Total No. of Printed Pages:03

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SUBJECT CODE NO: - Y-2121

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. F.Y (Sem-II)

Examination March / April - 2023

Electronics Paper-V Digital Electronics-II

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[Time: 1:30 Hours]   **[Max. Marks: 50]**

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Please check whether you have got the right question paper.

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N. B   1) Attempt all questions

                             2) Illustrate your answer wherever necessary.

Q1   Attempt any one   20

   a) Describe the operation edge triggered J-K   F/F using suitable logic diagram give
       its truth table and symbol.

   b) Explain the operation of mod-8 synchronous counter with suitable logic diagram
       give its truth table

Q2   With the net logic diagram explain the working of parallel in parallel out shift register.   20

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OR

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Write short notes on (any four)

   a) Dual slope A/D converter

   b) EPROM

   c) R-2R Ladder type D/A converter

   d) Explain in brief different types of ROMs

   e) Master slave JK flip flop

   f) Up/down synchronous counter.

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1

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Q3   Multiple choice questions   10

1) A flip-flop that operates in step with the clock operates _____.

   a) Asynchronously

   b) Synchronously

   c) None of the above

   d) Above a) & b) both are correct

2) A negative edge triggered flip-flop transfers data from input to output on the _____

   a) Low to high transition of the clock pulse

   b) High to low transition of the clock pulse

   c) None of the above

   d) Above both a) & b) are corrects

3) A counter that counts from 0 to 7 is _____

   a) Mod-8   b) mod-7   c) mod-9   d) mod-10

4) _____ is the building block of the sequential logic circuits.

   a) Gates   b) flip-flops   c) above both a & b are correct   d) none of the above

5) _____ flip-flops are required to construct a register which is capable of storing $(4096)_{10}$ in binary.

   a) 8   b) 12   c) 10   d) none of the above

6) Which of the following forms can be used for transmitting _____ data

   a) Serial   b) parallel   c) either parallel of serial data   d) none of the above

7) The memory in which data stored in the memory is lost when power is turned off is _____ memory.

   a) Non-volatile

   b) Volatile

   c) none of the above

   d) above both a) & b) are correct

8) _____ no of 4 bit words can be stored on a 512-bit ROM.

   a) 512   b) 128   c) 2048   d) none of the above

2

9) _____be the percentage resolution of five bit digital to analog converter.

a) 1/32   b) 0.03125   c) 3.23   d) none of the above

10) _____is the output voltage of 6 bit binary ladder with input 101001 insider v(0)=0 & v(1)=10V

a) 6.41V   b) 0.0156V   c) 6.4V   d) none of the above

3