S-207 Roll No. ……..

MGIS–01/PGDGIS–01/CGIS–01

Introduction to Informatics

Master of Geographical Information System/Post Graduate Diploma in Geographical Information System/Certificate in Geographical Information System (MGIS/PGDGIS/CGIS-11/16/17)

First Year/First Semester, Examination, 2018

Time : 3 Hours **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B, C. Attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. Answer the following :
   (a) What is Computer Memory ?
   (b) What is the difference between RAM and ROM ?
   (c) What is a RAM ? What are its two types ? Differentiate between them.
   (d) What is a Cache memory ? How is it different from a primary memory ?

2. Answer the following :
   (a) What is process ? What are the main objectives of the process-management module of the operating system ?
   (b) Differentiate between multiprogramming and multitasking operating system.
   (c) What is the difference between primary keys and foreign key ?
3. What is network topology ? Explain different types of network topologies along with the advantages and disadvantages of each.
4. Answer the following :
   (a) Explain ISO-OSI model in detail.
   (b) Explain Architecture of a database system.

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. Answer the following :
   (a) How covert binary number to decimal number ?
   (b) What is Mainframe Computer ? Explain.
2. Answer the following :
   (a) Differentiate between network operating system and distributive operating system.
   (b) What is Internet ? Explain why internet is called a 'network of networks'.

3. Explain the difference between :
   (a) Bridge and Gateway
   (b) Switch and Router
4. What is network interface card ? Why is it used ?
5. Explain different internet architectures in detail.
6. Explain TCP/IP model in detail.
7. What is DBMS ? Explain a simplified DBMS with the help of a diagram.
8. Explain client-server database in detail.

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (1) mark each. All the questions of this Section are compulsory.

1. ..... is a one-to-one transmission method in which the network carries a message to one receiver, such as from a server to a LAN workstation.
   (a) Broadcast
   (b) Unicast
   (c) Multicast
   (d) None of the above
2. The notion of network architecture was introduced during the internet research phase by the research community that had developed the ..... protocols.
   (a) ARPANET
   (b) NFSNET
   (c) CSNET
   (d) MILNET

3. A network interface card, also known as a ..... .
   (a) Router
   (b) Bridge
   (c) Hub
   (d) Network Adapter

4. A ..... is a communication device that converts binary electrical signals into analog signals for transmission over telephone lines and converts these signals back into binary form at the receiving end.
   (a) Modem
   (b) Network Adapter
   (c) Hub
   (d) Repeaters

5. ..... are used to regenerate the analog as well as the digital signals which are distorted by transmission loss.
   (a) Modem
   (b) Network Adapter
   (c) Hub
   (d) Repeaters

6. A ..... is a device or set of devices designed to permit or deny network transmission based upon a set of rules and is frequently used to protect networks from unauthorized access while permitting legitimate communications to pass.
   (a) Antivirus
   (b) Firewall
   (c) Malware
   (d) None of the above

7. A ..... is a program that allows user to define, manipulate and process the data in a database, in order to produce meaningful information.
   (a) DBMS
   (b) SQL
   (c) Distributed system
   (d) Centralized system

8. In a ..... database system, data are spread across a variety of different databases.
   (a) Distributed
   (b) Centralized
   (c) SQL
   (d) None of the above

9. ..... statements allow you to set, change permissions for security purposes like Grant, Deny and Revoke.
   (a) DDL
   (b) CFL
   (c) MPFL
   (d) DCL

10. Whenever the simple rules of functional dependencies are applied to a relations, it transforms the relations into a state which called ..... form.
   (a) DPR
   (b) Normal
   (c) PPR
   (d) Distributed