## **Sylhet Engineering College, Sylhet**

(Shahjalal University of Science & Technology)
Department of Computer Science & Engineering

| Final Examination, 2020<br>Course No: CSE 503<br>Time: 03 (Three) hours |                                                                                                                                                                |                                  | Set # 2     |                                                | 3 <sup>rd</sup> year 1 <sup>st</sup> semester<br>Course Title: Computer Architecture<br>Full Marks: 30 |                |     |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------|-----|
| N.B. : (i) Answ                                                         | question from                                                                                                                                                  | each PART                        |             | (ii) Use separate answer scripts for each PART |                                                                                                        |                |     |
| (iii) Marks allotted are indicated in the ma                            |                                                                                                                                                                |                                  | margin      | rgin (iv) Special Instruction (if any)         |                                                                                                        |                | N/A |
|                                                                         |                                                                                                                                                                |                                  |             | PART-A                                         | <u> </u>                                                                                               |                |     |
|                                                                         | (a)Consider the following C statement: D = A+B*C;<br>Rewrite the statement using 3, 2, 1, 0 Address instruction set.                                           |                                  |             |                                                |                                                                                                        |                | 5   |
|                                                                         | (b) What will be happened if we send code word with parity bit 101101 and receiver receive as follows: (i) 101101 (ii) 100101 (iii) 110101 (iv) 001000         |                                  |             |                                                |                                                                                                        |                | 8   |
|                                                                         | (c) Per<br>metho                                                                                                                                               |                                  | tion (10101 | .00 – 100                                      | 0100) using 2                                                                                          | 's complement  | 2   |
|                                                                         |                                                                                                                                                                |                                  |             | PART-B                                         |                                                                                                        |                |     |
| 2.                                                                      | (a)Represent -12 in 8 bit architecture                                                                                                                         |                                  |             |                                                |                                                                                                        |                | 2   |
|                                                                         | <ul><li>(b) What is the final content of Register R at the end of the following</li><li>Assembly Language code?</li><li>i. MOVE R,A6H ii. MOVE R,F0H</li></ul> |                                  |             |                                                |                                                                                                        |                | 6   |
|                                                                         | CSR                                                                                                                                                            | R                                | CSL         | R                                              |                                                                                                        |                |     |
|                                                                         | ASR                                                                                                                                                            | R                                | SR          | R                                              |                                                                                                        |                |     |
|                                                                         | CSL                                                                                                                                                            | R                                | ASR         | R                                              |                                                                                                        |                |     |
|                                                                         | AND                                                                                                                                                            | R,FOHCSR                         | R           |                                                |                                                                                                        |                |     |
|                                                                         | HLT C                                                                                                                                                          | DR R,OFH                         |             | HLT                                            |                                                                                                        |                |     |
|                                                                         |                                                                                                                                                                | )*(6)=(-24) fo<br>lication using | •           |                                                | _                                                                                                      | able of signed | 7   |