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MGIS-11/PGDGIS-11

(Master of Geo Informatics/P.G. Diploma in Geo Informatics)

First Year, Examination 2012

MGIS-01/PGDGIS-01

Introduction to Informatics

Time: 3 Hours

Maximum Marks: 60

Note: (1) Attempt any two questions form Section A.

(2) Attempt any four questions from Section B.

(3) All questions are compulsory in Section C.

Section A

(Long Answer Type Question)

2*15 =30 Marks

1. Calculate the following conversion:

a) Obtain decimal equivalent of hexadecimal number $(3A. 2F)_{16}$

b) Convert the following binary numbers to their equivalent hex numbers.

- i) 10100110101111
- ii) 0.00011110101101.

c) Convert $(3287.5100098)_{10}$ into octal

2. What is data structure? Discuss about the difference between a Stack and an Array in detail.
3. Discuss Comparison of OSI and TCP/IP models. And what is IPv6?
4. Explain following terms:
 - (a) Normalization(1 NF,2 NF ,3 NF)
 - (b) Difference between DMBS and RDBMS
 - (c) What is difference between primary key and foreign key?

Section B

(Short Answer Type Question)

4*5= 20 Marks

1. What is the difference between SDRAM and DDR RAM?
2. What is logical cache?
3. Why paging is used in OS?
4. Convert the expression $((A + B) * C - (D - E) ^ (F + G))$ to equivalent Prefix and Postfix notations.
5. What are the advantages of Distributed Processing?
6. What are the key elements of protocols?

7. What is Functional Dependency?

8. If there are two tables emp1 and emp2 and both have common record. How can I fetch all the records but common records only once?

Section C

(Objective Question)

10*1=10 Marks

1. Protecting the data from unauthorized access is called

(a) Data inaccessibility

(b) Data encryption

(c) Data security

(d) Data validity

2. Which of the following memory is capable of operating at electronics speed?

(a) Semiconductor memory

(b) Magnetic disks

(c) Magnetic drums

(d) Magnetic tapes

3) A page fault occurs

- (a) When the page is not in the memory
- (b) When the page is in the memory
- (c) When the process enters the blocked state
- (d) When the process is in the ready state

4) Virtual memory is

- (a) An extremely large main memory
- (b) An extremely large secondary memory
- (c) An illusion of extremely large main memory
- (d) A type of memory used in super computers.

5) 'LRU' page replacement policy is

- (a) Last Replaced Unit.
- (b) Last Restored Unit.
- (c) Least Recently Used.
- (d) Least Required Unit.

6) What protocol is used to find the hardware address of a local device?

- (a) RARP (b) ARP
- (c) IP (d) ICMP

7) A device that links two homogeneous packet-broadcast local networks, is

- (a) Hub
- (b) Bridge
- (c) Repeater
- (d) Gateway
- (e) None of the above

8) What type of join is needed when you wish to include rows that do not have matching values?

- (a) Equi-join
- (b) Natural joins
- (c) Outer joins
- (d) All of the above.

9) The following are functions of a DBMS except

- (a) Creating and processing forms
- (b) Creating databases
- (c) Processing data
- (d) Administrating databases

10) A DBMS that combines a DBMS and an application generator is

- (a) Microsoft's SQL Server
- (b) Microsoft's Access
- (c) IBM's DB2
- (d) Oracle Corporation's Oracle