

KATHMANDU UNIVERSITY
End Semester Examination
May/June, 2022

Marks Scored:

Level : B.E.

Year : III

Exam Roll No. :

Time: 30 mins.

Course : GEOM 313

Semester : II

F. M. : 10

Registration No.:

Date : ~~13~~ 13-June-2022

SECTION "A"

[20Q. × 0.5 = 10 marks]

Encircle the most appropriate option.

1. 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
2. Which of the following is **NOT** possible to obtain in analogue dissemination of maps?
 - a. Good graphical quality
 - b. High information density
 - c. Adjustment to individual demands
 - d. No need of equipment
3. Stochastic screening is typically controlled by following parameter:
 - a. Screen angle
 - b. Screen frequency
 - c. Cell type
 - d. Tint percentage
4. An alternative to process color, spot colors use....
 - a. Transparent color
 - b. Opaque color
 - c. Translucent color
 - d. Liquid color
5. High fidelity process colors are based on traditional process colors (CMYK) with two additional colors. Those additional colors are:
 - a. Orange and brown
 - b. Orange and purple
 - c. Green and brown
 - d. Green and orange
6. During this proofing method, the press is inked and calibrated and sample prints are made:
 - a. Laminate proof
 - b. Overlay proof
 - c. On-screen display
 - d. Press Check proof
7. The cylinder in which the printing plate is mounted is called:
 - a. Blanket cylinder
 - b. Plate cylinder
 - c. Printing cylinder
 - d. Impression cylinder
8. 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. Luminous surface
 - c. Oleophilic surface
 - d. Oil-fearing surface

9. Usually offset presses are capable to print on one side of the print medium at a time. Some are capable of printing on both sides simultaneously. They are:
 - a. Perfectors
 - b. Sheet-fed
 - c. Web-fed
 - d. Direct-to-press
10. Which of the following web map category does best fit the shortest route-finding option?
 - a. Personalized web maps
 - b. Analytic web maps
 - c. Interactive web maps
 - d. Real time web maps
11. The OGC standard web service used to disseminate grid data through web is :
 - a. Web Coverage Service
 - b. Web Feature Service
 - c. Web Map Service
 - d. Web Catalog Service
12. Which of the following is an example of temporal animation?
 - a. Map of boundary change in Europe since the World War II
 - b. A simulated flight through the landscape
 - c. A display of Choropleth maps with different classification methods used
 - d. A blinking dot in a map showing road accidents
13. According to Blok (2005) which of the following is a derived dynamic variable:
 - a. Order
 - b. Frequency
 - c. Synchronization
 - d. Moment of display
14. The traffic intensity (number of cars per hour) along main roads in a city has to be depicted in a map. Which map type is suitable to represent traffic intensity?
 - a. Flowline map
 - b. Cartograms
 - c. Choropleth
 - d. Dot density
15. The term Visual analytics can be defined as
 - a. Integrating approached from disciplines including cartography with scientific analysis, image analysis and information visualization
 - b. Stimulating visual thinking about geospatial patterns relationship and trends
 - c. Viewing geospatial data sets in a number of alternative ways
 - d. The science of analytical reasoning facilitated by interactive visual interfaces
16. Which of the following statement is **INCORRECT** for font selection in maps?
 - a. The typeface must be legible in small size
 - b. San-Serif fonts are generally used to label natural features such as mountain ridges and water body names
 - c. Different styles and weights of the typeface must be clearly differentiated from one another
 - d. Typeface must be able to form good word shapes
17. Usability refers to achieving users' goals with:
 - a. effectiveness, efficiency and satisfaction
 - b. Free and open source software and data
 - c. Maximum resource expenditure
 - d. Accuracy and completeness

18. is a research technique to test usability of cartographic products that is not just helpful to know what user are doing but also why they are doing.
- a. Focus group discussion
 - b. Thinking aloud
 - c. Video recording
 - d. Eye tracking
19. There are three major stages in the process of user-centered design of geospatial data dissemination system. They are:
- a. User requirement analysis, system design, testing prototype
 - b. Analyze requirement, produce design solution, evaluate design
 - c. User profiling, prototype design, user testing
 - d. System design, prototype design, user requirement analysis
20. What is the advantage of using proportional squares compared to proportional circles for the representation of absolute quantities in map?
- a. Easy scaling
 - b. Easy construction
 - c. Visually Pleasant
 - d. Give more estimation



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Level : B.E.
Year : III
Time : 2 hrs. 30 mins.

Course : GEOM 313
Semester : II
F.M. : 40

SECTION "B"
[6Q. × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. How does modern cartography differ from traditional cartography? What could be the reason for the emergence of the new term modern cartography although cartography existed since earlier times? [2+2]
2. What are the different ways of disseminating maps to users? What are the advantages and disadvantages of using web platform as a map dissemination tool? [1+3]
3. What are the factors that need to be considered before choosing the map reproduction techniques? Briefly explain the process involved in printing a digital map. [2+2]
4. Differentiate the terms Geodata presentation and Geodata exploration. Why is Geovisual exploration necessary for any geospatial project? [2+2]
5. What is the role of multimedia in maps? Briefly explain the feature Structure and navigation in multimedia maps. [2+2]
6. What is the significance of the time dimension in the geographic data? Suggest some ways of representing time in geographic data visualization. [2+2]
7. Write short notes on: [2+2]
 - a. Screening in print reproduction
 - b. Brushing techniques

SECTION "C"
[2Q. × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. Why do we need to perform proofing before map printing? What are the different proofing methods used in map printing? Explain the steps used in high volume map reproduction with particular emphasis on the offset lithographic printing. [1+2+5]

9.
 - a. Suppose you are working in the traffic department of Kathmandu metropolitan city. You are assigned to design web maps that can depict the live traffic conditions of the roads. Which type of web maps will you use and why? Explain the system architecture for designing such maps. [5]
 - b. What is the role of dynamic visualization variables in maps? List and briefly explain each of them. [3]
10.
 - a. Why is User- Centric Design (UCD) approach important in the context of modern cartography? Explain the basic principle and the overall process of UCD. [1+4]
 - b. "*The purpose of visualization is insight, not pictures (or maps).*" Explain this statement with suitable example. [3]