

This is mascot systems paper  
TECHNICAL TEST (MASCOT)

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Total 6 sections.

- 1) Computer Fundamentals
- 2) Algorithms
- 3) Hardware
- 4) Software
- 5) General Awareness
- 6) Languages

- \* All together 60 questions with each section containing 10 questions.
- \* All are multiple choice questions

1. One Nibble = ?
2. Hexadecimal and Octal representation of 1024 ?
3. What a compiler does ?
4. DOS ? (whether Graphical interface or Character interface and two more choices are given)
5. CPU - abbreviation
6. Fortran used as ( Ans : Scientific Language)
7. ASCII character set ? (total number)
8. Windows NT- What NT stands for?
9. Which is not an input device ? (keyboard, Disk, Mouse, Lightpen)
10. Which is not a pointing device ? (mouse, Joy stick, lightpen none)
11. Microsoft Chief ?
12. 4GL ? (Fortran, SQL, ADA, ....)
13. Father of Computers?
14. Which of them is Object Oriented Language.?
15. Power PC is the product of ? (Microsoft, IBM, Apple, Motorola, Intel)  
(A combination of any correct 3 companies)
16. Latest processor used ? (Pentium, Power PC, Pentium pro, none)
17. MS Word is ?
18. First Super Computer built in India. (Ans : param)
19. Which of the following companies donot manufacture chips?  
(Microsoft, Motorola, Intel, HP)
20. LAN - abbreviation
21. WAN - abbreviation
22. Modem is ? (related to electrical hardware.- Like Modulator & demodulator)
23. FDD - abbreviation ( floppy disk drive)
24. BIT - abbreviation
25. Information is ? (message, data, processed data, none)
26. Which is not networking ? (internet, ethernet, arcnet, none)
27. One Gigabyte = ? (  $2^{30}$  ,  $2^{20}$  ,  $2^{10}$  none)
28. Which of the following is not RDBMS ? (sybase, SQL, Access, none)\_
29. Oracle is ? (Ans : Relational Data Base Management System)
30. In Oracle, Table means ( Ans : Collection of records)

31. DMA - abbreviation (Direct Memory Access, Discrete memory Access, Disk memory access)
32. What is meant by Static Variable ?
33. What is meant by QUEUE? {refer any data structures text}
34. What is meant by STACK? {refer any data structures text}
35. The processor used in first IBM PC? (8086, 8088, 486, intel)
36. Difference between 80286 and 80287
37. In bubble sort, no. of comparisons required ? (ans : formula :  $N*(N-1)/2$ )
38. No. of comparisons of an item in 100 items by binary comparison? (10, 25, 50, 100)
39. CRT - (Cathode Ray Tube)
40. No. of entry values are there ideally in a subroutine.
41. Binary tree?
42. Flow in one direction ? (Single linked list, Double linked list, ....., ..)
43. Electron screen size ? (here, 2 lines of algorithm is given. Name the algorithm)
44. Which is not storage device.? (printer, CD ROM, Disk, none)
45. A question regarding memory ? (least used memory, recently unused memory, ..)
46. ISO - (International Standard Organisation)
47. HTML - (Hyper Text Markup Language)
48. Flow chart for factorial N? (ans : choice a)
49. What is meant by Recursion ?
50. Struct (s)
 

```

      {
      int a;
      long b;
      }
      Union (u)
      {int a;
      long b;
      }
      Print sizeof(s) and sizeof(u) if sizeof(int)=4 and sizeof(long)=4
      
```
51. Switch (i)
 

```

      i=1;
      case 1
          i++;
      case 2
          ++i;
          break;
      case 3
          --i;
      
```

 (ans : 1, 2, 3, none)  
 Output of i after executing the program
52. char S;  
char S[6] = "HELLO";

```
printf("%s ",S[6]);
```

output of the above program ? (0, ASCII 0, I,unpredictable)

```
53. Unsigned char c;
    for ( c=0;c!=256;c++2)
        printf("%d",c);
```

No. of times the loop is executed ? (127,128,256,infinitely)

```
54. int i;
    i=0;
    repeat
        i=i+1;
        print i;
    until(i<10)
    end
```

<===== PASCAL PROGRAM

No. of times the loop is executed?

```
55. Convert (int A,var ,int B;int c)
    {
        A=10;
        B=4-;
        C=120;
    }
    Convert (inta,b,c)
    {
        a=1;
        b=4;
        c=12;
    }
```

<===== PASCAL PROGRAM

convert (A,B,c) ? (10,40,120  
10,40,12,.....,.....)

```
56. Procedure A
    Begin
```

-----

```
end
```

<===== PASCAL PROGRAM

```
Procedure B
```

No. Of errors in the program ?(1,2,3,none

)

```
Begin
```

-----

```
end
```

```
57. int i;
    i=2;
```

```
i++;
if(i=4)
{
printf(i=4);
}
else
{
printf(i=3);
}
```

output of the program ? (4,3,unpredictable,none)

58. what is FAT?.

File allocation table

QUANTITATIVE APPTITUDE TEST :

Total 44 questions are there.  
Refer R.S. Aggarwal

1. How many degrees hours hand rotate in 10 minutes?
2.  $1/(10 \text{ power } 18) - 1/(10 \text{ power } 20) = ?$
3.  $0 < x < 1$ : Which is greater ? ( $1/(x \text{ square})$ ,  $1/x$ ,  $x$ ,  $x \text{ square}$ )
4.  $c=a/b$  ;  $a-1=c$  What is the relation between  $a$  &  $b$
5.  $N = ((8.42)**2)*(95. ....)/((0.982)*(64.....)**2)$   
If N contains the first three digits as 988, Which of the following is the nearest answer (9.88, 98.8, 988, none)
6. The sum of 7 consecutive odd integers with 27 as the fourth number .
7.  $(6666666666666666)**2 + 8888888888888888 = ?$
8. 2486724..... Express it in product of 3 numbers. (The given number is not exactly correct. Choices are given. Very easy)
9. Radius of sphere is increased by 50%. By how much percentage is surface area is increased.
10. In which of the following , 2 as a common factor , can be eliminated.

Ans :  $\log(x^2)/\log(y^2) = \log(x)/\log(y)$

Antonyms :

11. AUSPICISIOUS  
12. REHALISHLY  
13. & 14. - Sentence correction  
15, 16, 17 - Spelling Mistakes  
18, 19 - Two Questions

6 letters are assigned certain numbers.

In each question, 4 combinations of digits are given. Of which, which gives a meaningful word.

20 & 21. - 4 sentences will be given in each question. Arrange them in logical order.

22. 5 straight lines are cut in a circle. A question regarding this.

Reasoning :

- a) If statement A alone is required
- b) If statement B alone is required
- c) If both statements A & B are required
- d) Neither

23. Does Mr. Mathew give tuition ?

- A) Mathew is a teacher
- B) In school, the teacher is not expected to give tuitions.

24. There is no power cut in advanced country

If T is a city, Is there power cut in that city?

- A) Z is an advanced country
- B) T is a capital city of country Z

25. Tanzanians are in East Africa. Tanzanians are good in either Education ,

Dance or Music

- A) Tanzanians are good at Education
- B) East Africa are good at dance & Music.

Remaining questions 26 - 29 are of the same type.

30. On one day, 14 children are admitted in a school by their mothers.

2 are sisters, 3 are brothers, 2 are brother and sister and 2 are twins.

The rest are singles. How many mothers came? (5 , 7, 9, 14)

31. Problem Cisterns & pipes.

It will take 8hrs to fill a cistern. But due to leak at the bottom, it

take 10 hrs to full it. In how many hrs, the full tank will be emptied

because of leak.? (18,8,40,10)

32. Question regarding men & work

A does alone a work in 4 days  
 B does alone a work in 8 days  
 C does alone a work in 10 days  
 A & B together -----  
 C & B together -----

33. In 3.5 Kg rod , there is 74% silver. If it is alloyed with a 0.5 Kg rod,  
 the % of silver goes up to 84%. The percent of silver in 0.5 Kg rod ?

34. Two chords of lengths  $2L_1$  and  $2L_2$  are drawn in a circle. Their lengths  
 are inversely proportional to the straight distance joining the centre.  
 Find the radius of circle.

35. A Kg of tea costs Rs 49.50 . But the supplier gives 10 gms less for every Kg he sold. What is the actual cost.

36 - 40

A question on transportation table. 5 questions were given.

A	B	C	D	E	
A	X	12	8	20	6
B	12	X	12	5	9
C	20	8	X	4	7
D	3	15	6	X	10
E	12	5	8	3	X

A,B,C,D,E denote the stages.

X denote the start of the stage.

The bus goes from A to E and E to A with back stops at B,C, & D  
 For each the charge is Rs.0.70

The numbers in the table are how many passengers are there in the bus

upto that stage.( the numbers given the table are not correct)

36. Total no. of passengers in onward journey
37. Total amount in the conductors bag just before the bus reaches the stage C
38. How many Rs. 1.40 tickets are issued to passengers in backward journey.
39. If the bus breaks down between the stages C & D , the amount refunded to passengers.
40. If the ticket costs Rs.1.50, how much is the profit in Backward journey.

Remaining 4 questions may be from English.

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1) At 6'o clock clock ticks 6 times. The time between first and last ticks was 30sec. How much time it takes at 12'o clock.

Ans. 66 sec. 2 marks.

2) Three friends divided some bullets equally. After all of them shot 4 bullets the total no. of remaining bullets is equal to that of one has after division. Find the original number divided.

Ans. 
$$\begin{array}{ccc} x & x & x \\ x-4 & x-4 & x-4 \\ 3x-12 = x & & \\ x = 6 & & \\ \text{ans is 18} & & 2 \text{ marks} \end{array}$$

3) A ship went on a voyage after 180 miles a plane started with 10 times speed that of the ship. Find the distance when they meet from starting point.

Ans. 
$$\begin{array}{l} 180 + (x/10) = x \\ x = 20 \\ \text{ans is } 180+20 \end{array} \quad 2 \text{ marks}$$

4) Fill the empty slots.

	played	won	lost	draw	Goals for	Goals against
A	2	2	*0	*0	*7	1

B	2	*0	*1	1	2	4
C	2	*0	*1	*1	3	7

the slots with stars are answers. 4 marks

BC drew with 2-2

A won on B by 2-0

a won on C by 5-1

5) There are 3 societies a,b,c. a lent tractors to b and c as many as they had. After some time b gave as many tractors to a and c as many as they have. After sometime c did the same thing. At the end of this transaction each one of them had 24. Find the tractors each originally had.

Ans a had 39 b had 21 c had 12 4 marks

6) There N stations on a railroad. After adding x stations 46 additional tickets have to be printed. Find N and X.

Ans. let  $N(N-1) = t$ ;  
 $(N+x)(N+x-1) = t+46$ ;  
 trail and error method  $x=2$  and  $N=11$  4 marks

7) Given that April 1 is tuesday. a,b,c are 3 persons told that their farewell party was on

a - may 8, thursday

b - may 10, tuesday

c - june 8, friday

Out of a,b,c one is only correct one of the regarding month, day, date. Other told two correct and the third person told all wrong. What is correct date, month, day. 5 marks

8) There are 4 parties. df, gs, dl (deposit/loss), ew ran for a contest.

Anup, Sujit, John made the following statements regarding results.

Anup said either df or ew will definitely win

sujit said he is confident that df will not win

John said he is confident that neither ew nor dl will win

the result has come. only one of the above three has made a correct

statement. Who has made the correct statement and who has won

the contest. 5 marks.

9) Five people a,b,c,d,e are related to each other. Four of them make one true statement each as follows.

i) b is my father's brother. (ans. d said this)

ii) e is my mother-in-law. ( b )

iii) c is my son-in-law's brother. ( e )

iv) a is my brother's wife. (c)



10 marks.

- 10) All members of d are also members of a  
 All ' ' e ' ' d  
 all ' ' c ' ' both a and b  
 not all ' ' a are members of d  
 not all ' ' d ' ' e

a) which of all following statements must be true

- 1) there are more common members between c and a than between c and e
- 2) there are more members in a than in c
- 3) there are more members in a than in e

- i) 1 only ii) 3 only iii) 1,2 only iv) 2 and 3 only v) 1,2,

3

b) which of all the following can be inferred from the statements above

- 1) some members of d are also members of b
- 2) all members of e are members of a
- 3) all members of a are members of b
- 4) some members of d are not members of c
- 5) all members of b are members of c

- i) 1 only ii) 3 only iii) 2 only iv) b and d only v) d, b and a only

d) Which of the following is not possible

- i) some members of e are also members of c but are not members of b
- ii) ' ' ' ' d ' ' ' ' both c and b
- iii) all ' ' e ' ' ' ' a
- iv) some ' ' d are not ' ' a
- v) ' ' e are ' ' b

- 1) i only 2) iii only 3) i and iii only 4) all the above 5) none

e) if all members of b are also members of c then

- i) all members of a are also members of b
- ii) all ' ' ' ' c
- iii) ' ' b ' ' a
- iv) some members c ' ' e and b
- v) ' ' ' ' d and b

- 1) ii only 2) iii and iv only 3) iii only 4) ii and iv only  
 5) none

11)

boys are allowed to watch football at c.v.Raman auditorium subjecte  
 d  
 to  
 conditions.

- i) the boy over age 16 can wear overcoat
- ii) no boy over age 15 can wear cap

- iii) to watch the football either he has to wear overcoat or cap or both
- iv) a boy with an umbrella or above 16 or both cannot wear sweater
- v) boys must either not watch football or wear sweater.

What is the appearance of the boy who is watching football.

I am sending the Tata Ibm paper by three parts. Some more paper will be sent by Bhadram. Here is the first part

\*\*\*\*\*

12. After the following command is executed

```
$ ln old new
```

a listing is performed with the following output

```
$ls -li
```

```
total 3
15768 -rw-rw-rw-  2 you 29 sep 27 12:07 old
15768 -rw-rw-rw-  2 you 29 sep 27 12:07 New
15274 -rw-rw-rw-  1 you 40 sep 27 09:34 very old
```

Which of the following is true

- a) Old and new have the same i-node number ,2
- b) old and new have the same i-node number ,15768
- c) old and new have nothing to do with each other
- d) very old and new are linked
- e) veryold and old are linked

29) Which of the following is true about fork ()

- a) It transforms an executable binary file into a process

29) Which of the following is true about fork ()

- a) It transforms an executable binary file into a process that overlays the process which made the fork () system call. No new process is created     Ans B;
- b) Causes the creation of a new process the CHILD process with a new process ID.
- c) Causes the creation of a new process, the child process with the same process ID as the parent
- d) fork() has nothing to do with processes.
- e) fork() is not a system call

1)which message is displayed when a window is destroyed

a)WM-CLOSE B)WM-DESTROY C)WM-NCDESTROY D)WM-POST DESTROY

ans: check your self may be B

2) what is meant by SEND MESSAGE AND POST MESSAGE

ans:we don't know

3)which is the message used to limit the size of the window

a)WM-SIZE B)WM-RAWT C)WM-GETMINIMAX INFO D)WM-COMMAND

E)WM-CREATE

3)until |who|grep mary

do

step 60

done

a)is syntactically correct

b)waits 60 sec. irrespective of mary being logged in or not

c)waits until mary is logged in

d)waits till mary exists

e)none

ans:C

4)the unix system call that transform an executable binary file into

a process:

ns: we don't know

5)fork() is a system call causes

ans: causes the creation of a new process , the child person with a new

process ID

6)main()

{

char \*x="string"

char y[]="add";

char \*z;

z=(char \*) malloc(sizeof(x)+size of(y)+1)

```
strcpy(z,y);
strcat(z,x);
printf("%s+%s=%s",y,x,z);
}
```

ans: Add+string=addstring (if it is in caps also true)

7) char \*(\*(\*a[n]())());

ans: d) an array of n pointers to functions returning pointers to functions returning pointers to characters

8) interprocess command in unix be achieved by

a) pipes b) messages c) semaphores d) shared memory e) all

ans: E (all)