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BIEE-015

B.Tech. – VIEP – ELECTRICAL ENGINEERING (BTELVI)

00165

Term-End Examination

December, 2014

BIEE-015 : MICROPROCESSOR AND APPLICATIONS

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt total of* ***seven*** *questions out of* ***10*** *questions. Assume suitable missing data, if any.*

1. (a) List the components of a computer and explain each in brief. What is the difference between a microprocessor and a CPU ? 5

(b) Discuss the features of 8085 interrupts. Also, explain the SIM and RIM formats. 5

2. (a) Explain the following : 5

(i) Data Bus

(ii) Address Bus

(iii) Control Bus

(b) What are the different addressing modes used in 8085 microprocessors ? Also mention its utilities. 5

3. Explain the following instructions of 8085 microprocessors : *10*

(i) SHLD addr

(ii) XCHG

(iii) MOV M, r

(iv) MVI M, data

(v) DAD rp

(vi) INR M

(vii) ORA r

(viii) CMPM

(ix) STC

(x) RET

4. Write short notes on the following : *10*

(i) 8259 – Programmable Interrupt Controller

(ii) 8255 – Programmable Peripheral Interface

5. What do you understand by DMA ? Discuss the internal block diagram of 8237 A. *10*

6. Explain the signal description of 8086 used in minimum mode and maximum mode. *10*

7. Using directives, write an assembly language program to find out the number of even and odd numbers from a series of 16-bit hexadecimal numbers. *10*

8. Explain all assembler directives, pseudo-ops and operators with suitable examples. *10*

9. Explain the process of device selection and data transfer in microprocessor. Also explain the handshaking process. *10*

10. Enlist the salient features of 80386. Explain the function of the following signals of 80386 : *10*

(i) W/R #

(ii) D/C

(iii) ADS #

(iv) NA #
