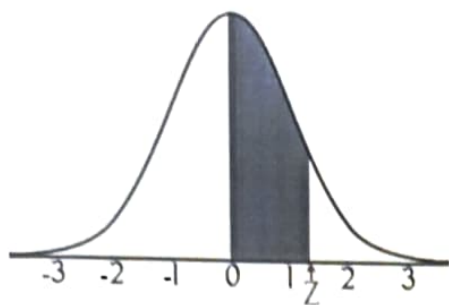
Q.3 Consider following data of a project:

Job (node <i>i</i> - node <i>j</i>)	Pessimistic duration (days)	Most likely duration (days)	Optimistic duration (days)	Minimum crash duration (days)	Cost of crashing (Rupees /day)	Manpower requirement
1-2	15	6	3	3	15	2
1-3	13	9	5	5	20	2
1-4	26	15	10	10	25	2
2-4	13	5	3	3	5	1
3-4	14	10	6	6	10	1
4-5	13	4	1	1	35	3

(2+2+7
+7=18) CO3, BT1,
CO4, BT2,
CO5 BT4

- Find the critical path and its duration.
- What is the probability that project will be completed between 22 and 29.
- If the overhead cost per day is Re.55/-, find the optimal crashed project completion time and cost. (Instruction: Treat the expected time as normal time and Optimistic time as crash time for crashing of project)
- If only 4 men are available for execution of this project, rearrange the activities suitably for levelling the manpower.

STANDARD NORMAL TABLE (Z)



Entries in the table give the area under the curve between the mean and z standard deviations above the mean. For example, for $z = 1.25$ the area under the curve between the mean (0) and z is 0.3944.

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0190	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	0.0910	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	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	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	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2969	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	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3513	0.3554	0.3577	0.3529	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	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	0.4370	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	0.4750	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	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
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	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	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	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	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	0.4980	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	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998

***** End of Question Paper *****