

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF TECHNICAL TEACHER EDUCATION

Programme: **BACHELOR OF EDUCATION HONOURS DEGREE**

SUPPLEMENTARY EXAMINATION

Course: *Project Development and Management*

TTE3208

Part: *III*

JULY 2013

Time: *3 hours* **Lecturer:** *Dr N Phuthi*

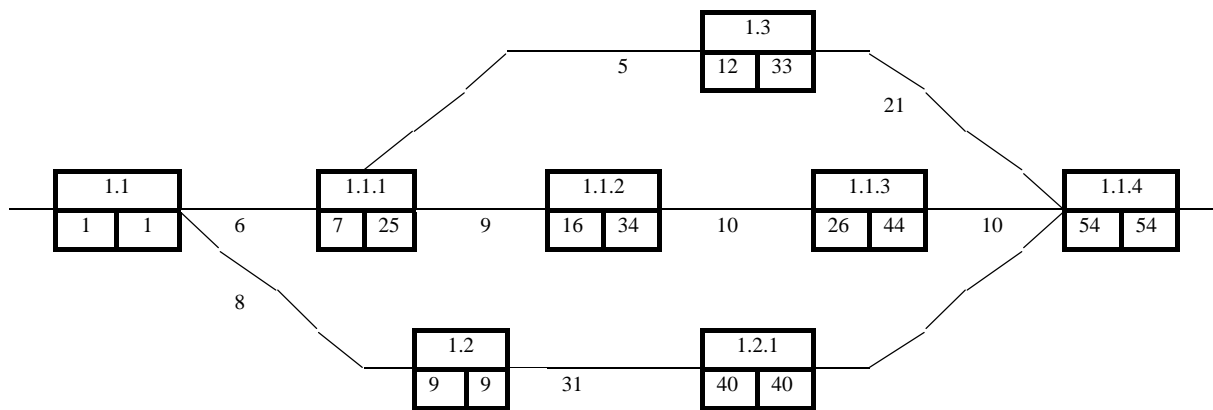
100 marks

DIRECTIONS AND INFORMATION FOR CANDIDATES

1. Answer **Question 1** and any **THREE** others.
2. All questions carry equal marks.
3. Questions may be written in any order but each question/sub-question must be clearly numbered and parts of one question must appear together.
4. Begin each question on a fresh page and parts of the same question must be together.
5. Show all working on the answer book, no part of the question paper should be handed in.
6. This paper consists of 3 printed pages.

QUESTION 1

Figure Q1 below is a network representation of a stage of a major project.



Key:

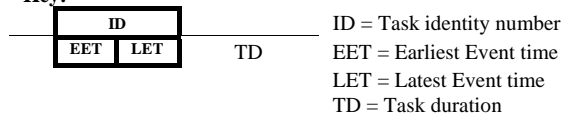


Figure Q1: Network diagram

- (a) Identify the critical path using numbers, explain your choice and briefly discuss its importance in the project. [9]
- (b) Discuss the creation of a work breakdown structure (WBS). [10]
- (c) Evaluate the role of teamwork in a project. [6]

QUESTION 2

Study Figure Q3 below and answer the questions after it.

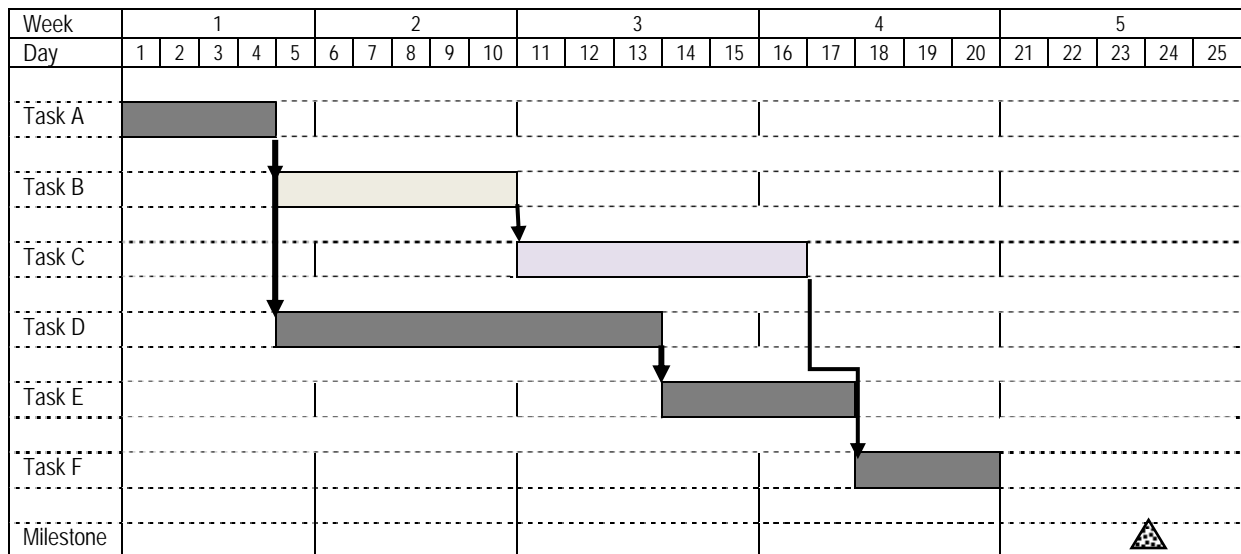


Figure Q3: Gantt Chart

- In the above diagram, locate the following and give a brief explanation of each:
buffer; critical path; dependent tasks. [9]
- If the same team is supposed to work on Tasks C and D, how would you resolve the resource contention? What effect would this have on the whole project and why? [6]
- Discuss how estimation of project duration may be done during the planning phase of a major project. Explain the consequences of both *optimistic* and *pessimistic* estimation. [10]

QUESTION 3

Read the passage below and answer the questions after it.

Almost by definition, projects involve tackling new problems. This means that sometimes, a project will encounter a problem which does not fit logically into the framework outlined [in a book]. It is essential that we remember that books are not a substitute for common sense: if there are sound reasons for doing things differently to the way presented [in a book], then do things differently. This is not to say that the framework presented [in a book] has no value, but rather that common sense is more valuable still.

- Discuss the value of a ground-breaking project in light of the ideas in the passage above. [8]
- Discuss the major differences between a project and a routine process. [8]
- Do you agree that managing a project requires more 'common sense' than textbook learning? Explain. [7]

QUESTION 4

Write an essay on: Qualities of an effective Project Manager. [25]

QUESTION 5

(a) Select any five of the terms below and define them, giving appropriate examples:

- Community project
- PERT chart
- Build, own, operate and transfer
- Crashing
- Project deliverables
- Consumables
- Feasibility study

[15]

(b) *Project status* is defined as the position where a project is against a pre-determined plan, and the impact of this position on the anticipated project outcome. Discuss the importance of keeping track of a project status from the beginning to the end. [10]

QUESTION 6

(a) Discuss **five** main characteristics and expectations of a team working on a project.

[10]

(b) Give definitions with examples of the following:

- *Capital projects*
- *Programmes*

[5]

(c) What are the roles of computers in project management?

[10]

E N D O F E X A M I N A T I O N