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Reg. No. 170021041792

Name. Afritha Jamal

**B.Sc. DEGREE (CBCS) EXAMINATION, JANUARY/FEBRUARY 2018**

**First Semester**

B.Sc. Physics Model II Computer Applications

Vocational—COMPUTER SCIENCE—COMPUTER FUNDAMENTALS

(Common to B.Sc. Mathematics Model II Computer Science)

(2017 Admissions)

Time : Three Hours

Maximum Marks : 80

**Part A**

*Answer any ten questions.*

*Each question carries 2 marks.*

1. Define digital computer.
2. Define RAM and ROM.
3. Convert octal to binary :
  - (a) 467.
  - (b) 206.
4. What is cache memory ?
5. Explain the function of ALU.
6. Write a note on audio output devices.
7. Name any three high level languages.
8. What is data and information ?
9. Define the term hardware and software.
10. Write the BCD code for decimal number 529.
11. Define the purpose of flow chart.
12. What is EBCDIC code ?

(10 × 2 = 20)

**Turn over**

**Part B**

*Answer any six questions.  
Each question carries 5 marks.*

13. Explain Hollerith's machine.
14. Write a note on computer codes.
15. Explain the classifications of computers based on memory size.
16. What is complimentary method subtraction using complementary method subtract the following :
  - (a) 10101-01110.
  - (b) 010010-100011.
17. Write short notes on different types of monitors.
18. Explain the term system software with examples.
19. What are the components of a motherboard ?
20. Differentiate between impact and non-impact printers.
21. Write a note on language processors.

(6 × 5 = 30)

**Part C**

*Answer any two questions.  
Each question carries 15 marks.*

22. What are the different generations of computers ? Explain.
23. Explain flow chart and its symbols. What are the advantages and limitations of flow charts :
24. Write notes on :
  - (a) Image scanner.
  - (b) Bar code reader.
  - (c) Optical mark reader.
  - (d) Optical character reader.
  - (e) MICR.
25. Convert the following :
  - (a) Octal numbers into hexadecimal numbers :
    - (i) 0.235.
    - (ii) 125.601.
    - (iii) 53.0032.
    - (iv) 210.101.
  - (b) Hexadecimal numbers into binary numbers :
    - (i) 3A102.D3.
    - (ii) CDFF.
    - (iii) 0.1DFC.
    - (iv) 1234B.3D.

(2 × 15 = 30)