2018

Full Marks : 75

Time : 3 hours

The questions are of equal value

**Answer five questions, selecting at least
one from each Group**

Group—A

1. What is file? Explain the difference between master files, transaction files and report files.

2. What do you mean by DBMS? Explain the functions of DBMS.

3. What are Data Definition Language (DDL) commands? Explain with examples.

4. What are Codd's rules for relational database management system?

Group—B

5. What is operating system and why do we need it? Discuss the major functions of operating systems.

6. What is segmentation? Explain address translation in segmentation.

7. What do you mean by CPU scheduling? Differentiate between preemptive and non-preemptive scheduling.

8. Discuss memory management in any operating system. Explain the concept of virtual memory and paging.

9. Explain the following :

   (a) Process control block

   (b) FCFS

   (c) DMA

Group—C

10. Define P-N junction diode and transistor. Explain how junction diode acts like rectifier.

11. Define different types of capacitor and derive an equation for capacitance of parallel plate capacitor.

12. Explain single-stage RC coupled amplifier and its applications.