



<b>FACULTY</b>	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
<b>DEPARTMENT</b>	ENVIRONMENTAL SCIENCE		
<b>SUBJECT</b>	GIS PROJECT MANAGEMENT		
<b>SUBJECT CODE</b>	GIS3800		
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<b>DURATION</b>	3 HOURS	<b>MARKS</b>	100

### **Regular Examination**

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This question paper consists of three (3) pages excluding this front page.

#### ***Instructions***

1. Work in an orderly way and present your work as neatly as possible.
2. Mark your questions correctly and clearly.
3. Answer all questions.

## QUESTION 1

[10]

From the following questions, choose the correct answer.

- 1.1 The work defined at the lowest level of the breakdown structure to estimate as well as manage time and cost is called the: (2)
- Activity
  - Task
  - Work package
  - Cost account
- 1.2 A project manager is employed by a GIS software company and is responsible for writing a software module of major existing software. From the following list choose one of the first things that the project manager for this project should do. (2)
- Work breakdown structure
  - Budget baseline
  - Project charter
  - Project plan
- 1.3 Your project work has generally been finished and you want to commence a solid closing process for the project. What must have been attained to begin this process? (2)
- The deliverables of the project must have been accepted.
  - The organizational process assets must have been updated.
  - The final product, service or result transition must have been finished.
  - Lessons learned must have been organized into a data base.
- 1.4 The concept of (the) \_\_\_\_\_ states that changes related to one requirement – scope, time, or cost – will at least influence one other element. (2)
- Three-point estimation
  - Triple constraint
  - Three wise men
  - Three needs theory
- 1.5 The communications management plan is a document which includes descriptions of.. (2)
- Project level performance reports
  - Activity level status reports
  - Stakeholder communication requirements
  - Project benefit analysis results

**QUESTION 2**

**[40]**

- 2.1 Give any example of scope validation in GIS project management. (2)
- 2.2 In a GIS database creation project, the project manager is making sure that the product of the project has been completed according to the project management plan. What part of the project management process is s/he in? (2)
- 2.3 Why is there a need for ‘planning’ as part of project management processes? (3)
- 2.4 What is your understanding of the ‘Fixed-Price Contract’ in project management? (3)
- 2.5 Indicate four challenges that could be experienced as a result of a poorly defined scope. (4)
- 2.6 Briefly discuss what it meant by “project portfolio”. (6)
- 2.7 Project contract closure is different from project administrative closure. Provide your own arguments to accept or reject this statement. (6)
- 2.8 According to the Project Management Institute (PMI), project management knowledge areas address critical concerns and practices that must be taken into account in project planning and execution. Highlight the three PMI Knowledge areas. (6)
- 2.9 Explain the concept of the Triple constraint and its effect on a project. (8)

**QUESTION 3**

**[50]**

3.1 Briefly discuss your understanding of the following terms:

- a. Risk Planning (3)
- b. Risk identification (3)

3.2 From your knowledge and understanding of projects, evaluate the four characteristics of a project. (8)

3.3 Explain the following approaches to resource scheduling while ensuring the distinctions between the two approaches:

- a. Resource loading (5)
- b. Resource levelling (5)

3.4 Assume you are a GIS project manager in charge of developing a health atlas database for the Ministry of Health and Social Services, your first task is to look at the scope of the project and develop a Work Breakdown Structure (WBS). Answer the following questions relating to the WBS:

- a. Explain what is the WBS and its importance to create one within a project. (6)
- b. Construct a simple and hypothetical Work Breakdown Structure (WBS) with all the major components. Note that only elements relating to WBS will be evaluated. (20)