

(PAPER) HUGHES Paper Pattern

SECTION C

1. An lead compensator zero is at $Z=Z_c$, pole is at $P=P_c$ then the following is correct

- a. $P_c > Z_c, p_c < 0, z_c < 0$
- b.
- c.

2. gain margin of $g(s)h(s)=1/s(s+k)$;

- a. $\sqrt{1+k^2}$
- b. 0
- c. infinity
- d. 1

3. machestor code does not improves

- A. clock recovery
- b. bandwidth efficiency
- c.

4. possion distribution is used for

- a. used in FSM
- b.
- c. used for queuing delay system of mutually identical events of arrival
- d. both a and c

5. no.of filpflops for mod 11 counter

- a. four
- b. five
- c.

6. no of comparators required for 4 bit parallel A/D comparator

- a. 4
- b. 16
- c. 15
- d. none

7. if even parity is used for parity generation, what is the hamming distance (simple fig is given)

ans:2

8. the code set is {00000,00111,11100,11011} what is the error detecting and correcting capability?

ans:2,1

9. operational amp characteristics following is correct:

- 1. input impedance is 0
- 2. output impedance is infinity
- 3. input impedance is infinity
- 4. gain is infinity

which combinations are correct?

10. band pass signal having frequencies 2.5k and 4.5k?give the sampling freq

- a. 9k
- b. 4k
- c. 4.5k
- d. 7k

11. defination of avalanche diode multiplication

12. more no of ripples are present in the diagram?which is correct

- a. lower order filter
- b. high order filter
- c.

13. if CPU have one interrupt pin and on to connect with external devices with some priority? which type of the following is used?

- a. parallel priority interrupt
- b. daisy chain
- c. RS filpflop
- d.

14. one megabit file transfer, serially on 9600 baud one start bit and two stop bits, then how much time it takes (approx)

- a. 4 hours
- b. 2 hours
- c. 20 minutes
- d. 2 minutes

15. IEEE 802.5 is

ans: TOKEN RING

16. Code sequence is given what is the error correcting distance?

17. bit stuffing used in HDLC Protocol for

ans: b is correct(read on text book)

Section A AND B (Both Mixed) !

1. If "AaBbCc" is passed to the char
char x(*a)

```
{  
a[0]?x(a+1):1;  
printf("%c",a[0]);  
return 1;  
}
```

what will be the output?

2. f(*p)

```
{  
p=(char *)malloc(6);  
p="hello";
```

```

return;
}
main()
{
char *p="bye";
f(p);
printf("%s",p);
}
what is the o/p?
ans:bye

```

3. when the program counter is incremented in the instruction cycle

- a. fetch cycle
- b. int cycle
- c. execution cycle
- d.

4. two sorted lists of n elements will take at least fine the order of complexity?

- a. $2n$
- b. $n/2$
- c. $\text{square}(n)$

5. logic diagram is given? find the expression

ans: OR gate

6. question on JAVA string

ans: string ends without a null character

7. cache access time is 100ns. main memory access time is 1000ns, hit ratio is .9, find mean access time?

ans :200ns

8. which is not suitable to find out IP address

ans:ARP

9. about deadlock condition

10. convert 41.6875 into binary

11. read about IP AND IPX

12. read about NFS

13. DHCP is

- a. for routing
- b. for network address conversion
- c. for diagnosis
- d.

14. execution phase can be

- a. pipelined
- b. no parallelism is possible
- c. vector processing
- d.

15. In public key algorithm , A wants to send message to B

which key is used

- a. A public key
- b. A private key
- c. B public key
- d. B private key

16. to prevent replay attacks in transmission

- a. symmetric encoding
- b. Asymmetric encoding
- c. for every exchange, key should be changed

17. virtual functionality is used in C++

- a. dynamic binding
- b. if the derived func is present but base class not present
- c.

18. if there are n nodes in a binary tree, how many null pointers are there

ans: $n+1$;

19. if heap sort contains n elements, no of comparisons required are

- a. $\log(n)$
- b. height of heap sort
- c.
- d.

20. Question on ICV(integrity check)

21. which of the following is efficient in terms of space

- a. insertion sort
- b. quick sort
- c. selection
- d. both a and c

22. in 32 bit representation, the range of numbers in 2's complement form :

ans : -2 to the power of 31 to 2 to the power of 31 minus 1

23. about normalization

24. socket is implemented in TCP Layer. which of the following is related to TCP layer

ans: port number

25. in reentrant procedure, which should be not used for passing parameters?

- a. passed by reg
- b. by direct
- c. by indirect
- d. by stack

26. which is related to thread

- a. separate switching reg
- b. " stack

- c. " address space
- d.

27. flow control is used for

- a. congestion at receiver
- b.
- c.
- d.

28. 5 questions on DBMS are there

29. in global static variable , declartion in a file

- a. localization of scope
- b. persistance of the value through out the file
- c.
- d.

30. in sorted table contains elements , which of the searching is false

- a. hash table
- b. binary searching

31. in demand paging overhead of context switching is more due to

- a. copy processes from disk to memory
- b. viceversa
- c. to get associative table
- d. swapping to the disk

32. when write through is better than write back(related to cache memory)

33. which is false when normalization is used?can't express

34. I : Verification: are we doing right product, II: Validation: are we doing product right

- a. I AND II ARE TRUE
- b. I AND II ARE FALSE
- c. I TRUE AND II FALSE
- d. I FALSE AND II TRUE

35. A table contains less than 10 elements which one is fastest

- a. bubble sort
- b. selection sort
- c. quick sort

36. about subroutine, precondition is false. what about post condition

- a. post condition is not defined
- b. post condition is always true
- c.
- d.

37. When static variables are used, which one of the following is not possible?

- a. dynamic run time
- b.
- c.

38. in product of x and y,

```
if (x=0|y=0)
y=1;
else
y=0;
(not cleared)
what is cyclometric complexity?
```

- a. 3
- b. 2
- c. 1
- d. 0

40. path testing is

- a. white box
- b. black box
- c. installation test
- d. environment test

41. program is given? above algorithm represents what type of search?

- a. binary search
- b. interpolation search
- c. sequential search
- d.

(may be "b" is correct);

42. if $x \rightarrow y$ in a relation R, x_1 and x_2 are in x, y_1 and y_2 are in y (question not cleared), about functional dependancy

- a. $x_1 = x_2$ and $y_1 = y_2$
- b.
- c.

43. in a down loading from website ,which one is correct?
ans: check the byte code and indicate the error, if any.

44. about UDP, One Address is given but that is not the state table

what will it do the packet

- a. packet is discarded
- b. packet is sent to ethernet server
- c. packet is sent to other address
- d.

45. in associated memory for fast accessing which one is used

- a. single linked list
- b. double "
- c. hash table
- d.