# NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

*Department of Electronic Engineering*

Project Management **[TEE 5155]** **ASSIGNMENT 3**

***Instructions:***

*Answer all the questions.*

*A total of 50 marks are allocated to the questions*

*Submit hand written copies on Monday, the 29th of March 2021 at 1200 hours.*

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1. Construct the AON precedence diagram for the project below.
   i) Calculate the ES, EF, LS, and LF times and the slack for each activity **[18 marks]**
   ii) Identify the critical path for the project. **[1 mark]**
   iii) Can the project be completed in 30 weeks? **[1 mark]**

| | **Activity Description** | **Activity** | **Duration (weeks)** | **Immediate Processors** |
|---|---|---|---|---|
| 1. | Problem Definition | A | 2 | - |
| 2. | System Analysis | B | 5 | A |
| 3. | Design Input & Output | C | 3 | B |
| 4. | Design Database | D | 15 | B |
| 5. | Develop Input Screens | E | 8 | C |
| 6. | Develop Output Reports | F | 10 | C |
| 7. | Develop Database | G | 2 | D |
| 8. | Test System | H | 6 | E, F, G |
| 9. | Implement System | I | 5 | H |

2. Think of a somewhat complicated task that you are familiar with and develop a WBS for it. (Examples: a wedding, a high school reunion or SRC elections etc.) **[5 marks]**

3. Write short notes on:
   i) Benchmarking **[1 marks]**
   ii) Pull communication **[1 marks]**
   iii) The Team charter **[1 marks]**

4. The Project Manager has assigned you to come up with a development specifications document for a company that is developing a custom Project Management Information System for the company you are working for. List at least 4 features you consider very critical that you would include in your document. **[4 marks]**

5. During the first meeting of a proposed project, one member suggests to put off identifying stakeholders until work on the project is almost complete and there are deliverables to showcase.
   a) What is your view on their suggestion? **[3 marks]**
   b) With the aid of an example, discuss the use and importance of the probability and impact matrix. **[8 marks]**

6. Decision tree diagrams are used in deciding between alternative risk responses. Suppose a project has a baseline cost estimate of $10 million, risk failure likelihood of 0.6, and a risk impact of $5 million. Two strategies are being considered to reduce the risk likelihood (but not the risk impact):

*Strategy 1 will cost $2 million and will reduce the failure likelihood to 0.1.*
*Strategy 2 will cost $1 million and will reduce the failure likelihood to 0.4.*

Complete the decision tree diagram shown below to find the values of a – o. *(Hint: g=9, h=4 and m=13).*

**[7 marks]**