Hall Ticket Number:

Code No. : 16136 A

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. VI-Semester Main & Backlog Examinations, June-2022

Project Management (OE-IV)

Time: **3 hours** Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What is the role of project manager in project management?	2	1	1	11
2.	Write about principles of organization?	2	1	1	11
3.	Define project planning? Write need of it in project management?	2	2	2	9,11
4.	Write disadvantages of bar chart in scheduling.	2	1	2	1
5.	Explain the necessity of crashing the activities in a network.	2	2	3	1,2
6.	Explain the benefits of Earned Value Management.	2	2	3	11
7.	What is difference between contract and tender document?	2	2	4	6,11
8.	Explain the necessity of Contract.	2	1	4	6
9.	Explain Slack and Surplus variables in Linear programming.	2	1	5	1
10.	Explain the need of optimization in project management.	2	2	5	2
	Part-B (5 × 8 = 40 Marks)				
11. a)	Describe in detail with neat sketches about various types of organization structures?	5	2	1	9,11
b)	Explain briefly about stages of project life cycle?	3	1	1	11
12. a)	Using the data given in table and normal distribution chart provided in question paper, what will be the project duration with an 80% chance of completion? What is the probability that the project will be completed within 25 weeks? What is the probability that the project will take longer than 32 weeks?	5	4	2	2,3

Activity	Durations			Predecessor Activity
	t_o	t_m	t_p	
A	1	3	5	-
B	4	5	12	A
C	1	8	9	A
D	2	4	6	B,C
E	2	9	11	B
F	3	7	9	C
G	2	6	8	D
H	3	5	10	E,F,G

Contd... 2

b)	Discuss the types of network analysis methods in project scheduling.	3	1	2	2,11
13. a)	Let A, B, C and D are the activities in project. A & B are starting activities; C follows B; D follows A and C; D is finishing activity. Their normal and crash durations and associated costs are given in table below. For entire project indirect cost is Rs. 1000/day. Find the optimum cost and duration for the project.	5	4	3	2,3

Activity	Normal duration (Days)	Normal cost (Rs)	Crash duration (Days)	Crash cost (Rs)
A	8	6000	4	12000
B	4	2000	2	14000
C	10	4000	4	8000
D	6	4000	4	800

b)	Explain procedure for updating of a project?	3	2	3	10,11
14. a)	Explain briefly about various types of contracts?	5	2	4	6,11
b)	Explain the tendering process for any project	3	2	4	6
15. a)	Determine the optimal solution for the following data using Graphical method. Max $Z= 13X_1+11X_2$ Subjected to constraints $4X_1+5X_2 \leq 1400$ $5X_1+3X_2 \leq 1500$ $X_1+2X_2 \leq 400$ $X_1 \& X_2 \geq 0$	5	4	5	5
b)	Describe the significance of simplex method in linear programming.	3	3	5	5
16. a)	Discuss in detail the need of project management.	4	2	1	11
b)	What do you understand by WBS (Work Break Structure)? Explain with a Flowchart the WBS for any project.	4	3	2	9,11
17.	Answer any ***two*** of the following:				
a)	What are the essential components present in contract document? Explain briefly?	4	3	3	6
b)	Explain the process of determining the Total Project cost and optimum duration for any project.	4	3	4	9,11
c)	Explain different types of optimization techniques applicable for construction project planning and management.	4	3	5	2

Contd... 3

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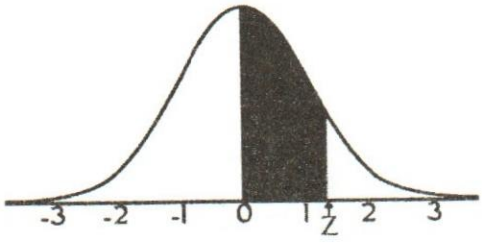

STANDARD NORMAL TABLE (Z)

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.

	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

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	37.50%
iii)	Blooms Taxonomy Level – 3 & 4	42.50%

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