E 2555 (Pages : 3) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2011

First Semester

Vocational Course – COMPUTER FUNDAMENTALS

(For the Vocational Subject : Computer Applications of Model-II B.Sc. Physics)

Time : Three Hours Maximum Weight : 25

Part A

Answer **all** *questions from this part.*

A bunch of **four** *questions carries 1 weight.*

BUNCH I

Select the most appropriate alternate :

1. The floppy disc is a :
   (a) Disk pack. (b) Optical disk.
   (c) Magnetic disk. (d) Sequential access device.
2. The IQ of a computer is :
   (a) One. (b) Zero.
   (c) Infinity. (d) Depending on the device.
3. Which of the following is not a feature of machine language ?
   (a) Easier to modify. (b) Difficult to program.
   (c) Easier to understand and use. (d) No worry about address.
4. The binary equivalent of 21_{10} is :
   (a) 10101_2. (b) 10111_2.
   (c) 11001_2. (d) 11011_2.

BUNCH II

Fill in the blanks :

5. The full form of www is _____.
6. _____ provides a consistent way of encoding multilingual plain text.
7. A quick way to obtain the _____ of a binary number is to transform all its 0s to 1s, and all its 1s to 0s.
8. Every CPU has a built in ability to execute a set of machine instructions called its _____.

Turn over

BUNCH III

Fill in the blanks :

9. _____ are portable computers that are small enough to fit inside a brief case.
10. _____ computers exhibit features of analog and digital computers.
11. The lists of instructions to be executed by a computer are known as _____ of a computer.
12. _____ language is normally written as strings of binary 1s and 0s.

BUNCH IV

State whether the following statements are True *or* False :

13. Machine and assembly languages are often referred to as low level languages.
14. ASCII is a 6-bit code that can represent 64 different characters.
15. Flash memory acts as a high speed buffer between CPU and main memory.
16. The secondary generation computers were manufactured using transistors instead of vacuum tubes.

(4 × 1 = 4)

Part B

Answer any **five** *questions from this part.*
Each question in this part carries a weight of 1.

17. Differentiate between analog and hybrid computers.
18. What is a main frame system? What are its main uses?
19. Differentiate between joystick and track ball.
20. Briefly explain the working of monochrome CRT.
21. What is a ROM? Why is it so called? Write few typical uses of ROM.
22. Why BCD code was extended to EBCDIC?
23. What is a compiler? How is it differing from an interpreter?
24. What is an assembler?

(5 × 1 = 5)

Part C

Answer any **four** *questions from this part.*
Each question in this part carries a weight of 2.

25. Convert the following decimal numbers into binary numbers :
    (a) 839.23. (b) 0.4573.
    (c) 123.27. (d) 8.9201.

26. Convert the following hexadecimal numbers into decimal numbers :

(a) 3AB7. (b) 9.2CF.

(c) FDA.1A. (d) 537AD.

27. Encode the following numbers in BCD :

(a) $(523)_{10}$. (b) $(1101101)_2$.

(c) $(2376)_8$. (d) $(19CD)_{16}$.

28. Write a note on processors.

29. Discuss the advantages and limitations of high level languages.

30. Perform the following arithmetic operations without changing the number system :

(a) $(11011.01)_2 + (100010.01)_2$.

(b) $(111011)_2 - (100100)_2$.

(c) $(257.6)_8 + (354.4)_8$.

(d) $(EEFD.AB)_{16} + (1782.36)_{16}$.

$(4 \times 2 = 8)$

Part D

Answer any **two** *questions from this part.*
Each question in this part carries a weight of 4.

31. What is a computer? Explain the purpose of a computer. Discuss the characteristic, capabilities and limitations of a computer.

32. Write an essay on secondary storage devices.

33. Differentiate between Hardware and Software. Explain the different types of software.

$(2 \times 4 = 8)$