The paper consists of three sections.

1. Aptitude 15 questions 20 min
2. System concepts 20 questions 20 min.
3. 'C' 15 questions 20 min.

Section 1

Question 1 to 5 have to be answered on the basis of the information given below:

On Sunday, December 23, four ships were berthed at the Port.

- λ Ship W left at 4 PM on Sunday, December 23, for a series of 8-day cruises to Bermuda and Nassau.
- λ Ship X left at 4:30 PM on Sunday, December 23, for a series of alternating11-day and 13-day cruises.
- λ Ship Y sailed at 5 PM on Sunday, December 23, for a series of 5-day cruises to Bermuda.
- λ Ship Z sailed on Monday, Decmeber 24, for a series of 7-day cruises to Nassau.

Each cruise begins on the day after departure.
Each ship is scheduled to return to the Port early in the morning after the last day of the cruise and leave again in the afternoon of the same day.
(From 1999 Barrons GRE book Model Test 3 - Section 5 - Q8 to Q12)

1. On December 31, which ships will be sailing from the Port on a New Year's Eve.

(a) W and X
(b) X and Y
(c) W and Z
(d) X and Z
(e) X, Y and Z

Ans: (c)

2. On how many sailing dates between December 24 and February 28 will ship W be moored alongside another ship

(a) 0
(b) 2
(c) 4
(d) 5
(e) 6

Ans: (d)

3. On how many occasions between December 24 and February 28 will three ships be moored at the

Port.

(a) 0
(b) 1
(c) 2
(d) 3
(e) 4

Ans: (a)

4. On which day of the week will these four ships make most of their departures?

(a) Sunday
(b) Monday
(c) Tuesday
(d) Thursday
(e) Saturday

Ans: (b)

5. On which days of the week in the period between December 24 and February 28 will the pier be least crowded?

(a) Tuesday and Friday
(b) Tuesday and Thursday
(c) Friday and Saturday
(d) Wednesday and Thursday
(e) Thursday and Saturday

Ans: (a)

6. A family with a husband, his wife and their child are at one side of river.
   They want to cross the river on a boat. The child can' t be left alone.
   The only available boat can hold only one person and the boatboy.
   Only the boatboy can row the boat.
   What is the minimum number of trips from on bank to the other, that the boatboy has to make
    for the whole family to reach the other side.

Question 7 to 10 have to be answered on the basis of the information given below:

The workweek in a small business is a five-day workweek running from Monday through Friday.
In each workweek, activities L,M,N,O and P must all be done.The work is subject to the following restrictions:

   λ L must be done earlier in the week than O and earlier than P
   λ M must be done earlier in the week than N and earler than O

    λ No more than one of the activities can ever be done on any one day

7.Which of the following is an acceptable schedule starting from Monday to Friday

a) L, M, N, O, P
b) M, N, O, N, M
c) O, N, L, P, M
d) P, O, L, M, L
e) P, O, L, M, N

Ans. (a)

8. Which of the following pair of activies could be done on Monday and Tuesday

a) L and O
b) M and L
c) M and P
d) N and O
e) O and M

Ans. (b)

9.If P and N are done on Thursday and Friday, then which of the following is true

a) L is done on Tuesday
b) L is done on Wednesday
c) M is done on Monday
d) O is done on Tuesday
e) O is done on Wednesday

Ans. (e)

10. Which of the following could be true

a) L on Friday
b) M on Thursday
c) N on Monday
d) O on Monday
e) P on Tuesday

Ans. (e)

Rest of the paper is based on similar questions.
I donot remember them completely but I' ll just give a basic idea about them below

* 5 programs are sheduled from monday to saturday, monday is not holiday,
PQRST are the programs. The day before P is holiday, and some other clues are
given, we have to find the sequence (4 questions)

* Suppose U R the presoner, There are two guards Who will tell truth or
one will tell truth. There is a gate for liberty and another foe hell.
asking about which sequencing is sufficient to find the gate for liberty??

* There are 7 targets, A B and C has to shoot them.
All should be shot down consecutively.
1. The number of chances for A and B are not less then 2,
2. C has only one chance
3. A can' t shot 3 times consicutively.
4. B is permited to shoot in even chances only.

They have given some 2 or 3 MCQ questions on this.

Section 2

1. Encryption and decryption is done in the following layer.

a) DLL
b) Network layer
c) Transport
d) Presentation

Ans: (d)

2. Floating point has different formats on two different machines.
   This modifications are taken care by which layer?

a) DLL
b) Network layer
c) Transpor layer
d) Presentation

Ans: (d)

3. Time complexity of quick sort algorithm is

a) N*N
b) log(N)
c) N*log(N)

d) N

Ans: (c)

4. Time complexity of AVL tree is .

a) N*N
b) log(N)
c) N*log(N)
d) N

Ans: (b)

5. Cycle stealing is used in which concept?

a) Programmed I/O
b) DMA
c) Interrupts

Ans: (b)

6. How many octets are there in an IP address

a) 6
b) 8
c)10
d)12

7.What are the maximum number of hosts that can be served by an IP

a) 254
b) 256
c) 2**24(2 to the power 24)

8. Which of the following is model representation of life cycle software

a) Water fall model
b) Spiral

9. The purpose of reviewing code is

a) To find syntax error
b) Tocheck for the proper design

10. Semaphores are used for the resolution of

a) Contention
b) Accessing of same resources by more than one

11.In threading of processes when the race condition will happen

a) Low priority process
b) Higher priority process

(See O.S.Concepts by Silberschatz)

12.Which of the following function is not performed by O.S.

a) CPU sheduling
b) Memory management
c) Transaction

Ans: (c)

13. If two applicaltion programmes uses same libraries which of following are shared

a) Lib code
b) Code and stack
c) Data
d) Data, code and stack

14. Which is the maximum 16 bit signed integer.

a) 66337
b) 66338
c) 257
d) 258

15.When will interrupt occurs?

a) Divide by zero
b) DMA completed
c) Insufficient memory

16. Which of the following has low power cosumption

a) EIL
b)CMOS
c) Totempole Arrangement

17. Which of the following is the wrong statement

a) Cominational circuits has memory
b) Sequential circuits has memory
c) Sequential circuits is a function of time

Ans: (a)

18.Virtual address is

a) More than physical address
b) Lesstthan physical memory
c) Equal to physical memory
d) None

Ans : (a)

19. Which of the following reduces CPU burden

Ans : DMA

20. Malloc function allocates memory at

a) compilation time
b)link
c)load
d)running

Ans: d

Section 3

1.Max value of SIGNED int

2. A long C program is given -- try to be familiar with few of the concepts listed below

int *num={10,1,5,22,90};
main()
{

```
int *p,*q;
int i;
p=num;
q=num+2;
i=*p++;
print the value of i, and q-p, and some other operations are there.
}
```
how the values will change?

3. One pointer diff is given like this:

int *(*p[10])(char *, char*)

Explain the variable assignment

4. char *a[4]={"jaya","mahe","chandra","buchi"};
   What is the value of sizeof(a) /sizeof(char *)

5. For the following C program

```
void fn(int *a, int *b)
{int *t;
t=a;
a=b;
b=t;
}

main()
{int a=2;
int b=3;
fn(&a,&b);
printf("%d,%d", a,b);
}
```

What is the output?

a) Error at runtime
b) Compilation error
c) 2 3
d) 3 2

6. For the following C program

```
#define scanf "%s is a string"
main()
{printf(scanf,scanf);
}
```

What is the output.

Ans. %s is string is string

7. For the following C program

```
{char *p="abc";
char *q="abc123";
while(*p=*q)
print("%c %c",*p,*q);
}
```

a) aabbcc
b) aabbcc123
c) abcabc123
d) infinate loop

8. What is the value of the following:

printf("%u",-1)

a) -1
b) 1
c) 65336

9. For the following C program

```
#define void int
int i=300;
void main(void)
{int i=200;
{int i=100;
print the value of i;}
print the value of i;}
```

What is the output?

10. For the following C program

```
int x=2;
x=x<<2;
printf("%d ",x);
```

Ans. 8

11. For the following C program

```
int a[]={0,0X4,4,9}; /*some values are given*/
int i=2;
printf("%d %d",a[i],i[a]);
```

What is the value?