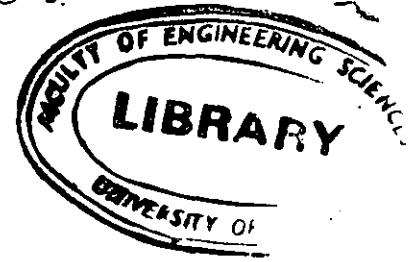


**SECTION B****INSTRUCTIONS:****ANSWER ALL QUESTIONS IN THE ANSWER BOOKLET**

1. (a) Write down the thematic areas of Project Management Body of Knowledge [5marks]
  - (b) Many projects undertaken can be classified as failed projects.  
*Read the brief failure account of the 'Big Dig' project below:*  
 "The "Big Dig" road construction project in Boston - USA (1987-2007) was budgeted at \$5,800,000,000.00 (billion) but cost over \$15,000,000, 000.00 (billion). The project resulted in criminal arrests, thousands of water leaks, death of a motorist from a tunnel collapse, and hundreds of millions of dollars in lawsuits."  
 (i) Explain what is meant by project failure [2marks]  
 (ii) State reasons and discuss why projects fail? [10marks]
  - (c) Briefly explain the various times associated with Project Evaluation and Review Technique (PERT). [6marks]
  - (d) There is an opportunity to invest in a business that will pay Ghs 200, 000.00 in a year, Ghs 400,000.00 in two years Ghs 600,000.00 in three years and Ghs 800,000.00 in four years. It can earn 12% per year compounded annually on a mutual fund that has similar risk. If it costs Ghs 1.2 million to start this business, suggest (as a project manager) whether to invest or not in such a business? [7marks]
2. *CeraTech* Ltd, Ghana is involved in the fabrication of ceramics for various applications. As a Project Manager in this Company, you discovered that your team has neglected to complete the network diagram for a project that involves the making of insulators for engine spark plugs. Based on your investigations you discovered that there are some information available that, each activity labelled A-G, has a different duration between one and seven weeks. Also, the slack for each of the activities (in Table 1.0) is given as follows:

Slack time (Weeks): 0, 0, 0, 2, 4, 4, 7

Table 1.0: Work Breakdown Activity table of the project

Activity	Preceding Activity	Duration (Weeks)
A	-	TBD
B	-	7
C	-	TBD
D	B	TBD
E	A, B, C	TBD
F	C	TBD
G	D, E, F	TBD

Note: TBD means To Be Determined

The work breakdown activity table associated with the spark plug project is given in Table

1.0. Using the clues provided below,

- (i) Determine the duration of each activity
- (ii) Determine the early start, early finish, latest start and latest finish times for each activity
- (iii) Draw and complete the network diagram for Table 1.0
- (iv) Identify the critical path and give the associated time

Clues:

- a. Activity E is on the critical path
- b. The early start (ES) for activity F is five weeks
- c. The duration of activity B is seven weeks
- d. Activity D has four weeks of slack, but activity F has greatest amount of slack.
- e. The early finish (EF) time for activity G is seventeen weeks
- f. The latest finish (LF) time for activity E is thirteen weeks

[30marks]