



# **GWANDA STATE UNIVERSITY**

**FACULTY OF ENGINEERING AND ENVIRONMENT**

**DEPARTMENT OF GEOMATICS AND SURVEYING**

**SURVEYING CAD 4**

**EGS 5103**

**Examination Paper**

**June 2023**

This examination paper consists of 2 pages

**Time Allowed: 3 hours**

**Total Marks: 100**

**Examiner's Name: F. Shumba**

## **INSTRUCTIONS**

A Calculator and computer with Civil 3D and Excel are required.

Answer ALL questions and save all files on Desktop with Reg # as Folder Name

English Feet to metres conversion factor = 0.30475

Density of Coal = 0.847

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**QUESTION 1****25**

- i. Calculate and adjust the given traverses in Civil 3D?
- ii. Draw the georeferenced traverse circuit and polars, show station names and (X, Y, Z) Coordinates of all the points.

Please Note: -On the bottom right corner, specify plotting parameters.

Take T1=	Y	X	Z
	10,000.000m	10,000.000m	452.000m

Orientation Correction = -200°00' 00"

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**QUESTION 2****35**

- i. From the given csv file calculate the Tonnage of Coal at 1.000m ,0.500 m and 0.100 m Contour Intervals. In your answer show the DEM/DTM as generated in Autodesk Civil 3D at the prescribed intervals.
- ii. Give a brief analysis of the Tonnage and DEM results obtained at different intervals.

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**QUESTION 3****40**

After carrying out data searches at SG for a Cadastral Survey, you manage to get the diagram attached. You are required to generate a soft copy in metric format of the same diagram for beacon search and consistency check.

- i. Using Civil 3D, reproduce the diagram.

Please Note: -Show all beacons and geospatial information except notes and inserts  
On the bottom right corner show the plotting parameters.

End of Examination