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Test have No negative marking and 3 sections -technical 35 questions in 30 mins-DCT, data structures,interrupts in 8085 etc..apitude -30 questions in 30 mins ,C-20 questions in 15 mins-was quite easy some questions(not sectionwise)

1 key constraints arefor...

- (a)secondary key
- (b)primary key
- (c)foreign key
- (d)...

2 If a sinusoidal signal of 1100Hz is flat top sampled at a rate of 1800Hz,& this signal is passed through

an ideal LPF with cutoff 1KHZ,the o/p contains the following frequency components:

(This question was repeated again in the same paper !!!)

- (a)only 800Hz
- (b)...
- (c)...
- (d)...

3 TRAP is _____interrupt

- (a)synchronus
- (b)asynchronus
- (c)hardware
- (d)...

4 When the instruction RST is executed, the control jumps to location:

- (a)0020
- (b)0024
- (c)0028
- (d)none of the above

5 A memory cell in static Random Access Memory is made up of:

- (a)6 mos transistors---ans
- (b)1 mos transistor and 1 capacitor
- (c)4 mos transistors and 2 capacitors
- (d)...

6 Worst case algorithm is meant for the case

- (a)when sometimes favourable
- (b)when worst unfavourable
- (c)...
- (d)...

7 A semaphore with negative count $n(s=n)$ has how many processes in the Q?

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- (a)0
- (b)n
- (c)n+1
- (d)n-1

8 If in a PCM system the no of bits used is increased from n to n+1, the signal-to-noise ratio

improves by

- (a)3dB
- (b)6dB
- (c)20ndB
- (d)24ndB

9 2 trains of length 110m & 90 m travelling at 45kmph & 50 kmph respectively..when will they pass each other?

- (a)144mins
- (b)102mins
- (c)..
- (d)...

10 From a circular sheet of radius 10cm , 40% is cut off & from the remaining portion a cone is constructed, what is the ratio of the radius of the cone to its height?

11 If a vessel contains 56 litres of a mixture of milk & water in the ratio 3:2..what amount of water should be added to make the ratio 4:5?

12 2 pipes fill a cistern in 12 mins, pipe A is 3 times faster than pipe b...if only pipe B has to fill the cistern ,how long will it take?

- (a)1hour
- (b)2hours
- (c)..
- (d)..

13 #define ADD(X,Y) X+Y

```
main()
```

```
{
```

```
#undef ADD(X,Y);
```

```
fun();
```

```
}
```

```
fun()
```

```
{
```

```
int y=ADD(3,2);
```

```
printf("%d",y);
```

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}

o/p?

Runtime error(linker error): _add undefined in module

14 Which of the following is illegal

- (a) void v;
- (b) void *v;
- (c) void **v;
- (d) all are legal

```
15 #define int INTEGER/*line1*/
#define INTEGER int/*line 2*/
main()
{
INTEGER p=10;/*line 5*/
printf("%d",p);
}
```

o/p?

- (a) compiler error at line 1
- (b) compiler error at line 2
- (c) compiler error at line 5
- (d) No error, prints 10

ans:c

```
16 main()
{
int counter=1;
for(;;)
{
counter++;
if(counter>9)
break;
}
}
```

in the above program

- (a) error b'coz for should have parameters
- (b) error bcoz 2 semicolons in a for loop are invalid
- (c) no error, loop is executed once
- (d) no error ,loop is executed 10 times

```
17) main()
{
```

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```
char str={'H','E','L','L','O','\0'}  
printf("%s/n",str+1);  
}  
o/p?
```

- (a)prints ELLO
- (b)prints HELLO
- (c)prints ILLO (i.e.'H' is incremented by 1)
- (d)...

18 The average temperature for monday,wednesday,thursday was 46 o C.the average temperature for tuesday,wednesday,thursday,friday was 48(some no)..if temp on monday was 42 o C,what is the temperature on tuesday?

- (a)32
- (b)36
- (c)37
- (d)3....

19 The average marks of 12 students was found to be.....(some no)...it was later found that while entering the data , it had been entered as 74 instead of 50...and 20 instead of 24(nos are not the same)...what is the correct average?

20 If a lady bought a house & sold it at 25% more than what she had paid after 3 years, she has to pay 50%tax on the gain...If C is the cost price,(gain=s.P-c.p),what tax did she have to pay?

- (a)..
- (b) $C/8$
- (c)...
- (d)...

21 Some no of men(given)..complete a work in (given) no of days...after (some no) of days ..

some more(given no) men join them,they will finish the work in how many days?

22 If a car travels from A to B at a speed of 'x' kmph & travels back from B to A at $\frac{4}{5}$ th the speed

,then the total distance travelled in terms of percentage of x is?

- (a)2400km
- (b)3600km
- (c)..
- (d)...

(23)-(24)2 similar problems on a race..i.e.one travels at some speed gives a lead of some time or length

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to the other....kind of problem..

25 A question on malloc

```
int *p;  
p=malloc(sizeof(int)*5);  
if malloc returned the address 1000;the value of p+1 is  
(a)1002  
(b)1004  
(c)...  
(d).....
```

26 A cascade amplifier is:

- (a) a common emitter stage followed by a common base stage
- (b) a common base followed by emitter follower
- (c) ..
- (d) a common base stage followed by a common emitter stage

27 A network has 7 nodes & 5 independent loops, the no of branches=?

- (a) 11
- (b) 14
- (c) ..
- (d) ...

28 Many nodes transmit at the same timecollision occurs...retransmit.....what is this called?

- (a)
- (b)
- (c) collision.....enforcement
- (d)

29 If the characteristic impedance of a transmission line is 50ohms, at 1 end the impedance is

+j50 ohms, the VSWR =?

- (a) 0
- (b) infinity
- (c) +j
- (d) +1

30 Minimum no of NAND gates required to realize the boolean eqn: $Z=ABC$?

- (a) 4
- (b) 6
- (c) ..
- (d)

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31 It has been found that mercury poisoning due to industrial pollution causes Hobson's disease.

An island R is completely away from modern industry. People here follow subsistence agriculture method.

A high % of people in Island R are affected by Hobsons disease. From the above paragraph, we can deduce

(i) there must be another reason for Hobson's disease other than mercury poisoning

(ii) mercury poisoning can be due to other reasons than industrial pollution

(iii)....

(a) i only

(b) ii only

(c) i ,ii, iii

(d) i and ii

32 fun()

```
{
```

```
int counter=1;
```

```
counter++;
```

```
if(counter>10)
```

```
fun();
```

```
}...(some program similar to this one).
```

the program will be executed infinitely--ans

33 Which of these are legal?

i. a pointer to a function

ii. a pointer to a structure

iii. pointer to union

(a) i only

(b) i and ii

(c) i, ii & iii

(d) ii & iii

34 Union..

```
{
```

```
int ivalue;
```

```
char lvalue;
```

```
struct boo
```

```
{
```

```
int ivalue;
```

```
char lvalue;
```

```
}databook;
```

```
};
```

(a) error as struct within union is not allowed

(b) error as struct members have same name as union members

(c)...

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(d).....

35 How many stacks are there in DOS?

- (a)1 stack
- (b)2 stacks
- (c)3 stacks
- (d)...

36 What is the o/p?

```
main()
{
char arr[5]={'a','a','b','c','d','e'};
printf("%s",arr);
}
```