

KATHMANDU UNIVERSITY
End Semester Examination
August, 2018

Marks Scored:

Level : B. E.
Year : III

Course : GEOM 313
Semester: II

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date AUG 21 2018

SECTION "A"
[20 Q. × 0.5 =10 marks]

Tick the correct answer from the given choices.

1. If I have to print 5000 color maps of high quality, which technique is most efficient?
a. Ink-jet printer b. Offset printer c. Laser printer d. Photocopying
2. The function of printer driver:
a. Produces digital map file
b. Converts digital map file into page description data
c. Processes raster image and prints the map
d. Interprets page description data and produces raster image
3. An alternative to process color, spot colors use:
a. Transparent color b. Opaque color c. Translucent color d. Liquid color
4. After a latent image is transferred to a printing plate during prepress phase, the plate is chemically treated in a process that converts image areas into:
a. Oleophobic surface b. Oleophilic surface
c. Oil-fearing surface d. Luminous surface
5. The limitations of web-maps include all except :
a. Problems related to computer b. Actuality
c. Speed of data transfer d. Interactive
6. In the basic framework of mobile cartography, the key components are all except:
a. Information b. Context c. Postal mail d. User
7. The combination of various thematic information based on a consistent succession of map scales is represented in a:
a. Topographical atlas b. Health atlas
c. National atlas d. Real timemap
8. The OGC standard web service that provides access to remote GIS operations:
a. Web Coverage Service b. Web Feature Service
c. Web Map Service d. Web Processing Service
9. Interoperability is required in web maps to:
a. Use XML
b. Use web services
c. Seamlessly access functions and seamlessly transfer data
d. Follow Open Geospatial Consortium rules

10. Distributed network of people create and maintain the map called:
 - a. Collaborative Web Map
 - b. Analytic Web Map
 - c. Interactive Web Map
 - d. Animated Web Map
11. Which of the following is an example of a non-temporal animation?
 - a. A blinking dot in a map showing current position of a local bus
 - b. Spinning globe in web pages
 - c. A simulated flight through the landscape according to flight time
 - d. Map of boundary change in Europe since the World War II
12. Which of the following is FALSE for Multimedia maps?
 - a. WWW is an ideal platform to combine different multimedia elements with maps
 - b. Animations can be very inexpressive in explaining complex processes
 - c. Combining multimedia gives a better understanding of the mapped phenomenon
 - d. Maps can function as indices to sound libraries
13. Moments at which graphically represented data are visible in a running animation
 - a. Transaction time
 - b. Valid time
 - c. Database time
 - d. Display time
14. Crispness, resolution and transparency are the three subtypes of the variable:
 - a. Clarity
 - b. Size
 - c. Position
 - d. Form
15. The best graphic variable used to show uncertainty/fuzziness in data is:
 - a. Size
 - b. Clarity
 - c. Synchronization
 - d. Colour
16. Select the incorrect statement
 - a. Visual analytics always utilizes static and certain data
 - b. Visual analytics synthesizes information to derive insights
 - c. Geovisualization views datasets in a number of alternative ways
 - d. Geovisualization supports knowledge building
17. According to the Visual information seeking mantra, the first step to interpret any visual design must be:
 - a. Zoom & filter
 - b. Details on demand
 - c. Overview first
 - d. Extract information
18. When a user can user utilize the system to achieve their goals with efficiency & satisfaction, the system is said to have good:
 - a. Usability
 - b. Utility
 - c. Visual design
 - d. Interface
19. A usability test technique where observers take records objectively of whatever user says through a video is:
 - a. Focus group discussion
 - b. Thinking aloud
 - c. Video recording
 - d. Eye tracking
20. Select the incorrect statement about atlas:
 - a. Portability is one of the advantage of digital atlases
 - b. Any book consisting of a collection of maps is an atlas
 - c. Narrative is the cornerstone of digital atlas
 - d. Maps in interactive electronic atlas are not true maps, rather they are specific selection of data

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SECTION "B"

(Short answer question)

[6 Q. × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. What are the emerging trends in data dissemination? Compare analog versus digital dissemination methods for maps. [2+2]
2. Explain the user centric design approach used for map use research. Define any two map use research techniques. [2+2]
3. Define the role of color management system. Why is black added as an extra process color while color printing even when mixture of CMY gives black? [3+1]
4. Why synchronization is considered a secondary derived visualization variable? How can you reduce the problem of inattention blindness in animations? [2+2]
5. Describe how multimedia cartography has developed in different stages. [4]
6. Describe the procedure of high volume print reproductions from prepress phase to printing. [4]
7. Write short notes on: [2+2]
 - a. Visual information seeking mantra
 - b. High Fidelity Process Color

SECTION "C"

(Long answer question)

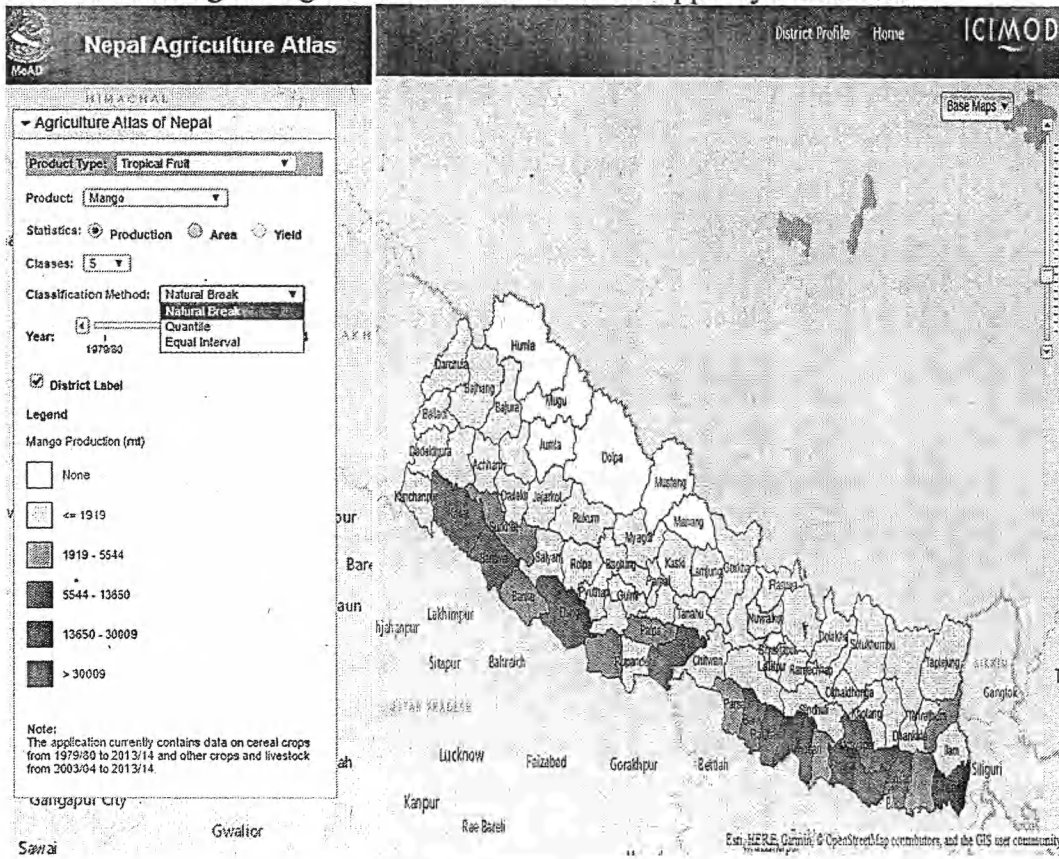
[2 Q × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. New technologies have enabled "the world in your pocket". Elaborate this statement using appropriate details. Describe the conceptual framework of mobile cartography. [2+6]
9. Define geovisualization and geovisual analytics with examples. Geovisualization is based on principle: *Detect the expected and discover the unexpected*. Using Minard's map of Napoleon's Moscow Campaign, explain this statement. [5+3]

10. Establish the need for interoperability in web maps. Answer the questions using the following two figures: [2+6]

i. From the figure, explain which category of atlas this belongs to. Justify by redrawing the figure with correct labels to support your answer.



ii. The figure below is a screenshot of a forest fire detection system. Justify which categories of web maps they belong to. Is it an atlas?

