Roll No.													

PRESIDENCY UNIVERSITY
BENGALURU
SCHOOL OF ENGINEERING

Test - 1

Winter Semester: 2021-22
Course Code: CIV 2004
Course Name: Integrated Project Management
Program & Sem: B.Tech & VI Semester

Date: 27th April 2022
Time: 10:00 AM to 11:00 AM
Max Marks: 30
Weightage: 15%

Instructions:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of 3 parts.

Part A [Memory Recall Questions]

Choose the correct answer. Each question carries ONE mark. (8Qx1M=8M)

1. Project management is aimed at managing which of the following resources in a construction project? (C.O.NO. 1) [Knowledge]
   a) Time resource b) Cost resource
   c) Material resource d) All of the above

2. Project management is a _____ of managing different resources in a project. (C.O.NO. 1) [Knowledge]
   a) Science b) Art c) Both A and B d) None of the above

3. The amount of duration by which an activity can be delayed without affecting the overall project duration and the early start of all succeeding activities is known as _____. (C.O.NO. 2) [Knowledge]
   a) Total float b) Free float
   c) Independent float d) Interference float

4. Which of the following is NOT the purpose of preparing a WBS?
   a) To logically subdivide all the work-elements of the project.
   b) To show sequence between all the activities involved in the project.
   c) To provide a pictorial representation of work elements of a project.
   d) To facilitate easy listing of activities. (C.O.NO.2) [Knowledge]

5. The correct order of life cycle of a project is _____. (C.O.NO. 1) [Knowledge]

   a) Conceptualization→Planning→ Execution→Termination
   b) Planning → Conceptualization → Execution→Termination
   c) Execution → Conceptualization→Planning→Termination
   d) Conceptualization→ Execution → Planning→ Termination

6. Activities that involve the use of resources such as labor, equipment, material etc are called as _____. (C.O.NO.2) [Knowledge]

a) Procurement activities b) Production activities
c) Management activities d) none of the above

7. Float for a critical activity is always _____. (C.O.NO. 2) [Knowledge]

a) Positive b) Negative
c) Zero d) can't say

8. Evaluation reports and progress reports are the deliverables from _____ phase of construction project life cycle. (C.O.NO.1) [Knowledge]

a) Conceptualization b) Planning
c) Execution d) Termination

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries FIVE marks. (2Qx5M=10M)

9. In a project review meeting, Project stakeholders such as owner and investors wanted to know about the tools discussed in the meeting. Define and explain the following terms (with examples) referred to in the meeting.

(C.O.NO.2) [Comprehension]

a) Work breakdown structure b) Activities in construction and types.

10. You have been assigned to take up a project, as a project manager who is expected to manage a project efficiently it is important for you to know the various phases of the project. Enlist and explain various phases in life cycle of a project (including all the activities performed in individual phases).

(C.O.NO.1) [Comprehension]

Part C [Problem Solving Questions]

Answer the Question. Question carries TWELVE marks. (1Qx12M=12M)

11. Details of a project consisting of 9 activities is given in Table below. As a planning manager you are asked to determine the time duration required to complete this project and critical activities of project. Prepare a network diagram and furnish the required deliverables. Also, Determine total float, free float.

(C.O.No. 2) [Application]

Activity	Duration (days)	Predecessor activity
A	10	-
B	5	-
C	8	-
D	5	A
E	1	B,C
F	15	E,D
G	2	C
H	45	F,G
I	5	H

Roll No.													

PRESIDENCY UNIVERSITY
BENGALURU
SCHOOL OF ENGINEERING

Test - 2

Winter Semester: 2021-22 | **Date**: 2nd June 2022

Course Code: CIV 2004 | **Time**: 10:00 AM to 11:00 AM

Course Name: Integrated Project Management | **Max Marks**: 30

Program & Sem: B.Tech & VI Sem | **Weightage**: 15%

Instructions:

(iii) Read the question properly and answer all the questions accordingly.

(iv) DONOT round off the values of activity duration in Part C.

Part A [Memory Recall Questions]

Choose the correct answer. Each question carries ONE mark. (8Qx1M=8M)

1. The abbreviation of planning technique PERT is ____. (C.O.NO. 2) [Knowledge]

a) Program Evaluation and Rate Technique
b) Project Evaluation and Review Technique
c) Program Evaluation and Robot Technique
d) Program Evaluation and Review Technique

2. The shortest possible time estimate in which an activity can be achieved under ideal circumstances is known as _____. (C.O.NO. 2) [Knowledge]

a) Pessimistic time estimate b) Optimistic time estimate
c) Expected time d) most likely time estimate

3. In PERT it is assumed that Activity duration are probabilistic and follows _____. (C.O.NO. 2) [Knowledge]

a) Normal distribution b) Beta distribution
c) Binomial distribution d) none of the above

4. Activities A, B, and C are the immediate predecessors for Y activity. If the earliest finishing time for the three activities A, B, C are 12, 15, and 10, then what will be the earliest starting time for Y? (C.O.NO. 2) [Knowledge]

a) 10 b) 12 c) 15 d) cannot be determined

5. In the process of reducing the project duration the direct costs of the project will _____. (C.O.NO. 3) [Knowledge]

a) Decrease b) Remain same
c) Increase d) Increase initially and then decrease.

6. Resource smoothening is a _____ constraint resource optimization technique.

a) Time b) Cost

c) Resource d) Quality (C.O.NO. 3) [Knowledge]

7. Which of the following is NOT correct in reference to project crashing? (C.O.NO. 3) [Knowledge]

a) Critical path of the project may change in the process of crashing.

b) Indirect costs of the project will decrease in the process of crashing.

c) Always reduction in duration of one activity results in reduction of project duration.

d) Float of the non-critical activities as critical activities are crashed.

8. In earned value analysis we can conclude that the project is behind the schedule if _____. (C.O.NO. 3) [Knowledge]

a) Schedule variance is positive b) SPI is greater than 1

c) Cost variance is positive d) Schedule variance is negative

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries FIVE marks. (2Qx5M=10M)

9. Resource optimization in project management is needed when resources have been over allocated or when certain resources are available in limited quantities, while the CPM schedule demands more than the available quantities. Resource levelling and smoothening are two such optimization techniques. Differentiate between these two techniques. (C.O.NO.3) [Comprehension]

10. Project crashing refers to the process of shortening the duration of the project by reducing the duration of a number of activities. It is done in order to meet project deadlines or to fast-track the project that has been delayed. Explain the variation of costs of project during crashing with the help of a curve. (C.O.NO.3) [Comprehension]

Part C [Problem Solving Questions]

Answer the Question. The question carries TWELVE marks. (1Qx12M=12M)

11. PERT analysis is a planning technique with the probabilistic approach which accounts for uncertainties associated with every activity. Table below has details of a project having various time estimates for activities involved in the project. (C.O.No. 2) [Application]

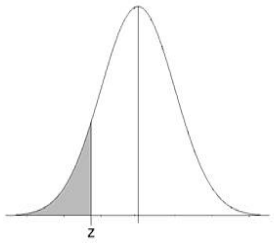
a) Determine expected duration of activities and mean value of project duration.

b) Calculate the probability and risk of completing the project within 79 days.

Activity	Predecessor	Duration (days)		
		Optimistic	Most likely	Pessimistic

A	~	4	6	7
B	A	14	20	40
C	A	10	15	20
D	B	17	25	55
E	C	10	14	20
F	D	8	12	20
G	E	25	30	50
H	F,G	4	6	7

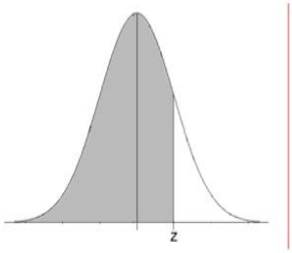
Standard Normal Cumulative Probability Table



Cumulative probabilities for NEGATIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641

Standard Normal Cumulative Probability Table



Cumulative probabilities for POSITIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998

Roll No												

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

END TERM EXAMINATION

Winter Semester: 2021 - 22
Course Code: CIV 2004
Course Name: Integrated Project Management
Program & Sem: B.TECH – VI Sem

Date: 1st July 2022
Time: 09:30 AM to 12:30 PM
Max Marks: 100
Weightage: 50%

Instructions:

(v) Read the all questions carefully and answer accordingly.
(vi) Standard normal cumulative probability table is provided at the end of the question paper.

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries TWO marks.
(10Qx 2M= 20M)

1. The amount of duration by which an activity can be delayed without affecting the overall project duration is known as _____.
(C.O.NO. 2) [Knowledge]

a) Total float
b) Free float
c) Independent float
d) Interference float

2. According to the life cycle path of a project in general; Maximum level of effort is required in which phase of the project life cycle?
(C.O.NO. 1) [Knowledge]

a) Conceptualization
b) Planning
c) Execution
d) Termination

3. The correct order of life cycle of a project is _____. (C.O.NO. 1) [Knowledge]

a) Conceptualization→Planning→ Execution→Termination
b) Planning → Conceptualization → Execution→Termination
c) Execution → Conceptualization→Planning→Termination
d) Conceptualization→ Execution → Planning→ Termination

4. Which of the following is not the rule to be followed in preparation of work breakdown structure.

a) Include 100% of the work necessary to complete the goal.
b) A work package should take no less than 8 hours and no more than 80 hours of effort.
c) All work package should be represented in sequence of execution.

d) Don't account for any amount of work twice. (Mutually exclusive) (C.O.NO. 2) [Knowledge]

5. The longest time estimate in which an activity can be achieved by considering all the possible uncertainties is known as _____.
(C.O.NO. 2) [Knowledge]

a) Pessimistic time estimate
b) Optimistic time estimate
c) Expected time
d) most likely time estimate

6. In the process of reducing the project duration the indirect costs of the project will _____.
(C.O.NO. 3) [Knowledge]

a) Decrease
b) Remain same
c) Increase
d) Increase initially and then decrease.

7. In earned value analysis we can conclude that the project is over budget if _____.
(C.O.NO. 3) [Knowledge]

a) Schedule variance is positive
b) CPI is greater than 1
c) Cost variance is positive
d) Cost variance is negative

8. Activities D, E, and F are the immediate successor activities for B activity. If the Late start time for these three activities are 21, 23, and 27, then what will be the late finish time for B while performing backward pass in network analysis?
(C.O.NO. 2) [Knowledge]

a) 21
b) 27
c) 23
d) 25

9. A quality assurance program may include _____. (C.O.NO. 3) [Knowledge]

a) Training program for workers
b) Procuring good quality material
c) Incentive or reward program for good quality work
d) All of the above

10. _____ is the term related to the parameters with respect to which quality control processes are measured.
(C.O.NO. 3) [Knowledge]

a) Quality economics
b) Quality checks
c) Quality characteristics
d) none of the above

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries TEN marks.
(5Qx10M=50M)

11. You have been assigned to take up a project, as a project management professional who is expected to manage a project efficiently it is important for you to know the various phases of the project. Enlist and explain various phases in life cycle of a project (including all the activities performed and reports prepared in individual phases). (C.O.NO.1) [Comprehension]

12. Planning techniques have evolved over time and have become sophisticated. Initially planning was done using basic calendars, to do lists etc, which were easier to plan but difficult to track the progress. Henry Gantt introduced Gantt chart which is accepted as a widely used tool for planning, scheduling and tracking project progress. Explain Gantt chart with the help of a neat diagram, delineate its advantages and disadvantages (C.O.NO.2) [Comprehension]

13. Project crashing refers to the process of shortening the duration of the project by reducing the duration of a number of activities. It is done in order to meet project deadlines or to fast-track the project that has been delayed. Describe the terms crash cost and crash duration for an activity. Explain the variation of costs of project during crashing with the help of a curve.
(C.O.NO.3) [Comprehension]

14. Earned Value Analysis is a tool used for analyzing the status/progress of the project during execution. A project has been started 12 months ago, it has incurred a cost of Rs.15 Lakhs to complete 40% of the work whereas the Allocated cost in the budget for 40% work was Rs. 13 Lakhs. According to the time schedule, in 12 months 43% of project was planned to be completed at a budgeted cost of Rs. 14 Lakhs. Comment on the status of the project using various metrics of Earned value analysis.
(C.O.NO.3) [Comprehension]

15. Quality management is required to ensure that all project activities that are necessary to design, plan and implement a project are effective with respect to the purpose of the objective and its performance. Explain the following terms with respect to Quality management.

a) Quality characteristics b) Quality assurance

c) Quality control d) Quality improvement (C.O.NO.3) [Comprehension]

Part C [Problem Solving Questions]

Answer both the Questions. Each question carries FIFTEEN marks. (2Qx15M=30M)

16. Details of a project consisting of 9 activities is given in Table below. As a planning manager you are asked to determine the time duration required to complete this project and critical activities of project. Prepare a network diagram and furnish the required deliverables. Also, Prepare a representative Gantt chart for the project and Determine total float, free float, independent float and interference float of all non-critical activities. (C.O.No. 2) [Application]

Activity	Predecessor	Time (weeks)
A	-	2
B	-	3

C	A	2
D	A,B	4
E	C	4
F	C	3
G	D,E	5
H	F,G	2

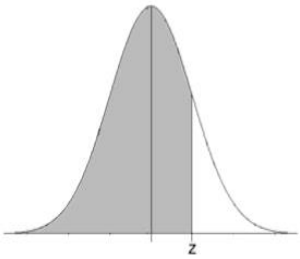
17. PERT analysis is a planning technique with the probabilistic approach which accounts for uncertainties associated with every activity. Table below has details of a project having various time estimates for activities involved in the project.

(C.O.No.2) [Application]

c) Determine expected duration of activities and mean value of project duration.
d) Calculate the probability of completing the project within 30 weeks.
e) Determine the deadline with risk of non-completion being 32%.

Activity code	Predecessor activity code	Time estimates (in weeks)		
		Optimistic	Most Likely	Pessimistic
A	None	2	4	12
B	None	10	12	26
C	A	8	9	10
D	A	10	15	20
E	A	7	7.5	11
F	B,C	9	9	9
G	D	3	4	5
H	E,F,G	5	5	5

Standard Normal Cumulative Probability Table



Cumulative probabilities for POSITIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998