

**UNIVERSITY OF SWAZILAND**  
**DEPARTMENT OF GEOGRAPHY,**  
**ENVIRONMENTAL SCIENCE AND PLANNING**

**SUPPLEMENTARY EXAMINATION**  
**JULY 2005**

**TITLE OF PAPER: ELEMENBTARY SURVEYING AND CARTOGRAPHY**

**COURSE CODE: GEP 213**

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS INCLUDING QUESTION 1, WHICH IS COMPULSORY AND ONE (1) QUESTION FROM EACH SECTION**

**MARKS ALLOCATION: QUESTION 1 CARRIES 40 MARKS. OTHER QUESTIONS CARRY 30 MARKS EACH.**

**THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR**

**SECTION A  
(COMPULSORY QUESTION)**

**QUESTION 1**

- (a) With relevant examples, explain why cartography is regarded as a branch of communication. (15 Marks)
- (b) Briefly explain TWO (2) categories or classes of maps. (10 Marks)
- (c) A steel tape will normally be provided with standardisation data for correction of measured lengths to account for differences that arise from conditions other than those at standardisation. Explain the following corrections:
- (i) Correction for temperature;
  - (ii) Correction for sag;
  - (iii) Correction for pull;
- (15 Marks)

**SECTION B**

**ANSWER ANY ONE QUESTION FROM THIS SECTION**

**QUESTION 2**

Use the attached map of Swaziland to do the following:

- (a) Using different shading [area emphasising symbols (lines)] indicate the administrative regions of Hhohho, Lubombo, Manzini and Shiselweni.
- (b) Indicate the location of the following urban areas: Manzini, Mbabane, Nhlangano, Piggs Peak and Siteki.
- (c) Name the river shown on the map.
- (d) Create an appropriate border.
- (e) Provide a suitable title of the map.
- (f) Provide a legend.
- (g) The shortest distance between Piggs Peak and Manzini is 60km. Indicate the scale of the map in statement form.

All the lettering should follow the guidelines for lettering a map. (30 Marks)

**QUESTION 3**

- (a) Briefly explain how the following would influence map design:
- (i) Map scale;
  - (ii) Audience;
  - (iii) Conditions of use. (15 Marks)
- (b) Write short notes on co-ordinate systems, with reference to maps. (15 Marks)

**SECTION C**

**ANSWER ANY ONE QUESTION FROM THIS SECTION**

**QUESTION 4**

- (a) Outline the procedure for determining land slope using a line-level. (16 Marks)
- (b) Indicate three causes of local attraction during a compass traverse. (6 marks)
- (c) List two advantages and two disadvantages of a compass traverse (survey). (8 Marks)

**QUESTION 5**

- (a) Define following terms used in levelling:
- (i) Datum;
  - (ii) Bench mark;
  - (iii) Backsight;
  - (iv) Change point. (10 Marks)
- (b) Give two reasons why levelling is carried on building sites. (10 Marks)
- (c) Write short notes on two applications of levelling. (10 Marks)

