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#### MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF ENGINEERING,APPLIED SCIENCES AND TECHNOLOGY

**DEPARTMENT: MINING AND MINERAL PROCESSING ENGINEERING**

**MODULE: PROJECT PLANNING AND DESIGN**

**CODE:HGEN511**

### SESSIONAL EXAMINATIONS

**DECEMBER 2023**

**DURATION: 3 HOURS**

**EXAMINER: MR S CHISHIRI**

## INSTRUCTIONS

1. *This paper contains* ***ONE*** *section and five questions*
2. *Answer any* ***FOUR*** *questions****.***
3. *Start a new question on a fresh page*
4. *Each question carries 25 marks*
5. *Total 100 marks*

**QUESTION 1**

1. With the aid of relevant metallurgical engineering examples, briefly describe the characteristics of a project charter. **[10 marks]**
2. State any 5 roles of a risk manager. **[5 marks]**
3. Describe the roles played by the following people when doing a project
4. Project team
5. Support services **[10 marks]**

**QUESTION 2**

1. Describe and explain the major concepts involved in project management.

  **[25marks]**

**QUESTION 3**

1. You are employed as a project manager at a Gold Mine. Give the organization structure for projects to be done by the Processing department. **[10 marks]**
2. Explain the following phrases in developing a project model
3. Market and client oriented approach
4. Stage gate development process
5. Market strategies
6. Systems engineering concepts
7. System life cycle characteristics **[15 marks]**

**QUESTION 4**

1. Explain the following phrases
2. Buffer management
3. Project value
4. Control of costs **[10 marks]**
5. Using examples briefly discuss four factors that lead creation of a project.

 **[15 marks]**

**QUESTION 5**

1. As a project metallurgist, describe using metallurgical engineering examples the significance of planning and scheduling when doing a project at an iron making plant. **[15 marks]**

b)With the aid of a diagram explain the contraints that affect a project. **[10 marks]**

**END OF EXAMINATION**