JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

SIXTH TRIMESTER (BATCH 2022-24)

ENDTERM EXAMINATION, APRIL 2024

Set-2

Course Name	PROJECT MANAGEMENT	Course Code	20530
Max. Time	**2 Hours**	Max. Marks	**40 MM**

INSTRUCTIONS:
A. This is a Closed Book examination
B. Attempt all questions.
C. Scientific calculators permitted.
D. Answers should be to the point, avoid unnecessary long answers.
E. z-table provided at the end.

Q1

Case - Advance Design Engineering (ADS)

Advance Design Engineering (ADS) is a specialized engineering design and development consulting firm. ADS has been awarded a contract by a multinational electric appliances company to design a low noise and energy efficient motor for appliances. Swati has been appointed as project manager of this new product development projects. She has compiled the following list of activities alongwith their logical relationships for the client's project. Swati has also documented the three point activity duration estimates as given in the following table-

Activity	Immediate Predecessors	Optimistic	Most likely	Pessimistic
A	-	4	7	10
B	-	2	4	8
C	A,B	2	5	8
D	C	16	19	28
E	C	6	9	24
F	E	1	7	13
G	C	4	10	28
H	D,F,G	2	5	14
I	G,F	5	8	17
J	H	2	5	8
K	I,J	17	29	45

a) Develop a project schedule network diagram and using PERT Analysis, determine expected completion time of the project.

b) Determine the probability that the project shall be completed within 70 days.

(Marks: 6+6)

Q2) A major automobile manufacturer have undertaken a capacity expansion project. The project manager has estimated the major tasks, durations and predecessor relationships as shown in the table below:

Activity	Immediate Predecessor	Time Duration (Days)
A	-	6
B	-	7
C	-	8
D	A	20
E	A	18
F	B	9
G	B	8
H	D,E	7
I	C	2
J	G,I	14
K	F,H,J	10

a) Construct the project network diagram using PDM method and determine the project completion time.

b) Identify the critical path(s) and total float for all activities.

(Marks: 5+5)

Q 3

Rahul is a young entrepreneur with a bachelor's degree in hotel management. He wishes to own a chain of budget hotels in tier-II cities of India. Rahul and his partner are presently working on their pilot project to build a budget hotel in the city of Ujjain. Rahul's present project scope includes all activities including concept development, feasibility study, land acquisition, construction, furnishing and finishing and obtaining required statutory approvals for their budget hotel in Ujjain. Rahul's project scope excludes marketing, advertisement and manpower recruitment which will be taken care by his partner. Help Rahul in project planning and construct a Work Breakdown Structure (WBS) for his project. Make suitable assumptions wherever necessary.
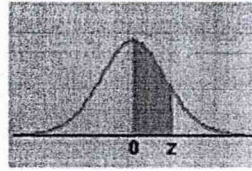
(Marks: 8)

Q 4

a. Discuss and compare project implementation in organizations with Functional, Matrix and Projectized organizational structure. Highlight the relative advantages and disadvantages.

b. Discuss various stages of project team development. Highlight the role of project manager in each stage.

(Marks: 5+5)

Standard Normal (Z) Table
Area between 0 and 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	0.0199	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	0.0910	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	0.2967	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	0.3340	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	0.3770	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