

COAL
BS CS Fall 2022
Quiz 5

Time allowed: 10 min

Total marks: 10

Roll Number: _____

Name: _____

Question 1:

Assume SP=0200h before the start of very first instruction "CALL 0007" in the following program. Answer the questions given at the end:

177F:0000	E80400	CALL 0007
177F:0003	B44C	MOV AH,4Ch
177F:0005	CD21	INT 21
177F:0007	50	PUSH AX
177F:0008	53	PUSH BX
177F:0009	33D2	XOR DX,DX
177F:000B	F7C30100	CMP BX,0001
177F:000F	7402	JZ 0013
177F:0011	03D0	ADD DX,AX
177F:0013	D1E0	SHL AX,1
177F:0015	D1EB	SHR BX,1
177F:0017	75F2	JNZ 000B
177F:0019	5B	POP BX
177F:001A	58	POP AX
177F:001B	C3	RET

1) What is the value of **IP** after the execution of instruction CALL 0007?[1]

IP=0007

2) What would be in **SP** after the execution of "CALL 0007" instruction?[1]

SP=01FE

3) What would be on **top of stack** after the execution of "CALL 0007" instruction?[2]

0003

4) What is in **SP** after the execution of PUSH AX instruction?[1]

SP=01FC

5) What is in **SP** after the execution of POP BX instruction? [1]

SP=01FC

6) What is in **SP** after the execution of RET instruction? [1]

SP=0200

7) What is in **IP** after the execution of RET instruction? [1]

IP=0003

8) Consider the value of AX=000A and BX=000B in the start of the program, What will be the value of DX after the complete execution of the program? [2]

DX=006E