



**GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY**  
**Faculty of Built Environment & Spatial Sciences**  
Department of Spatial Sciences

**BSc (Hons) in Surveying Sciences**  
End Semester Examination – May/ June 2022  
Level 02 - Semester I - Intake 38

**SP 22003 – CARTOGRAPHY II**

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<b>Questions</b>	<b>: 07</b>	<b>Date of Examination :</b>	<b>31<sup>st</sup> May 2022</b>
<b>Number of Pages</b>	<b>: 04</b>	<b>Duration:</b>	<b>: 03 Hours</b>

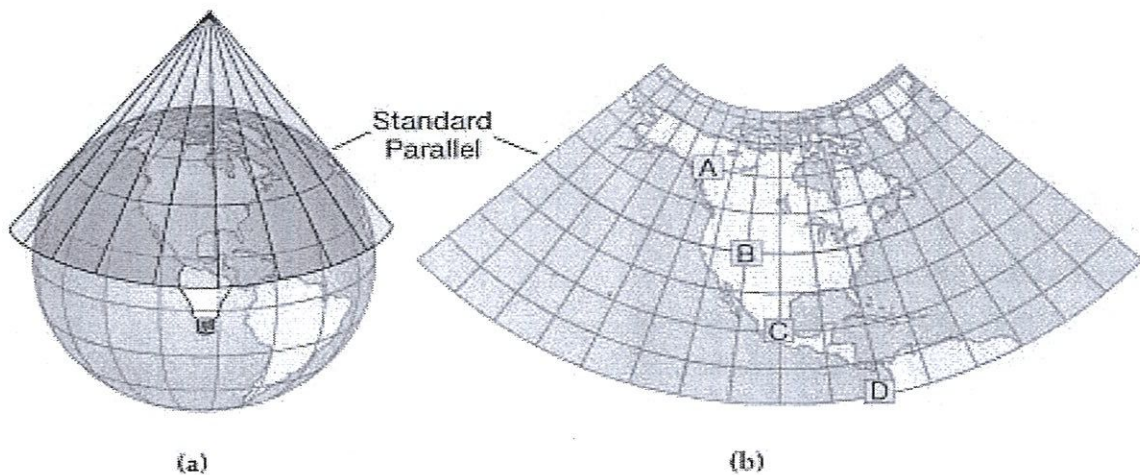
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**Instructions to Candidates**

- Answer **any five (05) questions**.
- This is a **closed book** examination.
- Write in **blue or black** pens only.
- All examinations are conducted under the rules and regulations of the KDU

### Question 01

- a) Define what is a map projection and name the projections which preserve one or more of the distortions. (05 marks)
- b) Name and briefly explain the three major groups of projections. (10 marks)
- c) As shown in the projection below (b) which point would possess the least distortion? Justify your answer. (05 marks)



[Total 20 marks]

### Question 02

- a) Define what is “color “and describe how does it differ from the primary colors? (05 marks)
- b) Briefly explain the followings: (2.5 marks each)
- Color tints and shades.
  - Hue, Intensity, and value of a color
- c) Explain the importance of colors in Cartography? (10 marks)

[Total 20 marks]

### **Question 03**

- a) What is GIS (Geographical Information System)? Explain its importance in Military use. (05 marks)
- b) Briefly explain the basic functions and elements of GIS. (05 marks)
- c) Write short notes on the followings: (2.5 marks each)
- i. TIN
  - ii. DEM/DTM/DSM
- d) Describe the basic methods of obtaining elevation data used to create a Digital Elevation Model (DEM) (05 marks)

**[Total 20 marks]**

### **Question 04**

"Cartographic generalization or a map generalization is the method whereby information is selected and represented on a map". Explain this statement. (20 marks)

### **Question 05**

- a) Having accurate information about terrain, enemy, own forces, and available resources, Commanders can work out several possible deployment plans for their troops. Explain this statement with suitable examples. (15 marks)
- b) Briefly explain the level of GIS utilization by the armed forces during the operational tasks in Sri Lanka. (05 marks)

**[Total 20 marks]**

**Question 06**

- a) Define the terms **Typography** and **Lettering** and explain their importance in Cartography.  
(10 marks)
- b) Discuss the general principals and requirements of lettering on maps?  
(10 marks)

**[Total 20 marks]**

**Question 07**

Briefly explain the steps of constructing a Digital Elevation Model (DEM)

**[20 marks]**

- End of Question Paper -