Total No. of Questions—8] [Total No. of Printed Pages—3

Seat No.	

[4757]-1082

S.E. (IT) (First Semester) EXAMINATION, 2015

COMPUTER ORGANISATION

(2012 COURSE)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Answer Q. No. **1** *or* Q. No. **2,** Q. No. **3** *or* Q. No. **4,** Q. No. **5** *or* Q. No. **6,** Q. No. **7** *or* Q. No. **8.**

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right indicate full marks.

(*iv*) Assume suitable data, if necessary.

1. (*a*) With suitable diagram explain in brief Von Neumann Architecture. [6]

(*b*) Explain in brief functions of the following pins of 8086 : [6]

(*i*) ALE

(*ii*) $\overline{RD}$

(*iii*) $MN/\overline{MX}$.

P.T.O.

Or

2. (*a*) Draw flow chart and explain Booth's Algorithm for two's complement mutiplication. [6]

(*b*) Draw neat diagram of internal architecture of 8086 and explain any *one* block. [6]

3. (*a*) What are interrupts ? Explain interrupts of 8086. [6]

(*b*) Explain with suitable diagram multiple bus organization of CPU. [7]

Or

4. (*a*) What is segmentation ? List segment registers of 8086 and explain its use in brief. [6]

(*b*) Explain with suitable diagram hardwired control method for design of control unit. [7]

5. (*a*) Explain direct mapping technique used in Cache memory. [6]

(*b*) What is TLB ? Explain its use with suitable diagram. [6]

Or

6. (*a*) List the different types of internal memory explain any *two* in brief. [6]

(*b*) Write a short note on optical memories. [6]

7. (*a*) Draw block diagram of 8255 PPI and explain it. [7]

(*b*) What is DMA ? Explain with neat diagram. [6]

Or

8. (*a*) Compare serial V/s parallel I/O. Explain features of serial I/O USART 8251. [7]

(*b*) List various bus standards interfaces. Explain any *one* in detail with sutiable diagram. [6]