



**THE KENYA POLYTECHNIC UNIVERSITY
COLLEGE**

DEPARTMENT OF SURVEYING & MAPPING

HIGHER DIPLOMA IN LAND SURVEY

END OF YEAR I EXAMINATIONS

NOVEMBER 2007

CARTOGRAPHY

3 HOURS

INSTRUCTIONS TO CANDIDATES:

You should have the following for this examination:

Answer booklet

Scientific calculator

Answer any FIVE of the following EIGHT questions.

All questions carry equal marks and the maximum marks for each part of a question are as shown.

This paper consists of 3 printed pages.

© 2007, The Kenya Polytechnic Examinations Office

1. (a) (i) Explain the TWO types of map revision.
 (ii) Outline the THREE revision policies giving examples where each is applied. (15 marks)
- (b) State any THREE circumstances where map revision becomes map reconstruction. (5 marks)
2. Describe the factors to be considered in map design. (20 marks)
3. (a) Explain the following giving ONE example in each case:

(i) Deed plan	(ii) Topographic map
(iii) Thematic map	(iv) Chart
(v) Atlas	

 (10 marks)
- (b) Outline THREE main uses of photo image maps. (4 marks)
- (c) List any SIX uses of topographic maps. (6 marks)
4. (a) Outline the following as used in Toponym:

(i) National Gazetteer	(ii) Exonyms
(iii) Transliteration	(iv) Transcription

 (10 marks)
- (b) Explain FIVE importance of standardization of Geographical names both nationally and internationally. (10 marks)
5. (a) Explain the following as used in map projection:

(i) Scale factor	(ii) False origin
(iii) Central meridian	(iv) Standard parallel

 (10 marks)
- (b) Illustrate the graticule of the following map projections:

(i) Cylindrical	(ii) Conical
(iii) Azimuthal	

 (10 marks)
6. (a) (i) With reference to the following colours of the spectrum, list FOUR film emulsions and indicate the colour range to which each emulsion is sensitive:
 Infrared, Red, Orange, Yellow, Green, Blue, Violet and Ultra-violet
- (ii) State safety conditions to be applied when handling or processing each sensitive film listed in 6(a)(i). (14 marks)

- (b) Distinguish between camera and contact photography. (6 marks)
7. (a) Explain the following as used in mapping:
- (i) Base map
 - (ii) Basic map
 - (iii) Homogeneous derived map
 - (iv) Heterogeneous derived map (10 marks)
- (b) Distinguish between the following giving ONE example in each case:
- (i) Absolute and relative quantities
 - (ii) Discrete and continuous variables
 - (iii) Qualitative and quantitative maps (10 marks)
8. (a) State the FOUR basic principles of lithography. (6 marks)
- (b) State the THREE reasons for making proofs before a map is finally printed. (4 marks)
- (c) Draw a diagram of a single colour offset printing machine and show the following parts:
- (i) Inking unit
 - (ii) Damping unit
 - (iii) Impression unit
 - (iv) Delivery unit
 - (v) Feeder unit (10 marks)