



**GN-454**

V Semester B.C.A. Examination, December - 2019  
(Y2K14) (CBCS Scheme) (F+R)

**COMPUTER SCIENCE**

**BCA-505 : Microprocessor and Assembly Language**

Time : 3 Hours

Max. Marks : 70

**Instructions :** (i) **SECTION-A** : Answer **any 10** questions.  
(ii) **SECTION-B** : Answer **any 5** questions.

**SECTION - A**

Answer **any 10** questions.

**10x2=20**

1. Define an Instruction. What are the two parts of an Instruction ?
2. Write the applications of 8085 microprocessor.
3. What are counters and time delays ?
4. Explain DAA instruction.
5. Differentiate between the following instructions :  
LDA 8000 and STA 9000.
6. What is machine cycle ?
7. Write an assembly language program to find the reverse of an 8-bit number.
8. How many bytes are required to store the following instructions ?  
(a) CPI OF                      (b) ADD B
9. Define Subroutine.
10. Differentiate between absolute and partial decoding.
11. What are handshake signals ?
12. What is an Interrupt ? Why it is needed ?

**P.T.O.**



**SECTION - B**

Answer **any 5** questions.

**5x10=50**

- 13.** (a) Draw the Pin configuration of 8085 microprocessor. **5+5**  
(b) Describe the demultiplexing of address/data bus.
- 14.** (a) Explain the classification of instructions based on word size. Give **5+5** examples.  
(b) What are Flags ? Draw the format of flag register and explain their function.
- 15.** (a) Explain the following instructions : **3+1+1**  
(i) RRC (ii) LHLD 9000 (iii) XCHG  
(b) Draw the timing diagram for opcode fetch machine cycle. **5**
- 16.** (a) What is an Addressing mode ? Explain the various addressing modes of 8085 with examples. **5+5**  
(b) Explain the unconditional and conditional Jump instructions.
- 17.** (a) Write the steps to convert Binary to ASCII and ASCII to Binary code **5+5** conversion.  
(b) Write a program to exchange two 16-bit numbers.
- 18.** (a) What is a Stack ? Explain the different operations that can be performed **5+5** on stack.  
(b) Explain RIM and SIM instructions of 8085 microprocessor.
- 19.** (a) Distinguish between Peripheral-mapped I/O and Memory-mapped I/O. **5+5**  
(b) What is DMA ? With block diagram explain how the data is transferred by a DMA controller.
- 20.** Write short notes on : **5+5**  
(a) CALL and RET instructions  
(b) Operating modes of 8255 PPI

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