

PSC Computer Engineering Examination Previous Year Question Paper

Exam Name: Computer Engineering

Date of Test : n/a

Question Paper Code: 079/2015

Medium of Questions: English



79/2015**(Pages : 4)**

Maximum : 200 marks

Time : 1½ hours

PART I**(Each question carries 4 marks)****A. Choose the Correct Answer :**

1. The largest positive number which can be stored in a computer that has 8-bit word length and uses 2's complement arithmetic is

(a) 256

(b) 127

(c) 128

(d) 235

2. The DBMS language component that can be embedded in a program

(a) DDL

(b) DCL

(c) DML

(d) DAL

3. The prototype of the function `gets(s)` is included in the file

(a) `stdio.h`(b) `ctype.h`(c) `string.h`(d) `stdlib.h`

4. What will be the output of the following code?

```
#define MAX 5 + 2
```

```
main()
```

```
{
```

```
    int k = 0;
```

```
    k = MAX * MAX ;
```

```
    printf ("%d", k);
```

```
}
```

(a) 49

(b) 0

(c) 37

(d) 14

[P.T.O.]

5. A multiplexer with 3 select line is a
- (a) 3:1 MUX (b) 8:1 MUX
(c) 4:1 MUX (d) 16:1 MUX
6. A sequential circuit with 12 states will have _____ flipflops.
- (a) 12 (b) 3
(c) 4 (d) 16
7. The key that represents relationship between tables
- (a) Foreign Key (b) Super Key
(c) Candidate Key (d) Primary Key
8. Which among the following instruction is not related to carry flag?
- (a) CLC (b) STC
(c) CMC (d) CLD
9. The requested tracks in the order received are 56, 58, 40, 15, 92, 160, 150, 40, 170. The average seek time of
- (1) C-SCAN (2) SCAN (3) SSTF (4) FIFO
- (a) $1 > 2 > 3 > 4$ (b) $4 > 3 > 1 > 2$
(c) $4 > 1 > 2 > 3$ (d) $4 > 3 > 2 > 1$
10. A Bluetooth network that supports communication between maximum 8 devices is called a
- (a) Scatternet (b) Minibus
(c) Piconet (d) VLAN

B. Fill in the Blanks :

11. Bubbled AND gate is equivalent to a _____ gate.
12. _____ bit indicates whether the block has been modified during its cache residency.
13. In class A network _____ bits are used for host identification.

14. An expression tree is generated for the following expression $(-a - (b - c)) / (-x^*(a + c))$. The operator placed as left child of root is _____.
15. The minimal FSA accepting the set of all strings of binary numbers that is divisible by 3 has _____ states.
16. The output of LEX compiler is _____.
17. Minimum number of 2 input NAND gates required to implement the expression $(AB' + A'B)(CD + C'D')$ is _____.
18. The merge sort algorithm has a worst case time complexity of _____.
19. The OSI layer deals with the physical address of a device is _____.
20. In a Class B network, how many number of subnets can have with the subnet mask as 255.255.248.0
21. The number of channels needed for a mesh network with one coordinator and 7 end devices is _____.
22. In a time sharing operating system, when the time slot given to a process is completed, it goes to _____ state.
23. What is the size of instruction queue in 8086?
24. The system program that combines one or more object files into single executable file is _____.
25. The graphical representation of the "flow" of data through an information system is _____.

C. Write the full form of the following Acronyms :

26. SDRAM.
27. GPRS.
28. BCNF.
29. MIME.
30. IMAP.

(30 × 4 = 120)

PART II

(Each question carries 10 marks)

D. Answer the following Questions :

31. Different class of network addressing in IP V4.
32. Readers-writers problem.
33. Basic COCOMO model.
34. Quick Sort Algorithm.
35. Cloud Computing.
36. Algorithm to insert an element in a circular Linked list.
37. Booth's Multiplication Algorithm.
38. Multivalued dependency.

(8 × 10 = 80)