

Total No. of Questions : 12]

SEAT No. :

P2924

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[5463] - 102

F.Y.M.C.A. (Engineering Faculty) (Semester - I)

COMPUTER ORGANIZATION

(2013 Pattern)

Time :3 hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) What do you mean by logic gate? Explain logic gates with truth table. [4]

b) Convert the following [4]

i) (11011011)₂ to Hex

ii) 392 to Binary

iii) 3985 to octal

iv) ADD2 to decimal

OR

Q2) a) What are the advantages and limitations of high level languages? [4]

b) Using Binary notation, show EBCDIC coding for the following words.[4]

i) CODE

ii) BYTE

Q3) a) Define race around condition. When does it occur? [4]

b) Explain multiplexer and demultiplexer in detail. [5]

OR

Q4) a) Explain clocked RS flip flop with logic diagram. [5]

b) Explain in detail design of Half Adder and Full Adder with truth table. [4]

P.T.O.

Q5) a) Explain memory hierarchy with neat diagram. **[4]**

b) What is the difference between EPROM and EEPROM? **[4]**

OR

Q6) a) What is cache memory? What is the need of it? **[4]**

b) Discuss DMA interfacing with processor in detail. **[4]**

Q7) Explain any 4 addressing modes. **[8]**

OR

Q8) a) Explain Instruction fetch and Execution cycle in detail. **[4]**

b) Explain CPU building block with neat diagram. **[4]**

Q9) Explain 16-bit (8086) microprocessor architecture in detail. **[9]**

OR

Q10) Explain Pentium processor architecture in detail. **[9]**

Q11) Write a short note on **[8]**

a) SISD

b) MIMD

OR

Q12)a) Explain SMP with block diagram. **[4]**

b) What is parallel processing with respect to multi processor organization? **[4]**

