2013 COMPETETIVE ENTRANCE EXAMINATION FIRST CYCLE
Subject: GENERAL KNOWLEDGE ON COMPUTER SCIENCE, paper: 1
(Major)
Option: Fundamental Computer Science   coefficient: 4   Duration: 2Hours

1. Both host and routers are TCP/IP protocol software. However, router do not use protocol for layers. The layer for which protocol software is not needed by a router is…….

   A. Layer 5(Application)

   B. Layer 1(Physical)

   C. Layer 3(Internet)

   D. Layer 2(Network Interface)

2. A binary search tree is a binary tree:

   A. All items in the left sub-tree are less than root

   B. All items in the right sub-tree are greater than or equal to the root

   C. Each sub-tree is itself a binary search tree

   D. All of the above

3. Which level of abstraction describes what data are stored in one database?

   A. Physical level

   B. View level

   C. Abstract level

   D. Logical level

4. Consider a schema R(A, B, C, D) and the functional dependencies A→B and C→D. then the composition R_1(A, B) and R_2(C, D) is……..

   A. Dependency preserving but not lossless join

   B. Dependency preserving and lossless join

   C. lossless join but not Dependency preserving

   D. lossless join

5. B$^+$ tree are preferred to binary tree in database because

A. Disk data transfer rates are much less than memory data transfer rate

E. Disks are more reliable than memory

F. Disk access is much slower than memory access

6. Which of the following TCP/IP internet are diskless machine……….to obtain its IP address from……..

A. RAP

B. RIP

C. ART

D. X

7. The ……….. memory allocation function modifies the previous allocated space.

A. Calloc

B. Free

C. Malloc

D. Realloc

8. Which is not the correct statement(s)?

(i) Every context language sensitive language is recursive. (ii) There is a recursive language that is not context sensitive.

A. (i) is true, (ii) is false

B. (i) is true and (ii) is true

C. (i) is false and (ii) is false

D. (i) is true and (ii) is false

9. The mechanism that binds code and data together and keeps them secured from outside world is known as

A. Abstraction

B. Inheritance

C. Encapsulation

D. Polymorphism

10. Which of the following IP address class is multicast address?

    A. Class A

    B. Class B

    C. Class C

    D. Class D

11. In round robin CPU scheduling as time quantum is increased the average turnaround time

    A. Increases

    B. Decreases

    C. Remains constant

    D. Varies irregularly

12. The following postfix is evaluated using a stack 823^/23*+51* -tho top two elements of the stack after first * is evaluated

    A. 6,5

    B. 5,7

    C. 3,2

    D. 1,5

13. To represent hierarchical relationship between elements, which data structure is suitable?

    A. Dequeue

    B. Priority

    C. Tree

    D. All of the above

14. What is the meaning of "hibernate" in Windows XP/ Windows 7?

    A. Restart the computer in the save mode

    B. Restart the computer in the normal mode

C. Shutdown the computer terminating all the running applications

D. Shutdown the computer without closing the running applications

15. The communication mode that supports two-way traffic but only one direction at a time is:

A. Simplex

B. Half duplex

C. Duplex

D. Multiplex

E. None of the above

16. The characteristic equation of JK Flip Flop is:

A. Qa+1-J.Qn+K.Qn

B. Qa-1-J.Q1a+K1.Qa

C. Qa+1-QaJ.K

D. Qa+1-(J+K)0

17. Which of the following is true?

A. Every relation in 3NF is also in BCNF

B. A relation R is in 3NF if every non-prime attribute of R is fully functionally dependent in every key of R

C. Every relation in BCNF is also in 3NF

D. No relation can be both BCNF and 3NF

18. In data processing life cycle, which of the following operation is not performed by computer?

A. Inputting

B. Processing

C. Controlling

D. understanding

19. What does COUNTA () function in Excel do?

A. Counts cells having alphabets

B. Counts empty cells

C. Counts cells having numbers

D. Counts non-empty cells

20. Which of the following is a valid IP address?

A. 192.168.111.1111

B. 192.163.1.1

C. 196.168.900.1

D. 192.900.168.1

21. Which of the following is not crossectional form gramma?

(i)S→a/bA/aA/bB   (ii) S→a/aA/AB   (iii) S→a/A/aA

   A→a   A→a   A→a

   B→b   B→b

A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iii)

D. (i),(ii) and (iii)

TABLE OF ANSWERS

1.A	7.D	13.C	19.D
2.D	8.B	14.D	20.B
3.A	9.C	15.C	21.C
4.B	10.D	16.A	
5.F	11.A	17.C	
6.C	12.D	18.D	