I Gate Technical Paper 1

Total 6 sections.
1)Computer Fundamentals
2)Algorithms
3)Hardware
4)Software
5)General Awareness
6)Languages

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 - abbrevation
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 - abbrevation
21. WAN - abbrevation
22. Modem is ? (related to electrical hardware.- Like Modulator &demodulator)
23. FDD - abbrevation (floppy Disc drive)
24. BIT - abbrevation
25. Information is ? (message, data,processed data,none)
26. Which is not networking ?(internet, Ethernet, arcnet,none)
27. One Gigabyte =?(2 power30 , 2 power 20 ,2 power 10 none)
28. Which of the following is not RDBMS ? (sybase, SQL,Acess,none)_
29. Oracle is ? (Ans : Relationasl Data Base Management System)
30. In Oracle, Table means (Ans : Collection of records)
31. DMA - abbrevation (Direct Memory Access,Discrete memory Access,
Disk memoryaccess)
32. What is meant byStatic 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,zig4,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 entryvalues are there in 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 algoirithm)
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 Makeup 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; (ans : 1,2,3,none)
case 3
--i;
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; <====== PASCAL PROGRAM
print i;
until(i<10)
end
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)
{ <====== PASCAL PROGRAM
a=1;
b=4;
c=12;
}
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. $1/(10$ power $18) - 1/(10$ power $20) = ?$
3. $0 < x < 1$: Which is greater ? $(1/(x$ square$),1/x,x,x$ 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. $(66666666666666)**2 + 888888888888=?$
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 : $\log(x$ square$)/\log(y$ square$) = \log(x)/\log(y)$

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 qusetion , 4 combination 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 bothe statements A & B are required
d) Neither

23. Does Mr. Mathew give tution ?
A) MAthew is a teacher
B) In school, the teacher is not expected to give tutions.

24. There is no power cut in advanced country
If T is a city, Is there power cut in that city?
A) Z is a advanced country
B) T ia a capital city of country Z

25. Tanzanians are in East Africa. Tanzanizns 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 onw 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, th eful 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 p to 84%. The percent of silver in 0.5 Kg rod?

34. Two chords of lengths 2L1 and 2L2 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 woith 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 fron 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. x x x
x-4 x-4 x-4
3x-12 = x
x= 6
ans is 18 2 marks

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

Ans. 180 + (x/10) = x
x = 20
ans is 180+20 2 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 orginally 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(depositloss),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 subjected 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 umberella or above 16 or both cannot wear sweater.
v) boys must either not watch football or wear sweater.

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

Iam sending the Tata Ibm paper by three parts. Some more

paper will be sent by Bhadram. Here is the first part

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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 proces 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 functins returning pointers to charecters

8)interprocess command in unix be achieved by

a)pipes b)messages c)semaphores d)shared memory e0all

ans: E (all)