[S2]

SARDAR PATEL UNIVERSITY
M. Sc. (GEOINFORMATICS)
SEMESTER – III
PS03CGIN01 (SPATIAL DATA INFRASTRUCTURE & WEB GIS SERVICES)
2ND NOVEMBER, 2017

Time: 2:00 p.m. to 5:00 p.m.   Marks: 70

> Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book.   (8)

(1) Open layers component falls into which server category?
   (a) Database Server   (b) Application Server
   (c) GIS Servers   (d) Web Servers

(2) Which level is just above Regional Level in SDI Hierarchy?
   (a) Global   (b) State   (c) Local   (d) National

(3) Central component of SDI is _____
   (a) Metadata   (b) Framework   (c) Fundamental Dataset   (d) People

(4) Relationship between Gujarat SDI and India SDI is an example of _____.
   (a) Horizontal Relationship   (b) Vertical Relationship
   (c) Both   (d) None

(5) _____ provides search and discovery to geospatial data and services.
   (a) Data Visualization   (b) Data Access
   (c) Data Discovery   (d) Data Index

(6) Ability for different systems to exchange/use geospatial information is called ?
   (a) Geospatial Interoperability   (b) Geospatial Interference
   (c) Both (a) & (b)   (d) None of these

(7) Web Map Service is ____ type of service.
   (a) Catalogue   (b) Processing   (c) Portrayal   (d) Data

(8) SOA stands for _____
   (a) Server Oriented Approach   (b) Service Oriented Approach
   (c) Server Oriented Architecture   (d) Service Oriented Architecture

Q-2 Attempt the following: (ANY SEVEN)   (14)

   1) What is SDI? List out various levels of SDI.
   2) Differentiate Website and Web Service
   3) What is Clearinghouse?
   4) List out key capabilities of an SDI.
   5) List out various types of services provided by SDI.
   6) What is Web GIS?
   7) What is Metadata? List out three levels of metadata.
   8) Why there is a need to build an SDI?
   9) List out the outcomes of an SDI.

Q-3 (a) Write a note on elements of SDI. [6]

(b) Write a note on SDI Hierarchy with neat diagram. [6]

OR

(b) Write a note on Development of SDI.

Q-4 (a) Write a note on GSDI. [6]

(b) What is data warehouse? Explain need for data warehousing. [6]

OR

(b) What are spatial databases? Explain spatial data warehouse and spatial data mining.

Q-5 (a) What is web GIS? Write a note on Client Server architecture and distributed [6] architecture.

(b) Write a note on GML. [6]

OR

(b) What is WMS? Explain all operations of WMS.

Q-6 (a) Write a note on WFS. [6]

(b) Write a note on Thin, Thick and medium client systems. [6]

OR

(b) Write a note on Web GIS Development life cycle.

ALL THE BEST

SEAT No._____

[46]

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SARDAR PATEL UNIVERSITY

No. of Printed Pages : 02

M.Sc. Geoinformatics
SEM – III, November 2017
QGIS Tools & Application Development,
SUB CODE: PS03CGIN02

DATE: 06th Nov. 2017
DAY: Monday

TIME: 2:00 PM TO 5:00 PM
TOTAL MARKS: 70

Q. 1 Choose the correct answer. [08]

(1) In plan metric the earth's coordinates system is projected on a _____dimensional planar surface
(A) one　　　　　　　　　　　　(C) three
(B) two　　　　　　　　　　　　(D) four

(2) QGIS has support for approximately _____known CRSs.
(A) 2700　　　　　　　　　　　(C) 27
(B) 270　　　　　　　　　　　　(D) None of above

(3) By default installed QGIS plugin is known as _____ plugins.
(A) Core　　　　　　　　　　　(C) Raster
(B) Vector　　　　　　　　　　(D) None of above

(4) Snapping tolerance is the _____ in QGIS uses to search for the closest vertex or segment.
(A) height　　　　　　　　　　(C) distance
(B) projection　　　　　　　　(D) None of above

(5) GPS Bable is used for _____
(A) Convert GPS file format　　　　　(C) Both (A) & (B)
(B) Transfer data Between computer & (D) None of above
　　　Device

(6) GPX file contain information regarding_____.
(A) Way point　　　　　　　　(C) track
(B) route　　　　　　　　　　(D) All of above

(7) NDVI =
(A) ((IR - R)/(IR + R))　　　　(C) Both (A) & (B)
(B) ((IR + R)/(IR - R))　　　　(D) ((IR + R) x (IR - R))

(8) High values of NDVI (0.6 to 0.8) indicate _____.
(A) barren areas of rock, sand, or snow　(C) shrub and grassland
(B) Temperate and tropical rainforests.　(D) clouds, water, and snow

Q.2 Answer the following.(attempt any seven, each two marks) [14]
(1) Title only all five division of GUI.
(2) Give a full form of EPSG, IGNF & GUI?
(3) What is Query builder in GIS system? What is its use?
(4) What is pyramid tab in GIS?
(5) Explain field list and value list in attribute table of GIS map?
(6) To prepare final print copy of digital map which different information's are necessary to add on map sheet?
(7) What is datum transformation?
(8) What is plugins in QGIS? Why they not pre-installed all plugins?
(9) What precaution should be taken during collecting field data?

Q.3	(A)	In detail with necessary figure explain coordinate system.	[06]
	(B)	Explain vertical coordinate system.	[06]
		OR	
	(B)	List and explain any three datum transformation system.	[06]

Q.4	(A)	Give full form of GPX files and explain in detail its creation and uses.	[06]
	(B)	Explain vector editing data tools In QGIS.	[06]
		OR	
	(B)	In detail explain raster data property in QGIS.	[06]

Q.5	(A)	Explain Geo referencer plugin and its application for GIS system.	[06]
	(B)	What is raster terrain analysis plugin in QGIS? How it help full in GIS?	[06]
		OR	
	(B)	Explain following	[06]
		(1) GDAL plugins	
		(2)Data base plugins	

Q. 6	(A)	What is a Geo tag photo? Write a note and important application of Geo tag photos on Map.	[06]
	(B)	What is thematic project? How its created? Explain with one example.	[06]
		OR	
	(B)	What is NDVI? How it usefully in GIS system?	[06]

-: All The Best:-

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(120)   SEAT No._____

SARDAR PATEL UNIVERSITY
M. Sc. (GEOINFORMATICS)
SEMESTER – III
PS03CGIN03 (VISUAL PROGRAMMING)
8ᵀᴴ NOVEMBER, 2017

Time: 02:00 p.m. to 5:00 p.m.   Marks: 70

> Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book.   (8)

(1) Which of the following is not an example of an object?
   (a) form   (b) color   (c) button   (d) text box

(2) Default namespace in C# is _____
   (a) data   (b) system   (c) IO   (d) Application

(3) Which method you invoke on SqlDataAdapter object to load your database with data?
   (a) Update   (b) Gather   (c) Fill   (d) Load

(4) The full form of MSIL is _____
   (a) Microsoft Intermediate Language   (b) Microsoft Incorrect Language
   (c) Microsoft International Language   (d) None of these

(5) Which of the following assemblies can be stored in Global Assembly Cache?
   (a) Private Assemblies   (b) Friend Assemblies
   (c) Shared Assemblies   (d) Public Assemblies

(6) To change the caption of label one has to change its _____ property.
   (a) Label   (b) Text   (c) id   (d) Textbox

(7) Automatic memory management in .NET is known as _____
   (a) Garbage Collection   (b) Memory Collection
   (c) Memory Management   (d) None

(8) The database technology used by the .NET Framework is _____.
   (a) ADO   (b) XML   (c) ADO.NET (d) SQLServer

Q-2 Attempt the following: (ANY SEVEN)   (14)
   1) List out various methods and states of Thread.
   2) Differentiate Value Type and Reference Type.
   3) What is remote object? List out the types of remote objects.
   4) Differentiate Managed Code and Unmanaged Code.
   5) What is Connected and disconnected architecture of ADO.Net.
   6) Highlight the functionality of CLR.
   7) Explain delegate with example.
   8) Explain boxing and unboxing with example.
   9) Explain conditional statements in c#.

(P.T.O.)

(1)

Q-3 (a) Draw .Net framework architecture and also explain in detail. [6]

(b) List different pre-processor directives available in C#. Explain any two. [6]

OR

(b) What is assembly? Discuss types of assemblies in detail.

Q-4 (a) Explain different types of loops in C# with example of each. [6]

(b) Write a note on inheritance. [6]

OR

(b) List out various types of operators in c#. Explain any two in detail with example.

Q-5 (a) List and explain any four common control of windows application in C#. [6]

(b) List different layouts of WPF application. Explain any two with sample code. [6]

OR

(b) What are custom controls? Explain custom controls in detail.

Q-6 (a) Draw and explain ADO.net architecture in detail. [6]

(b) Write a note on Styles in WPF. [6]

OR

(b) Explain Connection, Command, Dataset and Data Adapter objects in ADO.net.

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(119) SEAT No._____

SARDAR PATEL UNIVERSITY
M. Sc. (GEOINFORMATICS)
SEMESTER – III
PS03CGIN04 (ANDROID & IPHONE APPLICATION DEVELOPMENT)
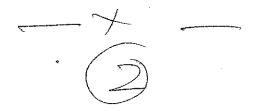### 10ᵀᴴ NOVEMBER, 2017, Friday

Time: 2:00 p.m. to 5:00 p.m.

Marks: 70

Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book.   (8)

(1) _____ file defines your application's capabilities and permissions and how it runs.
(a) Uniform Resource Identifier   (b) AndroidManifest.xml
(c) /res/values   (d) layout file

(2) What Activity method you use to retrieve a reference to an Android view by using the id attribute of a resource XML?
(a) findViewByReference(int id);   (b) findViewById(int id)
(c) retrieveResourceById(int id)   (d) findViewById(String id)

(3) _____ is used to pass data between activities in Android?
(a) Intent   (b) Content Provider   (c) Broadcast Receiver   (d) None

(4) Third argument of Delete method of database in Android is?
(a) where args   (b) where clause   (c) table name   (d) Any

(5) "NS" in iOS stands for:
(a) NeXT-sun   (b) N-set   (c) Net state   (d) None

(6) iPhone OS was first unveiled in ?
(a) January-2009   (b) January-2008   (c) January-2007 (d) January-2006

(7) iOS remote push notification is introduced by apple in which version?
(a) iOS 2.0   (b) iOS 3.0   (c) iOS 4.0   (d) iOS 6.0

(8) What does an Objective-C string literal look like?
(a) "foo"   (b) #"foo"   (c) @"foo"   (d) $"foo"

Q-2 Attempt the following: (ANY SEVEN)   (14)

1) Write a note on Toast.
2) What is Intent? Why it is used? List out various types of intents.
3) Write a note on AndroidManifest file.
4) List out various versions of Android SDK along with code name.
5) List out and define storage options in Android.
6) What is the use of simulator in iOS?
7) What is mutable and immutable array?
8) Differentiate between iOS and Android
9) What is difference between native app and web app?

(P.T.O)

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Q-3 (a) Write a note on Android Architecture. [6]

(b) Write a note on Layouts in Android. Also list out important properties of layouts. [6]

OR

(b) What is resource? Write a note on types of Resource.

Q-4 (a) Write a note on Android activity lifecycle. [6]

(b) Write a note on various types of dialogs supported by Android. [6]

OR

(b) List out various types of menus supported by Android. Explain each in detail.

Q-5 (a) List the name of 5 UI elements with their functionalities? [6]

(b) Write a program in objective C to find out factorial of any number. [6]

OR

(b) Give a simple example of delegate in iOS.

Q-6 (a) Write a note on built-in content provider of Android. [6]

(b) Write a short note on NIB? [6]

OR

(b) Write a program to access the elements of array object.

WISH YOU ALL THE BEST

SARDAR PATEL UNIVERSITY

M.Sc. Geoinformatics

SEM – III, November 2017

Geoinformatics Application in Utility Management (PS03EGIN02)

DATE: 13th Nov. 2017   TIME: 2:00 PM TO 5:00 PM

DAY: Monday   TOTAL MARKS: 70

Q. 1 Choose the correct answer. [08]

(1) Approximately _____ is part of drinkable water of total water available on earth.
- (A) 100 %
- (B) 2.1 %
- (C) 97.3 %
- (D) None of above

(2) In SCADA system D stand for _____ .
- (A) Digital
- (B) Direct
- (C) Data
- (D) None of above

(3) GPX include _____ .
- (A) Route
- (B) Way point
- (C) Tracks
- (D) All of Above

(4) URL means uniform resource _____.
- (A) Loading
- (B) Location
- (C) locator
- (D) All of above

(5) URI means uniform resource _____.
- (A) Image
- (B) Interchange
- (C) Identifier
- (D) All of above

(6) In National marine _____ association is shortly known as NMEA.
- (A) Error
- (B) Environment
- (C) Electronics
- (D) None of above

(7) For new GIS work first invite Request for _____. (In short known as RFP).
- (A) Precession
- (B) Proposal
- (C) Program
- (D) Planning

(8) _____ Tools is use for GIS based water shade analysis.
- (A) Arc hydro
- (B) C ++
- (C) ENVY
- (D) None of above

Q.2 Answer the following.(attempt any seven, each two marks) [14]

(1) List and explain one Advantages of utility management using GIS.
(2) What is a URL protocol? Enlist different four protocols.
(3) What are advantages of GIS maps over traditional maps?
(4) Give full form of : (1) RINEX (2) RTCM
(5) List different ten utility services handle by GIS.
(6) What is GPX file? Where its use?
(7) Explain waters important for earth and human lives.
(8) Give NMEA setting Specification for hardware device.
(9) List Tapping Groundwater benefits.

Q.3 (A) Explain Utility Spatial Database Design [06]
    (B) Describe Utilities Services management. [06]
                        OR
    (B) What is utility management data model? [06]

Q.4 (A) How GPS data useful in GIS based utility management and planning? [06]
    (B) Write a note on important of RS data in GIS utility planning. [06]
                        OR
    (B) What is SCADA? Explain SCADA as power utility management [06]
)

Q.5 (A) What is GIS analysis? Explain in detail [06]
    (B) Write notes on Report generation and manipulation. Why manipulation is [06]
        needed?
                        OR
    (B) Explain utility browsing for GIS. [06]

Q.6 (A) Explain in detail canal network and its planning using GIS technology. [06]
    (B) Write a short not on : [06]
        (1) Electric network using GIS
        (2) Major challenges of water in India.
                        OR
    (B) Explain in detail water shade development and modeling. [06]

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