# VIT

Vellore Institute of Technology

## School of Information Technology and Engineering

**Fall Semester 2022-2023 - Fresher**

**Continuous Assessment Test – II**

**Programme Name & Branch: MCA**

**Course Name & code: ITA5001- Software Project Management**

**Class Number (s):VL2022230105089, VL2022230105085, VL2022230105081**

**Slot: A2**

**Faculty : Dr. J. Karthikeyan, Dr. J. Prabhu, Dr. Parvathi. R**

**Exam Duration: 90 Min.** **Maximum Marks: 50**

**General instruction(s):**

Use scale and pencil to draw diagrams.

1. Design the Network model using precedence network conventions for the project specified from the following table

| | Activities | Duration | Precedence |
|---|---|---|---|
| A | Hardware selection | 7 | - |
| B | Software design | 4 | A |
| C | Install hardware | 8 | - |
| D | Code and test software | 4 | B |
| E | File take-on | 6 | G |
| F | Write user manuals | 12 | E |
| G | User training | 3 | |
| H | Install and test system | 2 | C,D,F |

i. Identify Forward Pass, Backward Pass, and the critical paths (10 marks)

ii. Determine Total float, Free Float and Interfering float. (5 marks).

2. A Furniture maker is going to produce a new wooden framed Settee with both foam cushions. These are the tasks that must be done by the furniture maker and his assistants and the times they will take:

| Activity | Duration | Precedence |
|---|---|---|
| A | 6 | - |
| B | 5 | - |
| C | 8 | - |
| D | 4 | A |
| E | 3 | B |
| F | 4 | B |
| G | 7 | C |
| H | 3 | D,E |
| I | 6 | D,E |
| J | 8 | F,G |
| K | 2 | H |

Find the earliest date, latest date, slack, and critical path using Activity on Arrow (AoA) method to complete this furniture work.

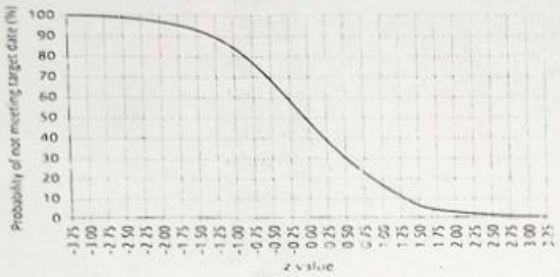
3.

a. Calculate the expected duration (t_e) and standard deviation (s) of the below activities. (5 marks)

b. Find the expected duration ($t_e$) and standard deviation (s) of the events using PERT. (5 marks)

c. Calculate the probability of not meeting target date of project completion at 28 days (%) by referring to the Z Graph given below: (5 marks)

| Activity | Optimistic (a) | Most Likely (m) | Pessimistic (b) | Precedence |
|---|---|---|---|---|
| A | 6 | 8 | 10 | - |
| B | 8 | 10 | 14 | - |
| C | 5 | 7 | 9 | A |
| D | 5 | 6 | 8 | - |
| E | 8 | 9 | 12 | B |
| F | 7 | 10 | 11 | C, E |
| G | 6 | 7 | 10 | D |




-0.72

75%

4. Identify the Risk planning from the following scenario and give reasons to justify your answer and mention its advantages and disadvantages.

Network monitoring takes note of slow or failing systems and notifies the network administrator of such occurrences. Such notifications can take the form of email messages, pager alerts, or plain old phone calls. No matter what form they take, network problem messages should take the highest priority. Network monitoring can alert a network administrator to problems caused by overloaded systems, crashed servers, lost network connections, virus or malware infections, and power outages, among other things. Also network monitoring software makes a practice of regularly taking virtual snapshots of the network's workflow. Any irregularities in this workflow are logged and, if they are serious enough, reported to the network administrator. Network monitoring can also be as basic as tracking the flow of visitors to and from a website, also tracking such statistics as time of visit, number of pages on the site visited, and entry and exit URLs. Website network monitoring software tracks and reports web activity for analysis

Software or Website