



# RAN-2403000503049001 / 2411001003049001

S.Y.B.Sc. (NCF-NEP) (Sem. III) Examination March - 2026

ELEC-MDC-301 : Advance Microprocessor Theory

Time: 1 Hour ]

[ Total Marks: 25

|                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                 |                      |                      |                      |                      |                      |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <p><b>સૂચના : / Instructions</b></p> <p>(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.<br/>Fill up strictly the above details on your answer book.</p> | <p>Seat No.:</p> <table border="1"> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table> <div style="border: 1px solid black; height: 80px; margin-top: 10px;"></div> <p style="text-align: center;">Student's Signature</p> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/>                                                                                                                                       | <input type="text"/>                                                                                                                                                                                                                                                                                                                                                            | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |                      |                      |

- Q.1. Write any five** **05**
- Which instruction is used for signed multiplication in 8086?
  - What is the difference between CALL and JMP instruction
  - How many address lines are present in 8086 microprocessor?
  - Which directive is used to reserve storage space in assembly language?
  - Write one application where numeric co-processor is essential,
  - What is the main function of the 8087 numeric co-processor?
- Q.2. (a) Write any one** **07**
- Draw the architecture of 8086 microprocessor and explain the function of each block.
  - Discuss the instruction set of 8086 with classification (data transfer, arithmetic, logical, control, string, and branch instructions),
- (b) Write any one** **03**
- Write a short note on flag register in 8086 and its types.
  - List and explain arithmetic instructions of 8086 with examples.
- Q.3. (a) Write any one** **07**
- Explain the architecture and working of 8087 numeric co-processor with neat diagram.
  - Write and explain an assembly program to find the LCM of four numbers.
- (b) Write any one** **03**
- Why is there a need for a numeric co-processor in 8086 systems?
  - Explain how LCM of numbers can be computed using assembly language