(6 pages) Reg. No. : .....

Code No. : 21039 **Sub. Code : GMCA 4 A**

B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2017.

Fourth Semester

Computer Application — Main

Major Elective — MICROPROCESSOR

(For those who joined in July 2012 – 2015)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The labels or constants that can be used by any module in the program is possible when they are declared as
   (a) PUBLIC
   (b) LOCAL
   (c) GLOBAL
   (d) Either PUBLIC or GLOBAL

2. The software used to drive microprocessor-based systems is called———
   (a) Assembly language
   (b) Firmware
   (c) Machine language code
   (d) BASIC interpreter instructions

3. Interrupts form an important part of——— systems.
   (a) Batch Processing
   (b) Multitasking
   (c) Real time Processing
   (d) Multi-user

4. The register which is attached to the service line is called———
   (a) Push-down register
   (b) Pull-up register
   (c) Break down register
   (d) Line register

5. Single-bit indicators that may be set or cleared to show the results of logical or arithmetic operations are the :
   (a) Flags (b) registers
   (c) Monitors (d) decisions

6. The technique of assigning a memory address to each I/O device in the computer system is called:

(a) memory-mapped I/O

(b) ported I/O

(c) dedicated I/O

(d) wired I/O

7. Because microprocessor CPUs do not understand mnemonics as they are, they have to be converted to

(a) Hexadecimal machine code

(b) Binary machine code

(c) Assembly language

(d) All of the above

8. What kind of computer program is used to convert mnemonic code to machine code?

(a) Debug (b) Assembler

(c) C++ (d) FORTRAN

9. The decimal value for the BCD coded number 00010010 is

(a) 6 (b) 10

(c) 12 (d) 18

10. Which logic circuit is the fastest?

(a) TTL (b) DTL

(c) RTL (d) all has same speed.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write short notes on assembly language?

Or

(b) Explain about the machine language?

12. (a) Write a note on buffer?

Or

(b) Explain the single board micro computer 8085 memory.

13. (a) Write short notes on documentation?

Or

(b) Explain about the 16 bit data transfer to register pairs (LXI).

14. (a) Write short notes on time delay using a register pair with flow chat?

Or

(b) Differentiate between CALL & RET.

15. (a) Give an example of BCD subtraction and explain.

Or

(b) Explain about the stack pointer and the program counter.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b), each

Answer should not exceed 600 words.

16. (a) Discuss about the 8085 instruction format with an example.

Or

(b) Discuss about the function of each component of a computer. Give example.

17. (a) Explain about the Latch in detail

Or

(b) Discuss about the Encoder and decoder. Give an example.

18. (a) Discuss about the branch operation and its types. Give an example.

Or

(b) Explain about the block transfer of data bytes with an example program.

19. (a) Discuss debugging counters in detail.

Or

(b) Explain about the call execution in subroutine. Give an example.

20. (a) Discuss about the addition of unsigned BCD numbers with an example.

Or

(b) Explain about the multiplication of two 8-bit using a numbers.