



Final Assessment Test- Jan/Feb 2023

Course: ITA5001 - Software Project Management
Class NBR(s): 5081/5085/5089
Time: Three Hours

Slot: A2
Max. Marks: 100

KEEPING MOBILE PHONE/SMART WATCH, EVEN IN 'OFF' POSITION, IS TREATED AS EXAM MALPRACTICE

Answer ALL Questions

(10 X 10 = 100 Marks)

1. a) Tirumala Tirupati Devasthanam board has planned to implement computer-based system to help the pilgrims to book various darshan tickets, collect donations, and virtual darshan facility. Identify the different stakeholders in the project and specify the objectives of the project. [5]
b) Assume that you are a developer in software solution company. Write down the problems with software projects faced by the developers in your point of view. [5]
2. The cash flow projections for Project "A" and "B" are given in the table below. Specify which project can be undertaken for the development based on Net Profit, Payback Period, ROI, Net Present Value (NPV) for each of the project's A and B using the discount rate 12%. Justify your answer. [2+1+2+5]

Estimated Project Cash Flows		
Year	Project (A)	Project (B)
0	-2,50,000	-200,000
1	65,000	10,000
2	80,000	60,000
3	20,000	25,000
4	30,000	20,000
5	15,000	55,000

3. E-Vote - This is a web application for voting through the internet for the nominees/parties. Social Security Number is used as a primary key and will integrate with the biometric device for thumb impression. The citizen will log in to the E-vote website with the help of SSN as user and password (generated by the citizen in the first login). In the next level, the system will ask for the thumb impression through the biometric device. If both get matched or satisfies the condition next navigation is for "Voting". Based on the details stored "Voting" form will be displayed. So, they cannot vote for any other areas. This software is published on the internet but accessed only by the KIOSK available in each polling area. This software is integrated with the citizen details like name, dob, parent's name, children, married/unmarried, SSN, and some details which will be uploaded to the VAO about the citizen like disability, death, etc (some confidential data). Because this will lock the voting option for the citizens who were expired, of course, it will lock the user the login. Nobody can misuse the login.
Discuss the step wise project planning for the mentioned system with neat diagram.

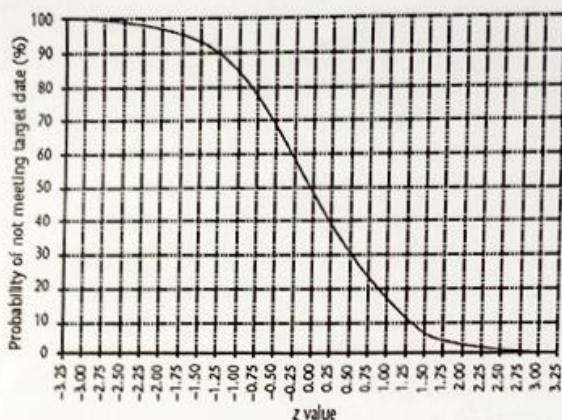
4. Consider the following data set for activities, precedence, and durations:

Activity	Pre-conditions	Duration
A	-	7
B	-	3
C	A	6
D	B	8
E	B	5
F	C, D	2
G	-	10
H	E, G	11
I	F, H	6
J	I, H	4

- a) Carry out a forward and a backward pass to compute the four schedule dates
– Earliest Start, Earliest Finish, Latest Start, and Latest Finish. [6]
- b) Compute the Total Float, Free Float, and Interfering Float. [3]
- c) Identify the critical path. [1]
5. Assume that you are a software risk manager. As part of your regular job profile, discuss the various forms of developmental risks that you come across and mention the respective risk reduction techniques that you follow.
6. a) Consider the series of events in a software project as given in the following table. Apply PERT to calculate the expected duration (t_e) and the standard deviation (s) for the events. [7]

Activity	Precedents	Optimistic (a)	Most Likely (m)	Pessimistic (b)
A	-	4	6	7
B	-	5	7	11
C	-	10	13	15
D	A	2	4	8
E	B	3	7	9
F	B	8	10	13
G	C	7	10	11
H	F, G	4	5	7
I	D, E	5	6	8

- b) Consider the target date for the last event=30, Calculate the Z value and identify the probability of missing the target for the last event using 'Z' graph. [3]



7. Explain any two of the visualizing progress techniques with neat diagram and suitable example. [5+5]
8. a) Describe the project control cycle with neat diagram. [5]
- b) Assume that the project is to be completed in one year at the cost of Rs.5,00,000. After three months, you realize that the project is 20% complete at a cost of Rs.1,50,000. Assess the performance of the project. [5]
9. a) Assume that you are making a Contract specifies that an information system application is to be designed, constructed, and delivered at a cost of Rs. 5000 per FP. Before acceptance testing, the customer asks for changes to some of the functions in the system accounting to 400 FPs, delete some of the functions which amount to 300 FPs and some new functions which amount to 400 additional FPs. Using the below table, Calculate the additional charges. [5]
- | | Pre-acceptance testing handover | Post-acceptance testing handover |
|----------------|---------------------------------|----------------------------------|
| Additional FPs | 100% | 100% |
| Changed FPs | 130% | 150% |
| Deleted FPs | 25% | 50% |
- b) Assume that you are the Project manager of an information technology solution company that provides turnkey solution to the customer. Describe any five of the typical terms that must be included in the contract. [5]
10. a) Write short notes on any one of the following [5]
- Delphi approach
 - Maslow's hierarchy of needs
- b) Social loafing is a problem that employees often encounter when carrying out group assignments. What steps can participants in a group take to encourage team members to 'pull their weight' properly? [5]

