# P-891

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# GIS-501/DGIS-501

**Introduction to Informatics**

(MAGIS/MSCGIS/DGIS/CGIS)

1st Semester Examination, 2023 (June)

**Time : 2 Hours]** **Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

## SECTION–A
## (Long Answer Type Questions)

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

**1.** Define Computer Network? Explain five types of network topologies in details with their advantages and disadvantages.

**2.** Define Operating Systems. Explain the functions performed by an Operating System.

**3.** (a) What is DBMS? Explain the architecture of DBMS with the help of a diagram.

(b) Explain Centralized, Parallel, Distributed and Client-Server DBMS with their advantages.

**4.** Answer the following :

(a) Write a short note on Number System. Also explain the four different types of number system with an example of each.

(b) Differentiate Primary and Secondary memory. Explain RAM along with its types and how RAM is different from ROM ?

**5.** (a) Explain the First, Second and Third Normal Form of database with examples.

(b) Explain the types of networks in details.

## 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 any Four (04) questions only. (4×8=32)

**1.** Convert any *two* of the following :

(a) $(1010.1011)_2$ to its decimal equivalent.

(b) $(1234.675)_{10}$ to its hexadecimal equivalent.

(c) $(4A83)_{16}$ to its decimal equivalent.

(d) $(210)_{10}$ to its octal equivalent.

**2.** Define memory and its type ?

**3.** Define data structures? Explain Array, Stack and Queue with an example of each.

**4.** Differentiate with examples :

(a) System and Application software.

(b) Proprietary and Open-Source software.

**5.** Write short note on any *two* of the following :

(a) Solid State Disks (SSD)

(b) Compact Disks (CD)

(c) Floppy Disk Drive (FDD)

(d) Hard Disk Drive (HDD)

**6.** Write short note on any *two* of the following :

(a) Repeater

(b) Network Interface Card (NIC)

(c) Bridge

(d) Hub

**7.** Explain Internet and transport layer of TCP/IP Reference Model.

**8.** Explain Relational and Network database models with their advantages and disadvantages.