

Student ID:

Total Marks: 20

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| 1. Which four segments are active at any given time? | (1) |
| 2. Write one purpose of DS register. | (1) |
| 3. Give an example of pseudo-op. | (1) |
| 4. Name the four fields of an assembly instruction in order that they appear in the program | (2) |
| 5. Is the following statement correct? Justify your answer.
ADD IP, 1 | (2) |
| 6. Is the following statement legal or illegal? Justify your answer.
XCHG BL, CX | (2) |
| 7. Give the signed decimal interpretation of the 16 bit number A943. | (3) |
| 8. Suppose AX contains 19BCh and BX contains 81FEh. Give the resulting value of AX and tell whether signed and unsigned overflow occurs. Also mention the value of the CF, PF, ZF, SF and OF flags for the following instruction.
SUB AX, BX | (4) |
| 9. Translate the following high-level language assignment statements into assembly language. A, B, and C are word variables. | (4) |
- $A = -(C - B + 1)$

Ahsanullah University Of Science and Technology
 Course No. CSE2214, Course Name: Assembly Language Programming
 Mid Term Examination, Time: 30 min

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| 1. | What is the function of the IP in the microprocessor? | (1) |
| 2. | Write one purpose of BP register. | (1) |
| 3. | Define the following pseudo- code: A word variable word2, initialized to 65536 | (1) |
| 4. | What is a statement? what is the difference between instruction and assembler directive? | (2) |
| 5. | A memory location has a physical address 4A37Bh. Compute the offset address if the segment number is 40FFh. Assume that the segment address is in CS and the offset address is in SI. | (2) |
| 6. | Is the following statement legal or illegal? Justify your answer.
MOV W1, DS (W1: WORD VARIABLE) | (2) |
| 7. | Give the unsigned decimal interpretation of the 16 bit number 8543h. | (3) |
| 8. | Suppose AX contains 1ABCh and BX contains 712Bh. Give the resulting value of AX and tell whether signed and unsigned overflow occurs. Also mention the value of the CF, PF, ZF, SF and OF flags for the following instruction. | (4) |
| 9. | XCHG AX, BX
Translate the following high-level language assignment statements into assembly language. A, B, and C are word variables. | (4) |
- $A = -(B + 2 * C + 1)$