

(Please write your Exam Roll No.)

Exam Roll No. 02585604418

## END TERM EXAMINATION

FIRST SEMESTER [MCA] NOVEMBER-DECEMBER 2018

Paper Code: MCA-101

Subject: Fundamentals of Information Technology

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including Q.no.1 which is compulsory.  
Select one question from each Unit.

Q1 Answer the following briefly:- (2.5x10=25)

- Discuss the role of databases in IT applications and compare it with conventional file system.
- Convert the following from decimal to hexadecimal system
  - 54
  - 410
- Explain System Bus and its Types.
- Give the four examples of external storage devices.
- What do you mean by cache memory?
- What are different types of addressing modes in Microprocessor 8085?
- What is a ring topology in LAN?
- What is switching? Explain difference between circuit switching, packet switching and data switching.
- What do you understand by Data Communication Protocols?
- What are registers? Explain different type of registers used in 8085 Microprocessor.

### UNIT-I

- Q2 Explain the architecture of 8085 microprocessor? What are its different types of operation? (12.5)
- Q3 (a) Explain shift micro operation. Also, discuss arithmetic and circular shift. (12.5)
- (b) What are the NAND and NOR GATES? How to represent the NAND and NOR gates? Why NAND is considered as Universal gates?

### UNIT-II

- Q4 (a) Define the term software and explain the various components of the software Development. (12.5)
- (b) Explain the different symbols used in a flowchart. Draw a flowchart to print first five multiples of five.
- Q5 (a) What are decision tables and decision trees? Explain with an example of each. (6.5)
- (b) Differentiate the following:- (3x2=6)
- Plasma display and Liquid Crystal Display
  - Raster scan and Random scan
  - Printer and plotter

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**UNIT-III**

- Q6 (a) What is multithreading? How threads are different from a process? (6)  
(b) Explain 3 tier architecture of DBMS. (6.5)
- Q7 (a) Explain the working of sequential access and direct access methods with the help of example. (6)  
(b) Describe the role of scheduling technique in process management. (6.5)

**UNIT-IV**

- Q8 (a) Define the various Networking topologies and its application. (6)  
(b) What are different types of Data Transmission media? Briefly explain them. (6.5)
- Q9 Write short notes following: - (2.5x5=12.5)
- (a) IP address
  - (b) Modem
  - (c) Digital and Analog transmission
  - (d) Internetworking
  - (e) Guided Vs unguided transmission

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