

B. N. M. Institute of Technology

Bengaluru – 560070

Innovative Teaching Methods

Title of Innovation method/activity: Quiz

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Course Name: Basic Electronics (II Semester, All Branches)

Goals / objective of method: To kindle interest/enthusiasm.

Topic covered through activity:
Digital Electronics and Microcontrollers.

Description of method (8 – 10 lines):

Activity-based learning, on the other hand, facilitates a better understanding of the subject by encouraging the student to complete the tasks at hand. The teacher, can immediately measure the students understanding by their ability to complete the tasks and take things ahead from there.

Methods like Quiz and Crossword are used to engage the students where they learn by being involved in these activities.

Benefits of method:

This activity serves as a technique to memorize / remember the concepts with ease.

For review and critique contact: e-mail address of faculty and HOD

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Note: Word search activity sheet and solution attached.

Year: 2017-18

Semester: II CSE 'A', 'B', ISE & MECH

Course Name: Basic Electronics (17ELN25)

Quiz Round I

1. The weight of the LSB as a binary number is _____.
2. Convert the decimal number 151.75 to binary _____.
3. An AND gate with schematic “bubbles” on its inputs performs the same function as an _____ gate.
4. For a two input Exclusive OR gate, if one input is A and other input is connected to logic-1, what is the final output of Exclusive-OR gate. _____
5. How many input combinations would a truth table have for a five-input OR gate. _____
6. 2's complement of 1111.1111 is _____.
7. Applying the distributive law to the expression $A(B+C'+D)$, we get _____.
8. In Boolean algebra $A+1 =$ _____
9. In binary number system the first digit (bit) from right to left is called as _____.
10. In digital system, 1 byte is equal to _____ bits.
11. $A + \bar{A} =$ _____.
12. What is the radix of octal number system? _____
13. How many numbers are there in the decimal number system? _____.
14. Write the carry expression for half adder.
15. How many two input EX-OR gate are required to realize sum expression of a full Answer

Answers

1. 1
2. 10010111.11
3. NOR
4. \bar{A}
5. 32
6. 0000.0001
7. $AB+AC'+AD$
8. 1
9. LSB
10. 8
11. 1
12. 3
13. 10
14. AB
15. 2

QUIZ Round II

Time: 15 mins

1. Assume a $\bar{S}-\bar{R}$ latch, made from cross coupled NAND gates, has a 0 on both inputs. The output will be _____.
2. Flip-flops are _____ triggered.
3. When the output of the NOR gate S-R latch is $Q=0$ and $Q'=1$, the inputs are _____.
4. The internal ROM of the 8051 Microcontroller is _____.
5. The 8051 has _____ parallel I/O ports.
6. Name the manufacturer of 8051 Microcontroller. _____.
7. What is the clock frequency of the oscillator used for 8051 controller _____.
8. In 8051 controller SFR stands for _____.
9. On power on reset, what is the value of PC _____.
10. In 8051 Microcontroller parity flag sets for _____ number of 1's.
11. In 8051 bit-addressable memory location range is: _____ to _____.
12. Total number of pins present in 8051 microcontroller _____.
13. The 8051 has _____ 16-bit timers.
14. How many address lines are required to address 8 K-bytes of RAM? _____.
15. Name the default register bank used by 8051. _____.

Answers:

1. $Q=1$ and $Q'=1$ (invalid)
2. Edge
3. $S=0$ and $R=1$
4. 4 K-bytes
5. 4
6. Intel
7. 11.0592 MHz
8. Special function register
9. 0000H
10. Odd
11. 20H to 2FH
12. 40
13. 2
14. 13
15. R0