

2019

**COMPUTER FUNDAMENTAL AND
APPLICATION**

PAPER – 1101

Full Marks : 70

Time : 3 hours

The figures in the right-hand margin indicate marks

*Candidates are required to give their answers in their
own words as far as practicable*

Illustrate the answers wherever necessary

GROUP – A

Answer Q.No. 1 and any two from the rest

1. (a) What are the advantages of multi-programming? 2
- (b) What are the disadvantages of machine-level language? 2

(c) Calculate using 2's complement method : 3

$$(10101)_2 - (1001)_2.$$

(d) What do you mean by floating point representation of a number? Explain with a suitable example. 2 + 2

2. (a) Explain 2nd and 3rd generation of computers along their characteristics. 3 + 3

(b) What are the differences between compiler and interpreter? 3

(c) Evaluate $(5BAC)_{16} = (?)_{10}$ 3

3. (a) Simplify the expression

$$AB + \overline{AC} + \overline{ABC}(AB + C). \quad 4$$

(b) What do you mean by BCD code? Give an example. 2

(c) Implement X-NOR with the help of NAND gates only. 3

- (d) What are the advantages of laserjet printer over Dot-matrix printer ? 3
4. (a) What are the primary application of magnetic tape storage ? 2
- (b) How does magnetic ink character reader (MICR) recognize the magnetic character ? 2
- (c) What is flowchart ? What are its limitation ? 1 + 2
- (d) Write a flowchart to find the reverse of an integer. 3
- (e) What is the use of virtual memory ? 2
5. (a) State the postulate of Boolean algebra. 4
- (b) Determine if the following expression is tautology or not : 4
- $$(p \rightarrow q) \vee (q \rightarrow p)$$
- (c) Convert $(76.25)_8$ into binary. 4

GROUP – B

Answer **Q.No. 6** and any **two** from the rest

6. (a) What are the functions of an operating system ? 3
- (b) What are the advantages of using cache memory ? 2
- (c) Differentiate between RAM and ROM. 3
- (d) Explain the term EEPROM. 3
7. (a) What are the differences between MAN and WAN ? 3
- (b) Describe MESH topology. 3
- (c) Write down the responsibilities of session and transport layers in ISO/OSI reference model. 3 + 3
8. (a) What is computer Network ? Why we use Network ? 2 + 2
- (b) What are the types of modes available in Network ? Explain any two. 1 + 2 + 2
- (c) What is the basic difference between Internet and Intranet. 2

- (d) What is web browser? 1
9. (a) Write the utilities of the following DOS commands : 5
- (i) CD
 - (ii) DIR
 - (iii) TREE
 - (iv) REN
 - (v) CLS.
- (b) Explain the term router and gateway. 2 + 2
- (c) What do you mean by remote login. 3
10. Write short notes on (any *three*) : 4 × 3
- (i) Bluetooth
 - (ii) SMTP
 - (iii) HTML
 - (iv) Time Division Multiplexing(TDM)
 - (v) WWW.
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