

KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2019

Marks Scored:

Level : B. E.

Year : IV

Exam Roll No. :

Time: 30 mins.

Course : GEOM 405

Semester : I

F. M. : 10

Registration No.:

Date 13 MAR 2019

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Encircle the most appropriate answer from the given choices.

1. A Web GIS client could be _____.
a. a web browser only b. desktop computer only
c. both browser and desktop computer d. browser, desktop computer and mobile
2. AJAX stands for _____.
a. Asynchronous JavaScript and xml b. Advanced JSP and xml
c. Asynchronous JSP and xml d. Advance JavaScript and xml
3. An alternative of JavaScript on windows platform is _____.
a. VBScript b. Python c. JSP d. Java
4. A web browser _____.
a. is a program used to encode html documents.
b. is a world wide web
c. enables user to access server
d. a software which enables users to access the resource of internet
5. How many HTML pair tags should be used for a most simple web page?
a. two b. eight c. six d. four
6. A dynamic web page is _____.
a. controlled by the client
b. controlled by the client as well as the server
c. generated on demand by a program or a request from browser
d. a server side html page
7. Getcapabilities returns _____.
a. Map layers b. Service level metadata
c. Service level attribute data d. Feature information
8. SRID for WebMercator is _____.
a. 3257 b. 3657 c. 4326 d. 3857
9. WMS delivers _____.
a. Image b. XML c. KML d. GML
10. Pyramid map tiling helps to deliver _____.
a. less no of scenes
b. less amount of data for a given zoom level
c. less about of details without zoom level
d. required amount of data at given zoom level

11. EPSG is used to _____.
 - a. define style
 - b. define projection
 - c. convert reference
 - d. define transformation parameters
12. Which attribute is used to name an element uniquely?
 - a. id
 - b. class
 - c. name
 - d. dot
13. A thick client is _____.
 - a. typically, low hardware requirements.
 - b. higher maintenance expenses (time and money).
 - c. ad-hoc access from more or less arbitrary locations.
 - d. a heavy weighted computer.
14. Main work of Geoserver is _____.
 - a. to publish data from postgresql/postgis database only
 - b. to publish shapefile data only
 - c. a proprietary software package
 - d. to publish spatial data from any major data sources
15. A web based geoprocessing service could be a _____.
 - a. WMS
 - b. WFS
 - c. server side execution based geospatial service
 - d. client side execution based geospatial service
16. A web service can be _____.
 - a. web software package
 - b. a client based web service
 - c. a standardized xml messaging system via web
 - d. a service offered by an edevice to another edevice via web
17. OpenLayers is a _____.
 - a. JAVA based library
 - b. server-side interfacing library
 - c. client-side mapping library
 - d. a library for map rendering
18. Style Layer Descriptor is used for _____.
 - a. publishing web map
 - b. defining legends
 - c. defining symbols and rendering
 - d. tiling
19. Interoperable systems can provide a mechanism _____.
 - a. to access functions seamlessly
 - b. to transfer data and access functions seamlessly
 - c. to transfer data seamlessly
 - d. for compatibility
20. Web cache is _____.
 - a. fishing IT via web
 - b. IT for temporary storage
 - b. IT for permanent storage
 - d. IT for temporary and permanent storage

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F. M. : 40

SECTION "B"

[6 Q. × 4 =24 marks]

Attempt *ANY SIX* questions.

1. Differentiate between thick and thin client server architecture.
2. What is Web Map Service (WMS)? Discuss on system architecture of WMS.
3. Discuss briefly the future impact of Internet on GIS with possible issues in Nepal.
4. What do you understand by Real-Time GIS? Elaborate on system architecture of a Real-Time GIS Application.
5. Discuss on how the "GetCapabilities" request work.
6. What is GIS server? Explain with an example of open source based GIS server.
7. Briefly explain *ANY TWO* of the following terms with their usage.
 - a. Web browser and web page
 - b. OGC
 - c. Geolocation, geocoding and reverse coding

SECTION "C"

[2 Q. × 8 =16 marks]

Attempt *ANY TWO* questions.

8. What is WebGIS? Discuss on its advantages.
9. Why do we need interoperability in web mapping? Discuss on major characteristics of the interoperable systems.
10. Why do we need SLD? How do you symbolise population data (High, Moderate and Low) of rural municipality and land use data (Forest, Shrubs-Grass, Agriculture, Water and Urban Built-up) while publishing WMS? Illustrate with SLD codes.

