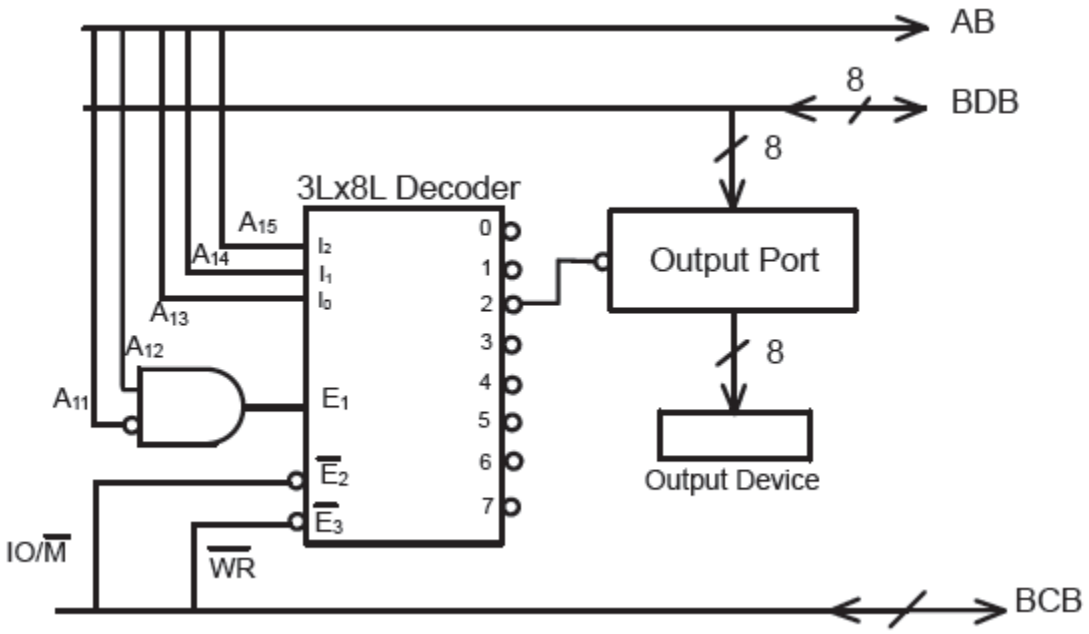
GATE Questions (Previous Years):

Question No. 01 EEE | GATE 2014

An output device is interfaced with 8-bit microprocessor 8085A. The interfacing circuit is shown in figure



The interfacing circuit makes use of 3 Line to 8 Line decoder having 3 enable lines E_1E1 , $E\overline{}_2E\bar{}2$, $E\overline{}_3E\bar{}3$. The address of the device is

- (A) 50_H
- (B) 5000_H
- (C) $A0_H$
- (D) $A000_H$

Answer : (B) 5000_H

Question No. 02 EEE | GATE 2014

In an 8085 microprocessor, the following program is executed

Address location – Instruction

2000H XRA A

2001H MVI B,04H

2003H MVI A, 03H

2005H RAR

2006H DCR B

2007H JNZ 2005

200AH HLT

At the end of program, register A contains

- (A) 60H
- (B) 30H
- (C) 06H
- (D) 03H

Answer : (A) 60H

Question No. 03 EEE | GATE 2014

In 8085A microprocessor, the operation performed by the instruction LHLD 2100H is

- (A) (H)←21H, (L)← 00HH←21H, L← 00H
- (B) (H)←M(2100H), (L)←M(2101H)H←M2100H, L←M2101H
- (C) (H)←M(2101H), (L)←M(2100H)H←M2101H, L←M2100H
- (D) (H)←00H, (L)←21HH←00H, L←21H

Answer : (C) (H)←M(2101H), (L)←M(2100H)

Question No. 04 EEE | GATE 2011

A portion of the main program to call a subroutine SUB in an 8085 environment is given below.

:
:
LXI D,DISP
LP : CALL SUB
:

It is desired that control be returned to LP+DISP+3 when the RET instruction is executed in the subroutine. The set of instructions that precede the RET instruction in the subroutine are

- (A) POP D DAD H PUSH D
- (B) POP H DAD D INX H INX H INX H PUSH H
- (C) POP H DAD D PUSH H
- (D) XTHL INX D INX D INX D XTHL

Answer : (C) POP H DAD D PUSH H

Question No. 05 EEE | GATE 2010

When a "**CALL** Addr" instruction is executed, the CPU carries out the following sequential operations internally:

Note: (R) means content of register R
((R)) means content of memory location pointed to by R
PC means Program Counter
SP means Stack Pointer

- (A) (SP) incremented
  (PC)← Addr
  ((SP)) ← (PC)
- (B) (PC) ← Addr
  ((SP)) ← (PC)
  (SP) incremented
- (C) (PC) ← Addr
  (SP) incremented
  ((SP)) ← (PC)
- (D) ((SP)) ← (PC)
  (SP) incremented
  (PC) ← Addr

Answer : (D) ((SP)) ← (PC)
(SP) incremented
(PC) ← Addr

Question No. 06 EEE | GATE 2009

In an 8085 microprocessor, the contents of the Accumulator, after the following instructions are executed will become

XRA A
MVIB F0H
SUB B

- (A) 01 H
- (B) 0F H
- (C) F0 H
- (D) 10 H

Answer : (D) 10 H

Question No. 07EEE | GATE 2008

An input device is interfaced with Intel 8085A microprocessor as memory mapped I/O. The address of the device is 2500H. In order to input data from the device to accumulator, the sequence of instructions will be

- (A) LXI H, 2500H
  MOV A, M
- (B) LXI H, 2500H
  MOV M, A
- (C) LHLD 2500H
  MOV A, M

- (D) LHLD 2500H
  MOV M, A

Answer :

Question No. 08 EEE | GATE 2008

The contents (in Hexadecimal) of some of the memory locations in an 8085A based system are given below:

Address	Contents
..	..
26FE	00
26FE	01
2700	02
2701	03
2702	04
..	..

The contents of stack (SP), program counter (PC) and (H,L) are 2700 H, 2100 H and 0000 H respectively. When the following sequence of instructions are executed.
2100 H: DAD SP
2101 H: PCHL
the content of (SP) and (PC) at the end of execution will be

- (A) PC = 2102 H, SP = 2700 H
- (B) PC = 2700 H,SP = 2700 H
- (C) PC = 2800 H,SP = 26FE H
- (D) PC = 2A02 H,SP = 2702 H

Answer : (b) PC = 2700 H,SP = 2700 H

Question

In a microcomputer, wait states are used to
(a) make the processor wait during a DMA operation
(b) make the processor wait during an interrupt processing.
(c) make the processor wait during a power shutdown
(d) interface slow peripherals to the processor. **[1993 : 1 Mark]**

Question

An 'Assembler' for a microprocessor is used for

(a) assembly of processors in a production line.

(b) creation of new programmes using different modules.

(c) translation of a program from assembly language to machine language.

(d) translation of a higher level language into English text. **[1995 : 1 Mark]**

In an 8085 microprocessor, the shift registers which store the result of an addition and the overflow bit are, respectively

(a) B and F (b) A and F

(c) H and F (d) A and C

[2015 : 1 Mark, Set-1]

Question

An instruction used to set the carry Flag in a computer can be classified as

(a) data transfer (b) arithmetic

(c) logical (d) program control

[1998 : 1 Mark]

Question

In an 8085 microprocessor, the shift registers which store the result of an addition and the overflow bit are, respectively

(a) B and F (b) A and F

(c) H and F (d) A and C

[2015 : 1 Mark, Set-1]