



RAN - 1903000203020092

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**S. Y. B. Sc. (Electronics) (Sem. - III) Examination**

**March - 2023**

**Electronics : Paper - IV**

**Advance Digital Electronics and Circuits Design**

**[ Total Marks: 50**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**S. Y. B. Sc. (Electronics) (Sem. - III)**

Name of the Subject :

**Electronics : Paper - IV Advance Digital Electronics and Circuits Design**

Subject Code No.: **1903000203020092**

Seat No.:

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Student's Signature

- (2) Figure on the right indicates full marks
- (3) All symbols and abbreviations have their usual meaning.
- (4) Non-programmable calculators are allowed.
- (5) Assume data if necessary.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ  
O.M.R. Sheetની પાછળ છાપેલ છે.***

***Important instructions to fillup O.M.R. Sheet  
are given on back side of the provided O.M.R. Sheet.***

1. What is one disadvantage of an S-R flip-flop?
  - a) It has no enable input.
  - b) It has an invalid state.
  - c) It has no clock input.
  - d) It has only a single output.
  
2. The number of cells in a K-map with n-variables.
  - a)  $2n$
  - b)  $n^2$
  - c)  $2^n$
  - d)  $n$
  
3. The full form of SR is \_\_\_\_\_.
  - a) System rated
  - b) Set reset
  - c) Set ready
  - d) Set Rated
  
4. In down counter, \_\_\_\_\_ output of the first FF is connected to the clock input of the next FF.
  - a) Q
  - b)  $\bar{Q}$
  - c) CLK
  - d)  $V_{cc}$
  
5. The advantage of a J-K flip-flop over an S-R FF is that \_\_\_\_\_.
  - a) It has fewer gates
  - b) It has only one output
  - c) It has no invalid states
  - d) It does not require a clock input
  
6. Which of the following combinations cannot be combined into K-map group?
  - a) Corners in the same row
  - b) Corners in the same column
  - c) Diagonal
  - d) Overlapping combinations
  
7. When both inputs of SR latches are low, the latch \_\_\_\_\_.
  - a) Q output goes high
  - b) Q' output goes high
  - c) It remains in its previously set or reset state
  - d) It goes to its next set or reset state







**SPACE FOR ROUGH WORK**