PAPER – 'B'
WRITTEN TEST PAPER FOR SELECTION OF TEACHERS : CSB 2011
COMPUTER SCIENCE / I P – PGT: SUBJECT CODE: (P51)

1. Each time you turn on your computer, it will check for the following control file(s)

(a) io.sys, Command.com
(b) dir.com, Command.com, date.com
(c) io.sys, msdos.sys Command.com
(d) Chkdsk.exe

2. Which command is used to delete the directory that is empty?

(a) RD   (b) Del *.*   (c) MD   (d) CD

3. In which year the first operating system was developed

(a) 1910   (b) 1940   (c) 1980   (d) 1950

4. Where do you find user.dat?

(a) C:\windows   (b) C:\windows\system32
(c) C:\windows\system   (d) C:\

5. Which command displays the list of all previous commands entered by the used?

(a) COMMANDS/ALL   (b) KEYDOS
(c) DIR/ALL   (d) DOSKEY

6. In OSI network architecture, the dialogue control and token management are responsibility of which layer

(a) Network (b) Session (c) Transport (d) Data

7. Which of the following communication modes support two-way traffic but in only one direction at a time?

(a) Simplex   (b) Duplex
(c) Half Duplex   (d) All the above

8. How many OSI layers are covered in the X.25 standard?
(a) Two   (b) Three   (c) Seven   (d) Six

9. Which of the following is not a transmission medium?
(a) Modem   (b) Coaxial cables
(c) telephone lines   (d) Microwaves

10. Which of the following is considered a broad band communication channel?

(a) Coaxial cable   (b) fiber optics cable
(c) Microwaves circuits   (d) All of above

11. In OOPs, when a Method behaves differently with different massages, it is called

(a) Data Abstraction   (b) Encapsulation
(c) Overloading   (d) Inheritance

12. Reusability is a feature of OOPs implemented through

(a) Classes   (b) Objects
(c) Encapsulation   (d) Inheritance

13. In C++ following is the ONLY Difference between do-while and while loop is

(a) do-while will NOT be executed even once.
(b) do-while is exit restricted loop where as while is entry restricted loop.
(c) do-while will be executed atleast 2 times and while loop once.
(d) None of the above.

14. Data types in C++ are broadly classified as

(a) int, char, float
(b) array, class, struct
(c) signed-unsigned, short, long
(d) built-in, user defined, derived

15. Consider the following class

```
class MY
{
int a;
public:
MY(int x){a=x;}
void print() {cout<<a;}
}obj;
```

Point out error, if any.

(a) class can't be defined like this.
(b) Declaration of MY(int) is invalid.
(c) Definition of 'obj' is invalid.
(d) No error.

16.   What is 'new' in C++?

(a) operator   (b)function   (c) statement   (d) object

17. Which of the following is NOT an example of STATIC allocation of memory?

(a) int a;   (b) Objects of a class
(c) linked list   (d) arrays

Find the output of the following C++ programs (Q 18 to 23) and give appropriate option

18.
```
#include <IOStream.H>
void main()
{
int a[]={5,7,9,11,14};
int *p=a+2;
cout <<++*p++;
}
```

(a) 5   (b) 10   (c) 11   (d) 7

19.
```
#include <IOStream.H>
void main()
{
int p[]={2,6,7,1,7};
for(int i=1;i<3;i++)
cout<<i[p]<<" ";
}
```

(a) 2 6   (b) 7 1   (c) 6 7   (d) No output-error

20.
```
#include <IOStream.H>
void main()
{
int a=15, b=10;
cout<<++a<<" "<<++b<<" "<<a<<" "<<b;
}
```

(a) 16 11 16 11 (b) 15 10 16 11   (c) 16 11 15 10
(d) No Output-error

21.
```
#include <IOStream.H>
void main()
{
int a=32, *p=&a;
char c='A', &d=c;
d+=a;*p+=c;
cout<<a<<" "<<c;
}
```

(a) 129 a   (b) A 129   (c) 132 a   (d) a 132

22.
```
#include <IOStream.H>
void print(char **c)
{
*c="MY MY";
}
void main()
{
char *p="YOUR";
print(&p);
cout<<p;
}
```

(a) YOUR   (b) NULL String
(c) MY MY   (d) No Output-error

23.
```
#include <IOStream.H>
int&   print(int &a, int &b)
{  if (a>b) return a;   else return b; }
void main()
{
int x=10, y=20;
print(x,y)=30;
cout<<x <<" "<<y;
}
```

(a) 10 30 (b) 10 20   (c) 30 20   (d) 30 30

(Ques 24 to 31 are based on C++)

24. The break statement causes an exit
(a) Only from the innermost loop
(b) From the innermost loop or switch
(c) From all loops and switches
(d) Only from innermost switch

25. Which of the following statement is invalid?
(a) int   a_b;   (b) int a=5, b=4;
(c) int   x=y+z;   (d) int a=b=c=0;

26. In a class specifier, data or functions designated
private are accessible
(a) To any function in the program
(b) Only if you know the password
(c) To member functions of the class
(d) Only to the public members of the class

27. The library function exit ( ) causes an exit from
(a) The loop in which it occurs.
(b) The function in which it occurs.
(c) The block in which it occurs.
(d) The program in which it occurs.

28. The setw() library function belongs to:
(a) iostream.h
(b) process.h
(c) iomanip.h
(d) none of the above.

29. Assume that a class **derv** that is privately
derived from class **Base.** An object of class **derv**
located in **main( )** can access
(a) only public members of **derv**.
(b) only protected members of **derv**.
(c) only private members of **derv**.
(d) only public members of **base**.

30. Which of the following operator has least
precedence?
(a) &&   (b) ++   (c) %   (d) ?:

31. What will be the output of the following
statement, if value of i=6 initially? cout<<i= =8;
(a) 8   (b) 0   (c) 6   (d) 1

32. The frequency range : 300 kHz to 3MHz is used
for
(a) AM radio transmission   (b) TV transmission

(c) FM radio transmission
(d) Microwave communication

33. Which of the following is true of the IP address
192.0.0.10?
(a) The netid is 192
(b) The network address is 192.0.0.0
(c) The hostid is 0.10
(d) The hostid is 0.0.10

34. What is the commonly used unit for measuring
the speed of data transmission?
(a) Bits per second   (b) Bytes per second
(c) Either a or b   (d) None of the above

35. Which of the following is not an interpreter?
(a) HTTP   (b) CGI   (c) HTML   (d) JAVA

36.   A switch is device that
(a) Connects dissimilar networks.
(b) Amplifies the signal being transmitted.
(c) Divides the segment networks into different
subnetworks.
(d) Prevent the unauthorized access to/from a
network.

37.   Which of the following is not an example of
FOSS (Free Open Source Software)
(a) Linux   (b) PNG   (c) MySQL
(d) Mozila FireFox

38. A program when executed by CPU is called
(a) Thread   (b) Instruction   (c) Set   (d) Process

39.   Original ASCII has _____ possible code
groups
(a) 256   (b) 65536   (c) 64   (d) 128

40. Which of the following memory is an optical
memory?
(a) Bubble Memory   (b) CD-ROM
(c) Core memory   (d) Floppy disk

41.   Fastest LAN is
(a) Token bus   (b) Ethernet
(c) Token ring   (d) FDDI

42.   The default Subnet mask is
(a) 127.0.0.1   (b) 224.0.0.0
(c) 255.255.255.0   (d) all of the above

43.   Port number of HTTP is

(a) 25   (b) 80   (c) 125   (d) 123

44.   CDMA is used in
(a) Wireless in local loop
(b) Allocating a wireless channel
(c) Both (a) and (b)
(d) None of the above

45.   Mozila includes which of the following
(a) A web browser   (b) An email client
(c) HTML editor   (d) All of the above

(Questions 46 to 62 are based on JAVA)

46. Which of the following lines will compile without warning or error?

(a) float f=1.3;   (b) char c="a";
(c) byte b=257;   (d) int i=10;

47. A byte can be of what size

(a) -128 to 127   (b) -2^8-1 to 2^8 (c) -255 to 256
(d) depends on the particular implementation of the Java Virtual machine

48. Which of the following is not keyword or reserved word in Java?

(a) if   (b) then   (c) goto   (d) while

49. What will happen when you compile and run the following code?

```
public class MyClass{
 static int i;
 public static void main(String argv[]){
 System.out.println(i);
 }
}
```
(a) Error Variable 'i' may not have been initialized
(b) null   (c) 1   (d) 0

50. Which of the following will output -4.0

(a) System.out.println(Math.floor(-4.7));
(b) System.out.println(Math.round(-4.7));
(c) System.out.println(Math.ceil(-4.7));
(d) System.out.println(Math.min(-4.7));

51. Given the following declarations

```
String s1=new String("Hello")
String s2=new String("there");
String s3=new String();
```
Which of the following are legal operations?
(a) s3=s1 + s2;   (b) s3=s1-s2;
(c) s3=s1 & s2;   (d) s3=s1 && s2

52. What is the result of the following operation?
System.out.println(4 | 3);
(a) 6   (b) 0   (c) 1   (d) 7

53. You are concerned that your program may attempt to use more memory than is available. To avoid this situation you want to ensure that the Java Virtual Machine will run its garbage collection just before you start a complex routine. What can you do to be certain that garbage collection will run when you want?
(a) You cannot be certain when garbage collection will run.
(b) Use the Runtime.gc() method to force garbage collection.
(c) Ensure that all the variables you require to be garbage collected are set to null.
(d) Use the System.gc() method to force garbage collection.

54. Which one does not have a valueOf(String) method
(a) Integer (b) Boolean (c) Character (d) Long

55. How would you set the colour of a graphics context called 'g' to cyan?
(a) g.setCurrentColor(cyan);
(b) g.setColor(Color.cyan);
(c) g.setColor("Color.cyan");
(d) g.setColor("cyan');

56. Which of the following methods are invoked by the AWT to support paint and repaint operations?

(a) repaint( ) (b) draw( ) (c) redraw( ) (d) paint( )

57. Which method is used to set the text of a label object?
(a) setText( )   (b) setLabel( )
(c) setTextLabel( )   (d) setLabelText( )

58. Which method returns the preferred size of a component?
(a) getPreferred( )   (b) getRequiredsize( )

(c) getPreferredSize( )   (d) getLayout( )

59. Which of the following may contain a menu bar?
(a) A panel (b) A frame (c) An applet (d) A menu

60. In order for a source code file, containing the public class Test, to successfully compile, which of the following must be true?
(a) It must have a package statement.
(b) It must be named "Test.java".
(c) It must import "java.lang"
(d) It must declare a public class named "Test"

61.   What is the result of expression 5.45 + "3.2"?
(a) The double value 8.6   (b) The string ""8.6"
(c) The long value 8.   (d) The String "5.453.2"

62. The "this" reference is used in conjunction with _____ methods.
(a) Static   (b) Constant
(c) Non-Static   (d) None of these

63. Information can be transferred between the DBMS and a

(a) Spreadsheet   (b) word processor program
(c) Graphics program (d) All of the above

64. What is the language used by most of the DBMSs for helping their users to access data?

(a) High level language   (b) Assembly Language
(c) Query Language   (d) 4GL

65. In the DBMS approach, application programs perform the

(a) Storage function   (b) Processing functions
(c) Access control   (d) All of the above

66. A transparent DBMS

(a) Can not hide sensitive information from users
(b) Keeps its logical structure hidden from users
(c) Keeps its physical structure hidden from users
(d) Both (b) and (c).

67. A file with extension .docx is created with
(a) MSWORD version 2007 & above.
(b) MSOFFICE version 2007 & above.
(c) MSWORD version 2003 & below.

(d) MSOFFICE version 2003 & below.

68. Which of the following don't support relational database?
(a) dBase IV   (b) Oracle
(c) FoxPro   (d) Reflex

69. Give ONE approach to standardization storing of data?

(a) MIS   (b) Structured programming
(c) CODASYL specification (d) none of the above

70. The highest level in the hierarchy of data organization is called

(a) Data bank (b) Database (c) File (d) Record

71. The modify operation is likely to be done after
(a) Delete   (b) Look-up
(c) Insert   (d) None of the above

72. An attribute of one of the table matching the primary key of another table, is called as

(a) Foreign key   (b) Key
(c) Candidate key   (d) Alternate key

73. In a relational schema, each tuple is divided into fields called
(a) Relations   (b) Domains
(c) Queries   (d) All of the above

74. Which operator is used for making range checks in queries?
(a) LIKE   (b) IN   (c) BETWEEN   (d) TO

75. Which of the following is NOT a DML command?
(a) Insert   (b) Delete   (c) Alter   (d) Update

76 Which of the following statement is true?

(a) Primary key constraint cannot be disabled, it can only be dropped.
(b) Primary key constraint cannot be disabled and dropped.
(c) Primary key constraint can be disabled and can be dropped.
(d) None of the above

77. **NOT NULL** implements

(a) Entity Integrity   (b) Referential Integrity
(c) Domain Integrity   (d) All of the above

78. **NOT NULL** constraint can be specified at the

(a) Column level   (b) Table level
(c) Database level   (d) None of the above

79. Which of the following operation DO NOT belongs to **CURSOR** (an SQL object)?

(a) close   (b) open   (c) fetch   (d) initialize

80. What will be the output of the following command?
> SELECT SUBSTR('ABCDEFG',3,4) from dual;
(a) ABCDEFG   (b) CDEF   (c) DEF (d) ABCD

81. SQL is _____language

(a) Object-oriented   (b) Procedural
(c) Non-procedural   (d) Interactive

82. If we write a program in a programming language and switch to SQL when we require to use the database, then SQL environment in use is known as _____SQL.

(a) PL (b) Dynamic (c) Embedded   (d) Real-Time

83. Which of the following SQL function can operate on any data type?

(a) TO_CHAR   (b) LOWER   (c) LPAD (d) MAX

84. Which of the following statement is true?
(a) DDL commands are automatically committed.
(b) DDL commands are committed by commit command.
(c) DDL commands are committed by savepoint.
(d) All of the above.

85. To delete all tuples in one go from a table the _____ command is used

(a) delete   (b) drop   (c) rollback   (d) truncate

86. To define the basic font size in HTML, which of the following tag is used?
(a) size (b) basefont (c) font   (d) All of the above

87. To jump to new page in HTML, we use
(a) <IMG> tag   (b) <jump> tag
(c) <href> tag   (d) <a> tag

88. The default alignment of images, which are inserted in the HTML web page, is_____

(a) left (b) Inline with text   (c) right (d) middle

89. Which of the following is not a valid value for **align attribute** of <IMG>?

(a) top   (b) bottom   (c) center   (d) middle

90. The value of #FFFFFF is

(a) White   (b) Black   (c) Red (d) none of these

91. An XML document has a logical structure and a _____ structure.

(a) Conceptual   (b) Virtual
(c) Imaginary   (d) Physical

Consider a Boolean Function f(a,b,c,d). It gives '1' as output when atleast three of the inputs are '1' and '0' for all other cases. Answer Ques 92 to 94.

92. The SOP of f(a,b,c,d) will be

(a) Σ 3,5,6,7,9,10,11,12,13,14,15
(b) Σ 0,1,2,4,8
(c) Π 3,5,6,7,9,10,11,12,13,14,15
(d) Π 0,1,2,4,8

93. The POS of f(a,b,c,d) will be

(a) Σ 3,5,6,7,9,10,11,12,13,14,15
(b) Σ 0,1,2,4,8
(c) Π 3,5,6,7,9,10,11,12,13,14,15
(d) Π 0,1,2,4,8

94. The minimal form of SOP for f(a,b,c,d) will be
(a) (a+c)(b+c)(b'+c')
(b) a'b'+c'd'+bd+b'c+cd
(c) ab+ac+ad+bd+bc+cd
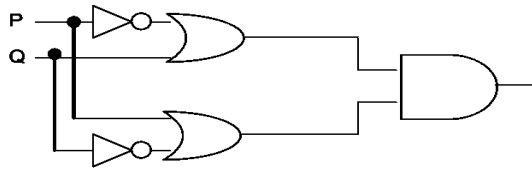(d) (a+b)(a'+b)(b'+d')

95. A two input OR gate is implemented with ONLY NAND gates. How many minimum NAND gates will be required for the same?

(a) 2   (b) 3   (c) 1   (d) None

96. [A(A+B)]' + [A'(B+A')]' + [A+B]' will result in

(a) 0   (b) A+B   (c) AB   (d) 1

97. The output of the following switching circuit will be

(a) P'Q + PQ'   (b) (P'+Q)(P+Q')
(c) P'Q' + PQ   (d) (P'+Q')(P+Q)

98. The infix form of the following postfix form 'P' will be

    P: 3 , 5 , 7 , − , 10 , + , 4 , / , /

(a) 3 / 5 − 7 + 10 / 4   (b) (((3 + 5) − (7 / 10))/ 4)
(c) (3 / (((5 − 7) + 10) / 4))   (d) 3 + 5 − 7 / 10 / 4

99. The value of the expression 'P' in Q 98 is

(a) 3   (b) 4.5   (c) 1   (d) 1.5

100. In a binary tree there will be _____ number of nodes.

(a) Even   (b) Odd   (c) 2   (d) Not known

--- * ----- * ----- * ---