

**2014**

Time : 3 hours

Full Marks : 80

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer from both the Groups as directed.*

**Group – A**

**(Objective Type Questions)**

Answer all questions :  $2 \times 10 = 20$

1. Choose the correct answer of the following :
- (a) The number of flip flops required in a decade counter is :
- (i) 4
  - (ii) 5
  - (iii) 6
  - (iv) 8

(b) What is the form of the Boolean expression of  $(A + B)(B + C)$  ?

- (i) Product of sums
- (ii) Sum of products
- (iii) K-map
- (iv) Matrix

(c) The Binary addition  $(10 + 1001)$  equals to :

- (i) 1011 with carry 0
- (ii) 1001 with carry 1
- (iii) 1010 with carry 0
- (iv) 1 with borrow

(d) \_\_\_\_\_ is a type of processor architecture that utilizes highly optimized set of instructions.

- (i) CISC
- (ii) RISC
- (iii) VISC
- (iv) LISC

(e) Negative numbers are stored in the system in the form of :

- (i) 2's complement

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Contd.

(ii) 1's complement

(iii) Both (i) and (ii) are true

(iv) Only 1 is true

(f) A full counter with  $n$  flip flop will have \_\_\_\_\_ states.

(i)  $2n$

(ii)  $2n - 1$

(iii)  $2n + 2$

(iv) None of the above

(g) The binary number of the Gray code number 110011 is \_\_\_\_\_.

(i) 11010

(ii) 10010

(iii) 10110

(iv) 00101

(h) The decimal value of  $(110101.01)$  is \_\_\_\_\_.

(i) 53.75

(ii) 55.75

(iii) 51.75

(iv) 57.25

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( Turn over )