UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER - JULY 2005
B.SC., BA B.A.S.S AND B.ED

Title: STATISTICAL GEOGRAPHY

Course Number: GEP 223

Time Allowed: Three (3) Hours

Instructions:

1. Answer Three (3) Questions.
2. Question One (1) is compulsory
3. Choose Two (2) other questions from Section B.
4. Where appropriate, illustrate your answer with examples.
5. All working and/or calculations must be clearly shown.
6. You will be provided with graph papers and tables for critical values and significant levels.

Marks Allocation: Question One carries Forty (40) marks and the other Questions are Thirty (30) marks each.

This paper is not to be opened until permission has been granted by the Invigilator.

SECTION A: COMPULSORY SECTION

QUESTION 1

You have been commissioned to establish the contribution of 400 main industrial firms in Swaziland towards national economic development. Among these firms 250 are large scale, 120 medium and 30 small scale. The funds provided are enough to cover only 10 percent of the Industries.

(a) Demonstrate how you will draw a representative sample for the study. **(15 marks)**

(b) (i) Indicate the type of information you will need for the study. **(15 marks)**

(ii) Identify the possible sources for the relevant information. **(5 marks)**

(iii) Identify the necessary instruments you will employ to get the information. **(5 marks)**

SECTION B: ANSWER ANY TWO (2) QUESTIONS

QUESTION 2

Discuss critically the six (6) main steps in undertaking a geographical study using a scientific approach. **(30 marks)**

QUESTION 3

Table 1 shows cotton production in Swaziland between 1951 and 1985.

(a) Draw a line graph to show the trend in cotton production in Swaziland - between 1951 and 1985. **(8 marks)**

(b) Calculate three (3) year running means for cotton production in Swaziland between 1951 and 1985. **(10 marks)**

(c) Using the calculated three (3) year running means in (b) above, plot another line graph on the same graph drawn in (a) above. **(8 marks)**

(d) Comment on the two (2) line graphs drawn. **(4 marks)**

QUESTION 4

Table 2 shows the size of population and Gross National Product (GNP) for some selected Low Income Economies. Using this data, do the following:

(a) Plot a scatter diagram for the two variables, **(5 marks)**

(b) Comment on the graph constructed, and **(5 marks)**

(c) Test the correlation co-efficient at 0.05 level of significance. **(20 marks)**

QUESTION 5

(a) Outline the main sources of geographical data. **(10 marks)**

(b) Discuss the problems you are likely to encounter in the collection and use of data from the sources identified in (a) above. **(20 marks)**

Table I: Production of Cotton in Swaziland (in Matric tons)

Year	Cotton Lint
1951	9045
52	8639
53	14127
54	9147
55	18599
1956	21851
57	23985
58	30693
59	31201
60	35978
1961	34250
62	30388
63	38925
64	47646
65	53206
1966	67034
67	78814
68	70830
69	51548
70	69403
1971	76430
72	65351
73	77001
74	65148
75	71363
1976	42410
77	66934
78	50435
79	56154
80	60477
1981	58644
82	44512
83	42901
84	41808
85	40036

Source: Hypothetical

Table 2 : Size of Population and GNP Per Capita for some selected Low Income African Economies

Country	Population (Millions 1994)	GNP Per Capita (Dollar) 1994
Rwanda	7.8	80
Mozambique	15.5	90
Ethiopia	54.9	100
Tanzania	28.8	140
Burundi	6.2	160
SieraLeone	4.4	160
Malawi	9.5	170
Chad	6.3	180
Uganda	18.6	190
Madagascar	13.1	200
Niger	8.7	230
Guine Bissau	1	240
Kenya	26	250
Mali	9.5	250
Nigeria	108	280
Burkina Faso	10.1	300
Togo	4	320
Gambia	1.1	330
Zambia	9.2	350
Benin	5.3	370
Central African Republic	3.2	370
Ghana	16.6	410
Zimbabwe	10.8	500
Guinea	6.4	520
Senegal	8.3	600
Conte d'Ivorie	13.8	610
Congo	2.6	620
Cameroon	13	680
Egypt	56.8	720
Lesotho	1.9	720

Source : World Development Report (1996) p. 188