

**XN-103**

**003-027504**

**M.Sc. (ECI) Sem.- V Examination  
January-2015**

**Department of Electronics**

**Paper 20 : Basic Microprocessor and Interfacing**

**Faculty Code : 003**

**Subject Code : 027504**

**Time : 2½ Hours]**

**[Total Marks : 70**

- Instructions :** (1) Answers to question one must be answered in main answer book.  
(2) Figures on right indicate marks.  
(3) **All** the questions are compulsory.

1. Answer any **seven** from the following : **14**
- (1) Mention the similarities and differences of registers PC and HL.
  - (2) What each bit flag register represent ?
  - (3) Write how SP register is used in PUSH instruction ?
  - (4) Which pins are used for DMA operation in 8085A ?
  - (5) Write the functions of ALE and READY pins.
  - (6) Write the meaning of all the combinations of  $IO/\bar{M}$ ,  $S_1$ ,  $S_2$  pins of 8085A.
  - (7) Draw the block diagram of 8253.
  - (8) Draw the block diagram of 8255.
  - (9) Write on the mode definition word of 8255.
  - (10) Explain CALL instruction.
2. Write any **two** from the following :
- (A) Write on all data transfer instructions of 8085A. **7**
  - (B) Write about the interrupts of 8085A. **7**
  - (C) Explain SIM and RIM instructions. **7**
3. Answer the following :
- (A) Write on the state transition diagram of 8085A. **7**
  - (B) Draw and explain the MR cycle of 8085A. **7**
- OR**
- Answer the following :
- (A) Write on the arithmetic instructions of 8085A. **7**
  - (B) Six bytes of data are stored in memory locations starting at 8250H. Add all data bytes. Use register B to save any carries generated while adding the data bytes. Display the sum and carries at two different ports. **7**

