

UNIVERSITY OF COLOMBO – SRI LANKA  
FACULTY OF ARTS  
SPECIAL DEGREE EXAMINATION IN ARTS (GEOGRAPHY) – PART II  
SECOND SEMESTER FINAL EXAMINATION (2018/19)  
GYG 3259 – INTRODUCTION TO GIS

Time: Two (02) Hours

Answer Three (03) questions selecting one (01) from each part.

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Part I

01. Answer all questions.

- i. What is a system?
- ii. List out the five components of Geographical Information Systems (GIS).
- iii. State four major areas of practical applications of GIS.
- iv. Name four spatial data capturing methods in GIS.
- v. Provide four examples for continuous data in GIS.
- vi. List out the eight functions of GIS.
- vii. State four main demerits of Raster data formats.
- viii. Name four recent trends in GIS.
- ix. What are the main segments of GPS?
- x. Name four areas of application for GPS.

(2\*10 = 20 Marks)

Part II

02. i. What are the modern mapping techniques? (3 Marks)
- ii. Define the modern mapping techniques that you have mentioned in section 02 i. (4 Marks)
- iii. Briefly state the differences between traditional cartographic techniques and modern mapping techniques. (5 Marks)
- iv. Discuss the merits and demerits of traditional cartography and modern mapping techniques with examples. (8 Marks)

(Total Marks 20)

03. i. What is meant by “Spatial Analysis”? (3 Marks)
- ii. Briefly state the vector overlay methods using sketch diagrams. (4 Marks)
- iii. What are the differences between vector and raster data analysis? (5 Marks)
- iv. “Continuous data is not effectively represented in vector format”. Examine this statement with suitable examples. (8 Marks)
- (Total Marks 20)**

04. i. What is meant by Global Positioning Systems (GPS)? (3 Marks)
- ii. Briefly state 2D and 3D positioning in GPS (4 Marks)
- iii. Explain briefly, the sources of errors and how to minimize those errors in GPS (5 Marks)
- iv. “GPS did not play a significant role in war activities but it is increasingly playing a major role in social life”. Discuss with suitable examples. (8 Marks)
- (Total Marks 20)**

### **Part III**

05. “The application of GIS is limited only by the imagination of those who use it” (Jack Dangermont, President of ESRI). Examine this statement with suitable examples. (20 Marks)
06. “The spatial analysis tools of GIS help to make decisions in a variety of GIS applications”. Discuss with suitable examples. (20 Marks)

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