

**SPECIFY TYPE OF EXAMINATION**

FIRST ATTEMPT   
FIRST RESIT   
SECOND RESIT   
RE-TAKE



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF SPATIAL PLANNING AND NATURAL RESOURCE MANAGEMENT  
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS IN SPATIAL  
PLANNING**

**4<sup>TH</sup> YEAR 2<sup>ND</sup> SEMESTER 2022/2023 ACADEMIC YEAR**

**MAIN CAMPUS**

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**COURSE CODE: PNB 1401**

**COURSE TITLE: ENVIRONMENTAL IMPACT ASSESSMENT AND AUDITING**

**DATE:                                      TIME:**

**DURATION: 2HRS**

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**Instructions:**

1. Answer ALL questions in Section A and B and ANY ONE question in Section C
2. Tick the most correct alternative in Section A
3. Answers to Questions in Section B and C must be written in the spaces provided on the question paper.

## Section A Answer all Questions

1. What is the purpose of EIA as a regulatory instrument/ tool?
  - a. helps in early identification and prevention of impacts
  - b. helps in generating public awareness about environmental issues
  - c. helps in formulating environmental management plan for residual issues
  - d. All of the above
  
2. Which of these is **TRUE** about Environmental Impact Assessment (EIA)?
  - a. It is a procedure that ensures that the environmental implications of decisions are taken into account when there are evidences of environmental impact in the progress of an activity.
  - b. It is a procedure that ensures that the environmental implications of decisions are taken into account after the environmental agency grants a permit.
  - c. It is a procedure that ensures that the environmental implications of decisions are taken into account before the decisions are made.
  - d. It is a procedure that ensures that the planned development integrates environment, socio-economic issues and culture
  
3. When is EIA usually required for a development project?
  - a. Limited impacts are expected in the environment
  - b. A small area is expected to be affected by the project
  - c. No cumulative impacts are expected
  - d. There are potentials for transboundary impact
  
4. Which of the following set of projects usually requires an EIA?
  - a. Reclamation, resettlement and new land development; Small housing building and Dams and reservoirs
  - b. Industrial plants (large scale); Community garden development
  - c. Irrigation, drainage, and flood control (large scale) and Development of wells in the community
  - d. Port and harbour development; Thermal and hydropower development and outdoor recreation
  - e. Mining and mineral development (including oil and gas)
  
5. If in the screening stage of EIA, the impact level of a developmental project is not discernible, then what step should be adopted?
  - a. Scoping stage is to be followed.
  - b. A rapid EIA study is to be conducted.
  - c. Detail EIA study is to be conducted.
  - d. The project should be given Environmental Clearance.
  
6. Which one of the steps below is **not** included in the scoping process? (select one)
  - a. Describe the project area and the area of the project influence.
  - b. Define a set of criteria to assess the project.
  - c. Identify and describe the environmental impacts and create a contingency plan
  - d. Start inserting this information in the appropriate section of the TOR.
  
7. What is **incorrect** of the Scoping step?

- a. It is a systematic exercise that establishes the boundaries of an EIA
- b. It clearly indicates what is relevant and what is not relevant within an EIA
- c. It serves as a work plan for the entire EIA process
- d. It is based on the general characteristics of the project

8. What should be included during baseline study when describing the purpose and need of a project to try to understand it? (select all that apply from the list provided)

- i. the project beneficiaries
  - ii. expected results
  - iii. how the results are to be achieved.
  - iv. rationale for how the activity is expected to achieve the results.
  - v. by what means results are to be achieved.
- a.i, ii&iii Only
  - b.i, ii & iv Only
  - c.i, ii & v Only
  - d.ii, iv &v only

9. Identify the **CORRET** sequence for impact assessment process in EIA

- a. Description of Environment → Identification of impacts → Prediction of impacts → Evaluation of impacts → Identification of mitigation needs.
- b. Identification of impacts → Prediction of impacts → Evaluation of impacts → Identification of mitigation needs.
- c. Identification of impacts → Description of Environment → Prediction of impacts → Evaluation of impacts → Identification of mitigation needs.
- d. Prediction of impacts → Identification of impacts → Description of environment → Evaluation of impacts → Identification of mitigation needs.

10. Which of the following **CORRECTLY** describe impact prediction?

- a. difficult exercise
- b. technical exercise
- c. very long exercise
- d. easy exercise

11. What class of impact is Noise pollution due to loading and unloading of material during construction phase of a project?is

- a. insignificant and irreversible impact
- b. long term and significant impact
- c. negative but reversible impact
- d. None of the above

12. How would you describe contamination of a confined ground water aquifer?

- a. insignificant and reversible impact
- b. long term and significant impact
- c. negative but short-term impact
- d. none of the above

13. How would you classify increased concentration of suspended particulate matter (PM10) in ambient air due to excavation of earth for the preparation of foundation of a building?

- a. significant and irreversible impact
- b. long term and significant impact
- c. negative but short-term impact
- d. None of the above

14. What is **not** included in an Impact assessment?

- a. a detailed assessment of the planned project and selected alternatives compared to the baseline conditions
- b. Qualitative descriptions measuring high, medium and low impacts
- c. All the data collection, analyses, and developed plans summarized together in a well-structured and concise document
- d. Quantitative descriptions such as indicating the cubic metres of water withdrawn, sewage produced, and pollutants released

15. The list below gives specific areas where Mitigation measures should focus. (select all that apply from the list provided)?

- i. Preventive measures that avoid the occurrence of impacts and thus avoid harm or even produce positive outcomes.
  - ii. Measures that focus on limiting or lessening the severity and the duration of the impacts.
  - iii. The identification of compensation mechanisms for those impacts that are unavoidable and cannot be reduced further.
- a. i and ii only,
  - b. i, and iii only
  - c. ii and iii only
  - d. i, ii and iii

16. Which **one** item from the list below is **not** an example of an approach to impact assessment?

- a. Expert judgment
- b. Rapid Impact Assessment Matrix (RIAM)
- c. Social impact assessment
- d. One-off impact assessment

17. Which of the following EIA tools would be suitable for preliminary assessments?

- a. Checklists and simulation modelling
- b. Checklists and matrices
- c. Matrices and Cost benefit analysis
- d. Matrices and Simulation Modelling

18. Negative impacts on the environment identified during the EIA can be alleviated through mitigation measures. Identify the mitigation hierarchy from the options provided.

- a. Reduce - Remedy - Avoid - Compensate – Adopt
- b. Avoid - Reduce - Remedy - Compensate - Adopt
- c. Compensate - Reduce - Remedy - Avoid - Adopt

d. Remedy - Avoid - Compensate – Reduce – Adopt

19. Which one of the items listed describes a way to minimize impacts?

- a. Scale reduction or re-location of the proposal
- b. Change the EIA team
- c. Talk with the authorities
- d. Obtain a construction permit to start

20. A core part of Impact Management is developing an– environmental management plan (EMP). Which items from the list below are **not part** of the contents of an EMP?

- a. Mitigation
- b. Capacity Development
- c. Contingency plans
- d. TOR

21. Which is **not** a key step in developing an EMP?

- a. A review of EIA legislation in different countries
- b. Statement of compliance with relevant standards.
- c. Allocation of resources and responsibilities for plan implementation.
- d. Schedule of the actions to be taken.

22. Identify from the list given specific aspects of a good EIA report and review (select all that apply from the list provided)?

- i. Assessment, mitigation measures and related plans
  - ii. A terms of reference (TOR)
  - iii. A generalized set of assumptions about the project benefits described in highly technical terms.
  - iv. A satisfactory prediction of the adverse effects of proposed actions and their mitigation using conventional and customized techniques.
  - v. Information that is helpful and relevant to decision making.
- a. i, ii, iii, iv
  - b. i, ii, iv, v
  - c. ii, iii, iv, v
  - d. i, iii, iv, v

23. There are many known shortcomings in EIA reports. Which is **not** a known shortcoming?

- a. The description of the proposal does not cover key features.
- b. Appropriate mitigating measures are not considered.
- c. Insufficient or outdated prediction models are used.
- d. All relevant stakeholder's concerns are incorporated.

24. What are the key objectives of EIA review (select all that apply from the list provided)??

- i. Confirm the quality of the information and methods used in an EIA.
- ii. Ensure that it addresses all the critical and cumulative impacts and identified relevant mitigation measures
- iii. Take into account inputs from public comment.

- a. i, ii and iii
- b i and iii
- c. ii and iii
- d. None of the above

25. There is often a formal review and licensing procedure in EIA systems. Who would carry out such a procedure (select all that apply from the list provided)?

- i.The proponent of the development project
- ii.The government authority ultimately responsible for licensing development projects (i.e government infrastructure department)
- iii.Another government agency or committee
- iv.an independent body

- a. i, ii and iii
- b. i, iii and iv
- c. ii, iii and iv
- d. i, ii, iii and iv

26. Experience with EIA review in a number of countries has shown that public comment is a critical part of the EIA review process. What are common methods to ensure the public can comment on the project? (select all that apply from the list provided)

- i.Public hearing(s)
- ii.Written comments submitted to the proponent or government department
- iii.Creation of TV shows and/or magazine articles to describe the project

- a. i and ii
- b. i and iii
- c, ii and iii
- d. All of them

27. Who carries out the technical review procedure of the EIA in Kenya?

- a. Parliamentary Committee on the Environment National
- b. Environmental Management Authority
- c. Environmental Court
- d. Ministry of Environment and Forestry

28. Which item does **NOT** require any indicators in order to monitor identified environmental and social impacts and mitigation measures?

- a. The amount and range of stakeholders who participated in the scoping stage
- b. The most important impacts
- c. The effectiveness of the mitigation measures to make sure that they indeed reduce the impacts.
- d. The actions proposed in the contingency plans

29. What kind of monitoring is referred to when we speak of monitoring a development project (select all that apply from the list provided)?

- i) Monitoring indicators that measure the impacts on the environment and communities as a

result of the development project

- ii) Ensuring the fulfillment of all the commitments made in the approved EIA.
- iii) Keeping track of changes that may happen in the environment and communities because of the project and other local and/or global changes, such as changes in livelihoods due to economic crisis or migration, differences in water availability due to drought, etc.
- iv) Keeping track of the political context, to ensure that the project retains its licence.

- a) i, ii and iii only
- b) i ii and iv only
- c. ii, iii and iv only
- d. i, ii, iii and iv

30. Who carries out the data collection for monitoring indicators?

- a. The project's implementers
- b. National governments or independent agencies.
- c. International development banks or aid agencies
- d. The Environmental Authority

### Section B

**The Candidate must attempt all questions in this section. Answers must be precise and concise**

- 1. The \_\_\_\_\_ indicate the scope of the study and how deep it might be, telling how detailed the EIA studies should be.
- 2. The \_\_\_\_\_ refers to the original environmental conditions existing at a given moment before a change
- 3. The \_\_\_\_\_ is the natural or juridic person interested in the development of a project
- 4. The \_\_\_\_\_ is one of the most important tools in order to incorporate an environmental point of view into the decisions to be taken by the project from the investment perspective
- 5. The \_\_\_\_\_ is the relative knowledge or ignorance common to every EIA process and critical for the impact prediction

Read the following statements and indicate whether True/False

	ANS
6. Typically, the project proponents carry out the screening process by assessing their project based upon a set of criteria determined by a designated agency.	
7. TORs are often prescribed in national EIA legislation.	
8. In a Leopold Matrix, the rows cover the key aspects of the environment and society, while the columns list the project's activities during all stages of the project.	
9. Impact Management plans are often compulsory.	
10. A good quality EIA might still lead to the planned development not being permitted to go ahead based on the identified impacts.	

**Read the following case and answer the questions**

## CASE STUDY

An important mining company has been operating for about 4 years in a coastal region. The mining activity of this company is very intense. This company has effectively implemented its EMP with great success, mitigating the environmental impacts caused by this activity. Up to date the results of the environmental auditory show up that this company completely fulfil all the legal requirements, laws and environmental standards established by the authorities.

For one year, this company is part of a trial against the community, which argues that after the company started its mining activity in the zone, the quality of the water has significantly deteriorated and that this company is operating in a protected area. The Company argues that it has relevant proofs in order to demonstrate that they have not polluted the environment but the others industries located in the zone. The mining company emphasizes that when they began the activities the environment was already polluted specially the water and that the quality standards of the water were not good at all.

11. What document must the mining company present in the trial in order to demonstrate its argument that the environmental quality was already deteriorate before their activities began in the zone. Why is this document so important? [3Mks]
12. What document should the mining company have obtained in order to get its environmental license demonstrating that they are not located in a protected area. [2Mks]
13. What is the name of the institution that provide this document in Kenya? [1Mk]
14. Identify **two** environmental impacts this company might cause into the environment and **two** ways to mitigate this impacts that should be included in its EMP [4Mks]

## Section C 20 Marks

These are long answer questions

There are a total of three (3) questions, each carrying 20 marks. A candidate is required to **answer any one (1) question**

- Q1. a) Why should Environmental Impact Assessment be required for development projects? [12Mks]  
b) Describe the **two** approaches in predicting impacts outlining the advantages and disadvantages of each [8Mks]
- Q2. a) The significance of an impact depends on its context and intensity, Identify **six factors** and explain how each influence the **intensity** hence significance of an impact [12Mks]  
b) Identify and describe any four classes of Environmental impacts [8Mks]
- Q3. (a) Identify one EIA methodology of your choice and answer the following questions
- i) Explain what it is? [1Mks]
  - ii) At what stage (s) of the EIA process is it most applicable? [2Mks]
  - iii) What are its merits [5Mks]



iv) What are its limitations

[5Mks]

b) Give a brief description of the categories for the environmental project classification according to the World Bank comparing it with that of Kenya.

[7Mks]