

End Semester Examination of Semester-I, 2019

Subject : BCA

Paper : BCA-101

(Computer Fundamental)

Full Marks : 70

Time : 3 Hrs

The figures in the margin indicate the marks corresponding to the question

Candidates are requested to give their answers in their own word as far as practicable.

Illustrate the answers wherever necessary

Group A

1. Answer any five out of eight questions: 2x5=10

- i) Differentiate between Microcomputer and Minicomputer.
- ii) What do you mean by Multitasking and Multi-processing?
- iii) Write two differences between interpreter and compiler.
- iv) Convert $(FABC2)_{16}$ to binary number system.
- v) Why SRAM is costlier than DRAM?
- vi) What are the advantages of binary numbers over decimal numbers?
- vii) What is the function of flash memory and what is the reason behind its popularity?
- viii) What do you mean Von-Neumann bottleneck problem?

(2)

Group B

Answer any five out of seven questions : $5 \times 4 = 20$

2. Give four examples of each input and output devices. What do you mean by cache memory? $2+2$
3. Write down the characteristics of data communication. Define channel capacity. $3+1$
4. What is swapping? How does it help in memory? $2+2$
5. Write a short note on internal bus with block diagram.
6. What is the function of MICR, OCR?
7. Distinguish between magnetic and optical media. What do you mean by 8421 code? $2+2$
8. Distinguish between Von-Neumann and Harvard Architecture.

Group C

Answer any four out of six questions: $10 \times 4 = 40$

9. What do you mean by CU, ALU, Memory unit and Data bus? What are the differences between Primary and Secondary memory? Why RAM is known as Random Access Memory? $4+4+2$
10. Discuss different topologies of computer Network with the help of diagram. Discuss different types of computer networks. $5+5$

11. What is tri-state device? Distinguish between guided media and unguided media. Distinguish between MAN and WAN. Why RAM is termed as 'random access memory'? Explain with a proper diagram. 3+3+4
12. What is bit in computer terminology? Find the relation between bit and GB? Convert the octal number 577.46 to the following number system—
- i) BCD
 - ii) DECIMAL
 - iii) BINARY
 - iv) HEXA-DECIMAL equivalent 2+2+6
13. What are the disadvantages of 1's complement? Write a short note on ASCII. Represent the number $(41.3)_{10}$ as a floating point number with 16-bits for mantissa and 8-bit for exponent. What are the functions of OS? 2+3+2+3
14. Write short notes : $2\frac{1}{2} \times 4 = 10$
- i) WWW
 - ii) FTP
 - iii) GATEWAY
 - iv) BRIDGES
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