

# NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF TECHNICAL TEACHER EDUCATION

Programme: BACHELOR OF EDUCATION HONOURS DEGREE

MAI N EXAMI NATI ON

Course: *Project Development and Management*

*TTE3208*

Part: *III*

*MAY 2013*

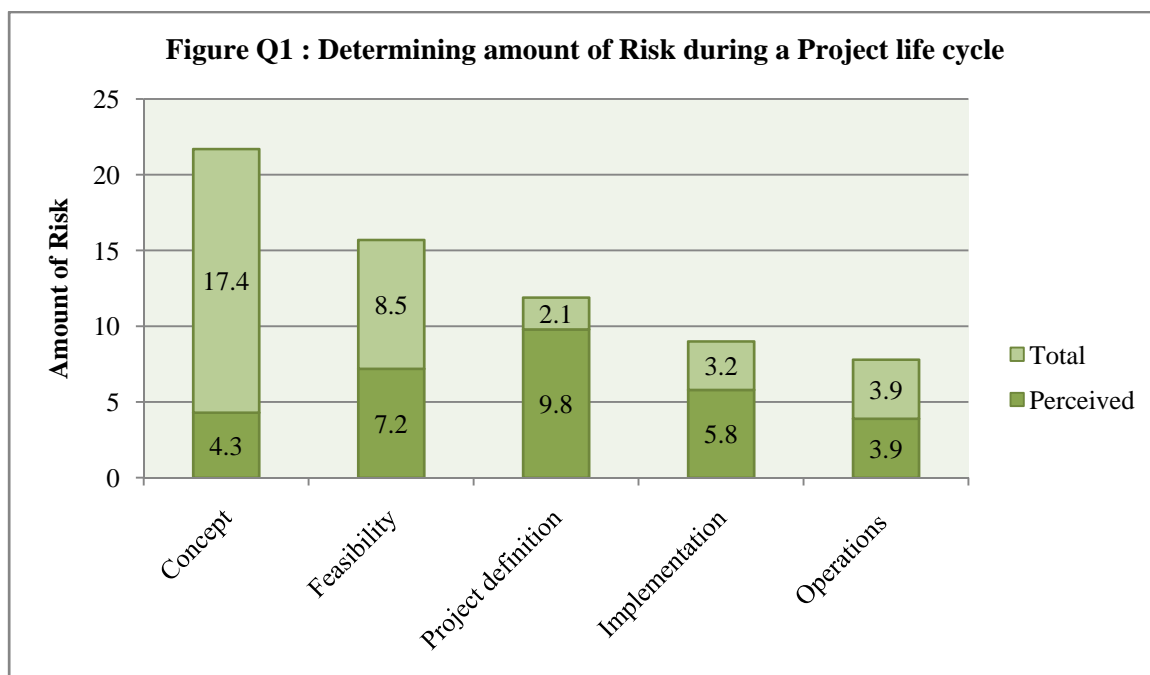
Time: *3 hours*      Lecturer: *Dr N Phuthi*

*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



- (a) Define *risk* and *risk assessment* in relation to a large-scale project. [5]
- (b) Describe, using figures, the variation of the amount of total and perceived risk during a project life cycle as depicted in Figure Q1. [10]
- (c) Discuss any **two** techniques for reducing risk in a project. [10]

## QUESTION 2

Read the passage below and answer the questions after it.

The origins of project management can be traced to the building of the pyramids in Egypt and the Great Wall of China. Study of the subject had started just before the Second World War in the chemical industry, but project management techniques were applied in the First World War when Henry Gantt made diagrams of projects ... the focus was initially on construction, but numerical techniques gradually developed which made the process generically applicable. Today project management has multidisciplinary application value. (Van der Waldt and Knipe, 2006)

- Why is it expedient to use the Project Method for major undertakings either by a nation or an organisation? [10]
- Evaluate one project management technique that could be used for a medium to large-scale project. [10]
- In your work situation, where would you use the Project Method and why? [5]

## QUESTION 3

Figure Q3 below shows a typical Gantt Chart.

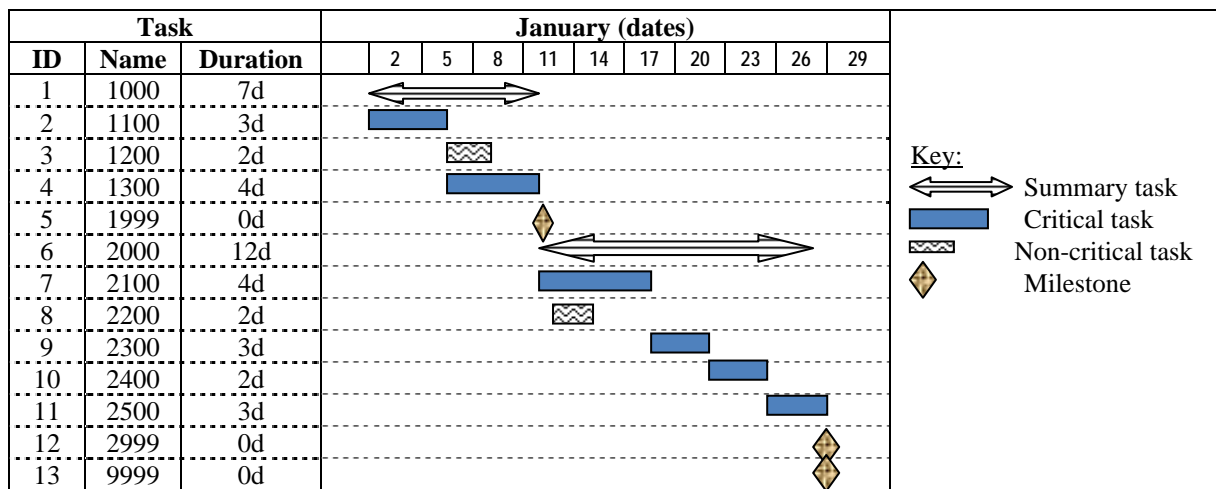


Figure Q3: Gantt Chart

- From the chart, identify the following, and give an explanation for your choice: *critical path, dependencies, float, and the total project duration.* [8]
- Use the diagram above to describe how a Gantt chart may be very valuable for planning, implementing and evaluating a project. [7]
- Discuss the roles of the Project Manager in the control and utilisation of the project resources. [10]

#### QUESTION 4

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

- Small-scale private project
- Build, operate and transfer
- Resource smoothing
- Float
- Exploration project
- Milestone

[15]

(b) Discuss the role of communication in a **named** project during all stages of its life cycle. [10]

#### QUESTION 5

Using a **named** example, write an essay on: The nature of resources, their procurement and deployment in project management. [25]

#### QUESTION 6

(a) Discuss the effects of the following on a project:

- (i) Schedule compression and expansion (i.e. varying the duration) [5]
- (ii) Contingency padding (buffering) [5]

(b) Identify **two** types of change, discuss their nature and suggest change management strategies that can be applied in a **named** project of your choice. [12]

(c) PRINCE is an acronym for Projects in Controlled Environments. Describe such projects and give one example. [3]

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