1. In computers, subtraction is carried out generally by which methods? A.      2's complement  B.   1's complement C.      signed magnitude  D.    BCD subtraction E. 10’s complement
2. 11H+4D=

A. 15D B. 15H C. FH D. 21H E. None

1. The lowest atomic operation that a computer can perform is called

A. Mano instruction B. Instruction set

C. OPcode D. Micro instruction E. None

1. In the system bus model, the communications among the components are by means of which of the following shared pathway?

A. input bus, address bus, control bus

B. data bus, I/O bus, control bus

C. input bus, output bus, control bus

D. data bus, address bus, control bus

E. All of the above

1. In multiple Bus organisation, the registers are collectively placed and referred as \_\_\_\_\_\_   
   A. Set registers B. Register Block  
   C. Register file D. Map registers E. None
2. The datapath of the CPU is made up of the following:

A. Control Unit and ALU B. ALU and Registers C. ALU and Control unit D. Control Unit and registers E. None

1. The register that contains the value to be stored in memory or the last value read from memory is

A. MAR B. MDR C. IR D. CX E. DX

1. Which the following Register contains the opcode of the last instruction?

A. IP B. IR C. AX D. BX E. CX

1. \_\_\_\_\_\_\_\_ are the different type/s of generating control signals.  
   A. Micro-programmed B.Hardwired  
   C. Both a and b D. Micro-instruction E. None
2. In computer design, issue whether multiply instruction should be implemented by a special multiply unit or by a mechanism that makes repeated use of add unit of the system is

A. an Architectural issue B. an organizational issue C. both organizational and architectural issue D. instruction set issue E. none

1. An instruction such as MOV AX, 20H is classified as:

A. 0 address format B. 1 address format C. 2 address format D. 3 address format E. none of them

1. In case of Zero-address instruction method, the operands are stored in \_\_\_\_\_ .  
   A. Registers B. Accumulators  
   C. Stack D. Cache E. RAM
2. The addressing mode, where you directly specify the operand value is \_\_\_\_\_\_\_ .  
   A. Immediate B. Direct  
   C. Definite D. Relative E. None
3. Instructions which won’t appear in the object program are called as \_\_\_\_\_ .  
   A. Redundant instructions B. Exceptions  
   C. Comments D. Assembler Directives E. All of the above
4. The last statement of the source program should be \_\_\_\_\_\_\_ .  
   A. Stop B. Return C. OP D. End E. Any of them
5. The effect of the following instructions

mov ah, 2h

int 21h

is to A. read a character into AL B. read a character into DL C. display the character in AL D. display the character in DL E. none of them

1. The effect of the following instructions

mov ah, 1h

int 21h

is to A. read a character into AL

B. read a character into DL

C. display the character in AL

D. display the character in DL E. none of them

1. Which of the following register’s content will terminate a program and return to MS-DOS when int 21h is executed:

A. AL= 4CH B. AH=4CH C. AL=00H D. AH=4C00H E. None

1. The conditional jump instruction JG is performed if the following flags are set to

A. CF = 1 and SF = OF B. CF = 0 and SF = OF

C. ZF = 0 and SF = OF D. ZF = 1 and SF = OF E. none of the above

1. The conditional jump instruction JE is performed if the following flag is set to

A. ZF = 0 B. ZF = 1 C. CF = 1 D. CF = 0 E. OF=1

1. The function of the RET instruction when defined in a procedure is:

A. To mark the end of the procedure

B. To return from a loop within the procedure

C. To return control to the caller of the procedure

D. To show that the procedure is in a different code segment

E. None of the above

1. The following definition of a procedure DISPLAY PROC USES AX BX

Inform the procedure Display\_\_\_\_\_

A. To use only AX and BX registers

B. That AX and BX are in already in use by another procedure

C. To restore the initial content of AX and BX at the end of the procedure

D. Not to change the content of AX and BX within the procedure

1. What is the output of the following loop

**. . .**

MOV BL , 6

MOV AH , 02H

MOV DL , ‘F’

START: INT 21H

INC DL

DEC BL

JNZ START

**. . .**

A. FFFFFF B. ABCDEF C. FGHIJK D. F E. None of them

1. What is the output of the following code

**. . .**

MOV CX , 6

MOV AH , 02H

MOV DL , ‘F’

L1: INT 21H

DEC CX

JZ L1

**. . .**

A. FFFFFF B. ABCDEF C. FGHIJK D. F E. None of them

1. What is the correct code to display the pattern AxxxxxAxxxxxAxxxxxAxxxxx

|  |  |
| --- | --- |
| **A)**  **. . .**  MOV AH , 02H  MOV AX , 4  L1: MOV DL , A’  INT 21H  PUSH AX  MOV AX , 5  MOV DL , ‘x’  L2: INT 21H  LOOP L2  POP AX  LOOP L1  **. . .** | **B)**  **. . .**  MOV AH , 02H  MOV CX , 4  L1: MOV DL , ‘A’  INT 21H  POP CX  MOV CX , 5  MOV DL , ‘x’  L2: INT 21H  LOOP L2  PUSH CX  LOOP L1  **. . .** |
| **C)**  **. . .**  MOV AH , 02H  MOV CX , 4  L1: MOV DL , ‘A’  INT 21H  PUSH CX  MOV CX , 5  MOV DL , ‘x’  L2: INT 21H  LOOP L2  POP CX  LOOP L1  **. . .** | **D)**  **. . .**  MOV AH , 02H  MOV CX , 4  L1: MOV DL , ‘A’  INT 21H  MOV CX , 5  MOV DL , ‘x’  L2: INT 21H  LOOP L2  LOOP L1  **. . .** |

E) None of the above

1. What is the appropriate way of implementing this high level language construct

IF(OP1 <= OP2){

statement1

statement2

}

ELSE{

statement3

}

|  |  |
| --- | --- |
| **A)**  CMP OP1 , OP2  JLE L2  statement3’  JMP L1  L1: statement1’  statement2’  L2: | **B)**  CMP OP1 , OP2  JLE L1  statement3’  JMP L2  L1: statement1’  statement2’  L2: |
| **C)**  CMP OP1 , OP2  JLE L1  Statement1  statement2’  JMP L2  L1: statement3  L2: | **D)**  CMP OP1 , OP2  JLE L1  statement3’  L1: statement1’  statement2’  JMP L2:  L2: |

E) None of the above

1. What is the corresponding high level construct of this code

CMP AL , OP1

JG L1

JMP L3

L1: CMP AL , OP2

JGE L2

JMP END\_IF

L2: statement

L3:

A. if((AL > OP1) && (AL > OP2)){ statement}

B. if((AL > OP1) ||(AL > OP2)){ statement}

C. if((AL > OP1) && (AL >= OP2)){ statement}

D. if((AL > OP1) || (AL >= OP2)){ statement}

E. none of the above

Use the following code to answer questions 28, 29 and 30

.model small

.stack 200h

.data

msg1 db 'I love $ cosc 204 $'

leng EQU $ - msg1

msg2 db 'cosc 204 is good$'

.code

start:

mov bx, @data

mov DS, bx

mov dx, offset msg1

mov ah , 40h

mov bx , 01h

mov cx , leng

INT 21H

mov ax, 4c00h

int 21h

end start

1. What is the output of the above program

A. I love B. I love cosc204 C. I love $ cosc 204 D. I love $ cosc 204 $ E. none of them

1. In the above program if *mov dx, offset msg1*

is replaced with *LEA dx, msg1* what will be the output

A. I love B. I love cosc204 C. I love $ cosc 204 D. I love $ cosc 204 $ E. cosc 204 is good$

1. In the above program if *mov ah, 40h*  is replaced with *mov ah, 09h* what will be the output

A. I love B. I love cosc204 C. I love $ cosc 204 D. I love $ cosc 204 $ E. none of them