



FACULTY OF SCIENCE

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL MANAGEMENT & ENERGY STUDIES

MODULE	ENM3B: ENVIRONMENTAL MANAGEMENT
CAMPUS	APK
EXAM	JANUARY 2017

DATE: 12 JANUARY 2017

SESSION: 11:30 – 14:30

ASSESSOR(S)

MRS. L.S. MODLEY

INTERNAL MODERATOR

DR. I.T. RAMPEDI

EXTERNAL MODERATOR

MR. K.W. MAPHANGWA (UNISA)

DURATION 3 HOURS

MARKS 150

NUMBER OF PAGES: 3 Pages

INSTRUCTIONS:

1. This examination paper has **TWO**, please complete **BOTH sections**.
 2. The assessment opportunity is **CLOSED BOOK** examination.
 3. Every section must be written in a **SEPARATE ANSWER SHEET**, which should be stapled together if more answering books are used.
 4. Write neatly and eligibly.
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SECTION A: ENVIRONMENTAL LAW AND SECTION 24

Question 1

An Industrial Development Zone (IDZ) has been approved in the Richards Bay area. The Umfolozi Developing Company that received the contract to develop the area realises that the whole development depends upon the sustained efficiency of regional infrastructure. To ensure this they consider the upgrading and expansion of the existing highway and the upgrading and expansion of the existing harbour. The highway was originally constructed over almost 30 years ago to provide an access to the port during the construction of Richards Bay Harbour. Its life span was limited and it was not designed to handle the current volume of traffic. New bridges will have to be build and the engineering costs will be more or less R47m. The costs for the upgrading of the highway alone would be in the amount of R334m. It is foreseen that the following structures will have to be erected namely a bridge crossing the Umfolozi Flood Plain (+/- 1 Km in length); 16 Large box culverts and 4 Bridges. A total distance of 19 km will be dual carriageway when completed. The existing road will be upgraded whilst the new carriageway will cater for West bound traffic. There will be two lanes each way. The project will be a joint venture BEE project.

The upgrading of the harbour would involve the construction of a new berth at the Richards Bay Coal Terminal (RBCT). The number of berths will be increased to six. It is foreseen that this should satisfy the needs of the Umfolozi Developing Company's filial, Highrise Co Ltd, that is a coal producer and who is not presently able to utilize the export facilities at RBCT. To construct a quay extension at the Coal Terminal the dredging method has to be used. The extension of the berth will be 308 meters.

The Liquid Bulk Terminal which will be situated in the harbour area, which handles a range of chemicals, has also to be expanded to accommodate for the increase in volumes imported. Situated close to the Port with a dedicated customs facility the IDZ will offer an immediate supply of raw materials including aluminium, heavy metals, various chemicals, wood, pulp, paper, agricultural products, gas, coal and remember that the electricity is the second most cost effective supply in the world.

Jaba Steel also wants to establish a 270,000 ton a year Ferrochrome smelter, which will also create thousands of construction jobs. The smelter will establish 130 permanent positions and 800 indirect jobs. The community conscious Nigerian industrial giant plans to utilize local labour and expertise and is committed to a policy of local beneficiation. Adjacent to the IDZ area, is an informal settlement. It is foreseen that this settlement be relocated to a new housing development area approximately 20km away from this site. The inhabitants protest vehemently against the relocation as they would be too far away from work and schools.

On the other side of the proposed IDZ area is a pristine marine and wetland area. Due to the natural beauty of the area, the developers propose to develop an exclusive holiday resort in the area with a golf course. The developers undertake to do a special study of the Hippo and their traditional feeding patterns in the area surrounding the lake and the developers promise that they will ensure that they will not disturb the habitat in the area.

You must write a report to your Directors advising on the following:

- 1.1) For this particular project how will you determine whether an environmental authorisation is required and who will be the competent authority in relation to your application for environmental authorisation? Motivate why you need to evaluate the impacts on the environment and decide if an environmental authorization is needed by stating the origin of the legally protected environmental right and what piece of legislation governs environmental protection in South Africa? [15]

- 1.2) Advise the Directors regarding the process to be followed in respect of activities which were commenced with without the requisite environmental authorization (Include information regarding any risks associated with this process). Also explain why not just any person can hold primary responsibility for the planning, management, coordination or review of the environmental authorisation process? [10]
- 1.3) What are the requirements of an EIA in South Africa? [10]
- 1.4) How does the definition of EIA support the goal of Environmental Management? [15]
- SUB-TOTAL [50]**

SECTION B: ENVIRONMENTAL MANAGEMENT PROCESSES AND SPECIALIST STUDIES.

Question 2

Few of these Environmental Impact Assessments consider the impact of an activity on human health. In the rare case where an Environmental Impact Assessments includes some aspects of health, health studies are conducted without clear guidelines on how to conduct the assessment and which process to follow to ensure that health impacts are comprehensively investigated. To ensure that environmental health becomes part of the Environmental Impact Assessment decision making process, health will need to be integrated into the present process in a structured and systematic manner. This will ensure that human health issues, resulting from a listed activity, are addressed before the start of an activity.

- 2.1) What is a Health Impact Assessment and why is it necessary to conduct such an assessment? [15]
- 2.2) Compare the scoping process within the EIA and the scoping process within the Health Impact Assessment by highlighting similarities and differences. [20]
- 2.3) There are 3 types of Health Impact Assessments, briefly explain each and propose the one most suitable for the described project. [15]

SUB-TOTAL [50]

Question 3

- 3.1) Define Public Participation in an EIA process. [15]
- 3.2) What does the public participation process in South Africa entail? Explain the different tools used to achieve successful public participation. [15]
- 3.3) What are the objectives for Public participation during the screening and scoping phases of the EIA? [20]

SUB-TOTAL [50]

TOTAL [150]
