MGIS-01/PGDGIS-01/CGIS-01
Introduction to Informatics

Master of Geographical information System

Post Graduate Diploma in Geographical

Information Systme / Certificate in Geographical

information System

(MGIS/PGDGIS/CGIS-11/16/17)

First Year/First Semester, Examination, 2019

Time : 3 Hrs   **Maximum Marks : 80**

Note : This paper is of Eighty (80) marks diveded into three (03) sections A,B and 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.Learner are required to answer any two (02) questions only.

(2 x 19 = 19)

1. (a) Difference between the following :
    (i)   System software & Application software
    (ii)   Multiprogramming & Multitasking
    (b) Suppose the following process arrive for execution at the time indicate.

Process	Arrival Time	Burst Time
P1	0	8
P2	1	4
P3	2	9
P4	3	5

Draw the Gantt chart and calculate the average time for the process with SJF preemptive and SJF non – Preemptive scheduling algorithm.

2. (a) what is OSI reference model ? what are the layers in OSI reference models? Describe each layer briefly.
   (b) Difference betweeen LAN, WAN, and MAN.

3. (a) Discuss the generalized architecture of database system. Explain the main functional componnents of DBMS.
   (b) Briefly discuss the different layers of data abstraction. Define physical and logical data independce.

4. (a) Explain Internal and External storage devices in details.
   (b) what are the application areas of information technologh.

Section – B
(Short- answer- type questions)

Note : Section 'B' contains eight (08) short answer type questions of Eight (08) marks each. Learner are required to answer any four (04) questions only.   (4 x 8 =32)

1. Describe the long term , short term and medium term schedules.

2. (a) what is computer network? Explain any four networking devices.
   (b) Define firewall , switch, router and security.

3. what are the different services of operating system?

4. what is Normalization ? Explain 2NF with insertion, deletion and updation anomalies with an appropriate example.

5. Write a short note on;
   (i)   Representation of characters in computer
   (ii)   Representation of Integers
   (iii)   Represeatation of fractions.

6. Consides the relations:
   EMP (ENO, ENAME, AGE, BASIC)
   WORK_ON(ENO, DNO)
   DEPT(DNO,DNAME,CITY)
   Express the following queries in SQL:
  (i) Find the names of employees whose basic pay is greater than average baisc pay
 (ii) Find the sum fo the basic pay of all the employee, the minimum basic pay the maximum basic pay and the average basic pay.
7. (a) Explain the distinctions among the primary key and super key with example?
   (b) Differentiate between random access memory and read only memory.
8. Given memory partitions of 100kb, 500kb, 200kb, 300kb, and 600kb (inorder) how would each of the first fit , best fit and worst fit algorithm place processes of 212kb, 417kb, 112kb, and 426kb (inorder) ?
   Which algorithm makes the most efficient use of memory?

Section–C
(Objectiove-type questions)

Note : Section 'C' contains ten objective type questions of one (01) mark each. All questions of this section are compulsory.   (10 x 1 = 10)

1. Counter that holds addresses of next fetched instruction is called.
   (i)   Sequence control register (ii) Program counter
   (ii)   Temporary register   (iv) Both A&B
2. What was the name of first computer designed by charles babbage?
   (i)   Analytical Engine (ii) Differece Engine
   (iii)   Colossus   (iv) ENIAC

3. The level of data abstraction which describewhich data is ctuall stered is.
   (i) Conceptual level (ii) Physical level
   (ii) File level (iv) None of the above
4. The brain of any computer system is
   (i) ALU (ii) Memory
   (iii) CPU (iv) Control unit
   (iv) None of these
5. Data about data is normally tumedas
   (i) Directory (ii) Databank
   (iii) Meta data (ivl Dictionary
6. The term attribute refers to a_____ of a table.
   (i) Record (ii) Column
   (iii) Tuple (iv) Key
7. What is firewall in computer network/
   (i) The physical boundary of network.
   (ii) An OS of computer netework
   (iii) A system designed to prevent unauthorized network
   (iv) A web browsing software
8. Convert binary $(111111110010)_2$ to hexadecimal
   (i) $EE2_{16}$ (ii) $FF2_{16}$
   (iii) $2FE_{16}$ (iv) $FD2_{16}$
9. Which device of computer operation dispenses with the use of the keyboard?
   (i) Joystick (ii) Lightpen
   (iii) Mouse (iv) Touch
10. Table in second normal form (2NF)
   (i) Have a composite key
   (ii) Eliminate the possibility of a insertion anomalies
   (iii) Have all non key field depend on the whole primary key
   (iv) Eliminate all hidden dependencies.

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