

## HCL Sample Test Paper 2

- Aptitude

1. How many of the integers between 25 and 45 are even ?  
(A)21 (B)20 (C)11 (D)10 (E)9  
Ans:d)10
2. If taxi fares were Rs 1.00 for the first 1/5 mile and Rs 0.20 for each 1/5 miles thereafter. The taxi fare for a 3-mile ride was  
(A)Rs 1.56 (B)Rs 2.40 (C)RS 3.00 (D)Rs 3.80 (E)Rs 4.20  
Answer :d)Rs 3.80
3. A computer routine was developed to generate two numbers (x,y) the first being a random number between 0 and 100 inclusive, and the second being less than or equal to the square root of the first. Each of the followin pair satisfies the routine EXCEPT  
(A) (99.10) (B) (85.9) (C) (50.7) (D) (1.1) (E) (1.0)  
Answer : A) (99.10)
4. A warehouse had a square floor with area 10,000 sq.meters. A rectangular addition was built along one entire side of the warehouse that increased the floor by one-half as much as the original floor. How many meters did the addition extend beyond the original buildings ?  
(A)10 (B)20 (C)50 (D)200 (E)500  
Ans: c)50
5. A digital wristwatch was set accurately at 8.30 a.m and then lost 2 seconds every 5 minutes. What time was indicated on the watch at 6.30 p.m of the same day if the watch operated continuously that time ?  
(A)5:56 (B)5:58 (C)6.00 (D)6.23 (E)6.26  
Ans :E) 6.26
6. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?  
(A)7.5% (B)9.5% (C) 10.5% (D)12% (E)15%  
Ans :A)7.5%
7. A plane travelled K miles in the first 96 miles of flight time. If it completed the remaining 300 miles of the trip in 1 minute, what was its average speed in miles per hour for the entire trip ?  
(A)  
(B)  
(C)  
(D)  
(E)  
Ans :(300+k)/97 \* 60

8. A merchant sells an item at a 20 percent discount, but still makes a gross profit of 20 percent of the cost. What percent of cost would be gross profit on the item have been if it had been sold without the discount?  
(A) 20%      (B) 40%      (C) 50%      (D) 60%      (E) 66.6%  
Ans :c) 50%

9. A millionaire bought a job lot of hats  $\frac{1}{4}$  of which were brown. The millionaire sold  $\frac{2}{3}$  of the hats including  $\frac{4}{5}$  of the brown hats. What fraction of the unsold hats were brown.  
(A)  $\frac{1}{60}$       (B)  $\frac{1}{15}$       (C)  $\frac{3}{20}$       (D)  $\frac{3}{5}$       (E)  $\frac{3}{4}$   
Ans :c) $\frac{3}{20}$

10. How many integers  $n$  greater than and less than 100 are there such that, if the digits of  $n$  are reversed, the resulting integer is  $n+9$ ?  
(A) 5      (B) 6      (C) 7      (D) 8      (E) 9  
Ans :D)8

11. An investor purchased  $x$  shares of stock at a certain price. If the stock increased in price Rs 0.25 per share and the total increase for the  $x$  shares was Rs 12.50, how many shares of stock had been purchased?  
(A) 25      (B) 50      (C) 75      (D) 100      (E) 125  
Ans :B)50

12. At a special sale, 5 tickets can be purchased for the price of 3 tickets. If 5 tickets are purchased at the sale, the amount saved will be What percent of the original price of the 5 tickets?  
(A) 20%      (B) 33.3%      (C) 40%      (D) 60%      (E) 66.6%  
Ans :c)40%

13. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do the same job in 9 hours. If Tina Works independently at the job for 8 hours and then Ann works independently, how many hours will it take Ann to complete the remainder of the jobs?  
(A)  $\frac{2}{3}$       (B)  $\frac{3}{4}$  (C) 1 (D) 2      (E) 3  
Ans :E)3

14. A decorator bought a bolt of  $d$  m number of red chips in any one stack?  
(A) 7 (B) 6 (C) 5 (D) 4 (E) 3  
Ans :C) 5

15. A sink has 12 lits of water some quantity of water is taken out. if the remainng water is 6 litres less then the water taken out then quantity of water taken out is.  
a. 3  
b. 6  
c. 9  
d. 1

16. which is the 4 digit number whose second digit is thrice the first digit and 3'rd digit is sum of 1'st and 2'nd and last digit is twice the second digit.  
1.2674

2.1349.  
3.3343  
4.3678

17. In a straight highway 2 cars starts from the same point in opposite directions each travels for 8 Kms and takeleft turn then travel for 6 Kms what is the distance between them now.

1.16  
2.20  
3.25  
4.10

## Technical Section

1. In ANSI C which is such thing is not in Java.

```
typedef struct node
{
    int
    NODEPTR * NODE
}
```

2. Q. In signed magnitude notation what is the minimum value that can be represented with 8 bits  
a) -128 b) -255 c) -127 d) 0

3. Q. there is an employer table with key feilds as employer no. data in every n'th row are needed for a simple followingqueries will get required results.

a) select A employe no. from employe A , where exists from employe B where A employe no. = B employehaving (count(\*) mod n)=0  
b) select employe no. from employe A, employe B where A employe no. = B employ no.groupby employe no. having (count(\*) mod n=0 )  
c) both a& b  
d) none of the above

4. Piggybacking is done for, Ans=>Acknowledgement.

5. WHICH IS NOT BASIC data type ans.Char\*

6. which of the following statement is valid for string copy

```
char *srt,*ptr;
a) while(*str) {
    *str=*ptr;
    ++str=++ptr;
}
b ) while(*str)
    {*++str=*++ptr};
c)
```

7. Two variable cannot have the same name in  
a)function b) block c) file d)--- C Section

8. #define inc(x) x++  
main()  
{  
 int t=1;  
 printf("%d",inc(t++));  
}

9. one or two que for the complicated declaration.

10. Const char \*a="Abcd"; char const \*a="lmno"; base do this, Two que were there.

11. char \*p ;  
char q[20];

12. int i,\*p=&i;  
p=malloc(10);  
free(p);  
printf("%d",p);  
ans : garbage

13. int i=20,\*j=&i  
f(i)  
printf("%d",i);

14. #define val 1+2  
printf("%d%d",val/val,val^3)  
ans : 3 9

15. #define "this" "#"  
#define (x,y) x##y  
printf("this","this is")  
ans: compilation error (tested)

16.  $2^2 + (a^a)$

17. int a ,b=7  
a=b<4?b<<1:b>4?7>>1:a  
ans.3

18. one que on c++ class member function  
ans.d

19. work of memory management unit.

20. who relate virtual memory to physical memory ans.os

21. memory is allocated to variable  
a) when declared b) when define c) ...

22.Question on double linked list

23.Define success 1

```
define failure -1
if(condition)
printf(success);
else
printf(failure);
ans success
```

24.main()

```
{
int var=25,varp;
varp=&var;
varp=10;
fun(varp);
printf("%d%d",var,varp);
ans a)45,45 b)55,55 c) 20,55;
```

25.u r given two statements

```
a=(10.15);
b=10,15;
```

if they are executed what is the output printf("%d%d",a,b);  
a)10,15 b)15,10 c)10,10 d)15,15 ans a

26.#define inc(x) x++

```
main()
{
    int t=1;
    printf("%d",inc(t++));
}
```

ans.error

27.main

```
{int x=1,y=2,z=3;
x=y==z;
printf(x);
}
```

.

## TEST PAPER-4

**Directions (Q. 1-5):** In each of the following number series one of the given numbers is wrong. Find out the wrong number.

**1. 8 34 207 1661 16617 199417**

- 1) 8    2) 34    3) 207    4) 1661    5) None of these

**2. 7 75 395 2379 11879 47541**

- 1) 7    2) 75    3) 395    4) 2379    5) None of these

**3. 420 70 75 300 197 148.5**

- 1) 70    2) 75    3) 300    4) 197    5) None of these

**4. 9 21 51 155 540 2163**

- 1) 9    2) 21    3) 51    4) 2163    5) None of these

**5. 22 37 59 97 155 251**

- 1) 37    2) 59    3) 97    4) 155    5) None of these

**6. An angry Arjun carried some arrows for fighting with Bheeshm. With half the arrows, he cut down the arrows thrown by Bheeshm on him and with six other arrows he killed the Chariot driver of Bheeshm. With one arrow each he knocked down respectively the Chariot, the flag and the bow of Bheeshm. Finally, with one more than four times the square root of arrows he laid Bheeshm unconscious on an arrow bed. Find the total number of arrows Arjun had.**

- 1) 100    2) 121    3) 144    4) 169    5) None of these

**Directions (Q. 7-11):** Study the following information carefully and answer the questions given below:

Total population of a village is 64000. Out of this 65% is literate. 60% of the total population is male. Out of the total illiterate population, males and female are in the ratio 3:4

**7. What is the ratio of illiterate females to literate ones?**

- 1) 1:1    2) 1:2    3) 4:7    4) Data inadequate    5) None of these

**8. Among the males what is the ratio of literate ones to illiterate ones?**

- 1) 3:1    2) 1:3    3) 9:4    4) Data inadequate    5) None of these

**9. What is the ratio of literate males to literate females?**

- 1) 4:9    2) 9:4    3) 9:13    4) Data inadequate    5) None of these

**10. What is the total number of illiterate males?**

- 1) 6400    2) 12800    3) 9600    4) 3200    5) None of these

**11. What is the total number of literate females?**

- 1) 6400    2) 12800    3) 9600    4) 3200    5) None of these

**Directions (Q.12-16):** Study the following table and answer the questions given below:

Following table shows the rural population and the percentage of total population living in the rural areas of the country X.

**Censes Population (in million) Percentage**

1901 213 89.2

1911 246 89.7

1921 223 88.8

1931 246 88.0

1941 275 86.1

## ANSWERS:

**1. (5) 2. (2) 3. (4) 4. (1) 5. (3)**

**6. (1) 7. (1) 8. (1) 9. (2)**

**10. (3) 11. (2) 12.(3) 13. (2) 14. (5)  
15. (2)**

**16. (5) 17. (1) 18. (5) 19. (2) 20.(1)**

**21. (3) 22.(4) 23.(1) 24 (2) 25(2)**

1951 299 82.7  
1961 360 82.0

1971 439 80.1  
1981 524 76.7  
1991 629 74.2  
2001 743 72.3

**12. Approximately what was the urban population of country X in the census year 1981?**

- 1) 109 million 2) 129 million 3) 159 million 4) 218 million 5) 155 million

**13. In which of the following census years was the population of the urban area 79 million?**

- 1) 1951 2) 1961 3) 1971 4) 1981 5) 1991

**14. Approximately what was total population of the country X in the census year 2001?**

- 1) 1050 million 2) 1129 million 3) 1000 million 4) 743 million 5) 1029 million

**15. The total population of the country X was approximately how much more in the census year 1931 with respect to the same in the census year 1921?**

- 1) 23 million 2) 29 million 3) 25 million 4) 32 million 5) 34 million

**16. The population of urban area in the census year 1941 was approximately what percent of the same in the census year 1951?**

- 1) 55% 2) 60% 3) 62% 4) 65% 5) 70%

**Passage(Questions From 17-21):** A spate of soul-searching is guaranteed by two major anniversaries that loom this year: the abolition of the slave trade in the British empire in 1807, and the Act of Union of England and Scotland in 1707. Both will feed into Britain's nagging sense of self-doubt: who are we? As the debates around integrated and multi-culturalism show no sign of flagging, both anniversaries will be mind for their contemporary relevance.

Television programmes, books, ceremonies, conferences, and newspaper supplements have been in the planning for months.

Some might regard this self-referentialism as tedious; they might advocate an apology for the slave trade and let's be done with 2007's anniversaries. But our reckoning with British history has been so limited that these two anniversaries provide us with a good opportunity for an overdue reality check.

Any chance of reinventing a plausible national identity now (as many are keen to do) is only possible if we develop a much better understanding of how our nation behaved in the past and how nationalisms (English, Scottish, and British) were elaborately created over the past few hundred years — and how incomplete and fragile that process always was.

The coincidence of these two anniversaries is fortuitous. The abolition of the slave trade is a painful reminder of British imperial history, which we have, incredible, managed to largely forget. Who remembers the Bengal famine or Hola camp, the empire's opium trade with China or our invention of concentration camps in the Boer war? We too easily overlook how empire was a

linchpin to British national identity, vital to welding Scotland and England together. Indeed, historian Linda Colley suggests three ingredients for British identity: “Great Britain is an invented nation that was not founded on the suppression of older loyalties so much as superimposed on them, and that was heavily dependent for its *raison d'être* on a broadly Protestant culture, on the treat and tonic of recurrent war, especially war with France, and on the triumphs, profits and Otherness represented by a massive overseas empire.”

These three props for Britishness have collapsed: Protestant Christianity has declined sharply, war with France is the pastime only of a few drunken football fans, and the empire is no more. No wonder Britishness is no longer the decline; over the past couple of decades, people have become increasingly likely to define themselves in polls as English or Scottish rather than British.

This is the social trend in defining identity that politicians such as Gordon Brown watch closely. Could this re-emergence of the older loyalties to which Ms Colley refers have political consequences? Could the Scottish National Party translate that into significant electoral gains in the Scottish elections only a few days after the official commemoration of the Act of Union in May?

It's not just the Scots who could decide they've had enough of the English — the feeling could become mutual. The grumbles are getting louder about Scottish MPs who vote on legislation affecting the English and the disproportionate amount of public spending swallowed up by the Scots.

Mr Brown clearly has a vested interest in silencing such complaints. He's been at the forefront of an establishment attempt to redefine Britishness on the grounds of “common values” such as fair play and tolerance.

Who is going to define Englishness? Julian Baggini has a stab at it in a book to be published in March, *Welcome to Every town: A Journey into the English Mind*. He spent six months living in Rotherham to get beyond the metropolitan, liberal elite's perceptions of Englishness and establish what most people (that is, the white working class) understand by their Englishness.

Parochial, tightly knit, focused on family and local communities; nostalgic, fearful of the future and insecure; a dogged belief in common sense: these are his conclusions. Mr Baggini confesses to feeling that his six months in Rotherham was like visiting a foreign country, and no doubt many of the people he met would regard six months in London as profoundly alienating. How do you weld national identities out of global metropolises disconnected from hinterland? Englishness is riven with huge regional and class divides. The stakes are high — for example, a rising British National Party vote, a fear of asylum, and hostility to Islam. The anniversary of the Act of union will provide a stage for all this to be played out. It's just as painful a commemoration for the English as for the Scottish. It required one nation to lose its sovereignty and the other its identity.

#### **17. According to the passage, the two major anniversaries will**

- 1) give an impetus to the questioning of British national identity.
- 2) set the Britons thinking who they really are.

- 3) be just another occasion to raise the issue of British national identity.
- 4) be just another occasion to give rise to a debate on multiculturalism.
- 5) not be celebrated because of the shame attached with slave trade.

**18. According to Linda Colley, Great Britain owes its nation-state concept to**

- 1) ceding of its territory by Scotland to England.
- 2) a shared relation of race, religion and economy.
- 3) what can today be seen as a concept of free trade area.
- 4) the perpetuation of slave trade.
- 5) commonality of interest between its constituents.

**19. Going by the passage, which of the following may instill a sense of national identity among the Britons?**

- 1) The return of Catholics to the Protestant fold
- 2) Britain going to war with Germany
- 3) Britain going to war as an Allied force
- 4) Regular football matches between British and French clubs
- 5) Any of the above

**20. According to the facts stated in the passage, if England and Scotland decide to split,**

- 1) it is the former that stands to gain.
- 2) it is the latter that stands to gain.
- 3) it will be a win-win situation.
- 4) it will be a lose-lose situation.
- 5) both the parties will lose their face but gain materially

**21. According to the passage, the post-modern mind views imperialism as**

- 1) something that was necessary in the context of the times.
- 2) a thing of the past which need not be mentioned further.
- 3) a blot on the history of mankind.
- 4) the white man's burden.
- 5) a concept relevant even in the present times, given the inability of the developing countries to catch up with the West.

**22. Oranges are bought at 7 for Rs.3. At what rate per hundred must they be sold to gain 33%?**

- (1) Rs.56      (2) Rs.60      (3) Rs.58      (4) Rs.57

**23. The cost price of 36 books is equal to the selling price of 30 books. The gain is :**

- (1) 20%      (2) 16%      (3) 18%      (4) 82%

**24. A person sells two machines at Rs.396 each. On one he gains 10% and on the other he loses 10%. His profit or loss in the whole transaction is :**

- (1) No gain, no loss      (2) 1% loss      (3) 1% profit      (4) 8% profit

**25. A trader bought 10kg of apples for Rs.405 out of which 1kg of apples were found to be rotten. If he wishes to make a profit of 10%, at what rate should he sell the remaining**

**apples per kg?**

- (1) Rs.45      (2) Rs.49.50      (3) Rs.50      (4) Rs. 51

## TEST PAPER-1

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There are 4 sections.

- 1) Aptitude
- 2) General computer concepts
- 3) C programming
- 4) Flowchart analysis

There's negative marking. So be careful.

The only constraint is Time.

So if you can utilize the time well, then you will definitely clear the test.

ALL THE BEST.

### **Aptitude.**

1.  $a=2, b=3, c=6$  Find the value of  $c/(a+b)-(a+b)/c$

**Ans. 11/30**

2. What does the hexa number E78 in radix 7.

- (a) 12455
- (b) 14153
- (c) 14256
- (d) 13541**
- (e) 131112

3. In a murder case there are four suspects P,Q,R,S. Each of them makes a statement. They are p:

"I had gone to the theatre with S at the time of the murder".q: "I was playing cards with P at the time of the murder".r: "Q didn't commit the murder".s: "R is not the murderer".Assuming the only one of the above statement is false and that one of them is the murderer, who is the murderer?

- a) P
- b) Q
- c) R
- d) Can't be concluded

e) S

4. Q is not equal to zero and  $k = (Q \times n - s)/2$ . What is n?

- (a)  $(2 \times k + s)/Q$
- (b)  $(2 \times s \times k)/Q$
- (c)  $(2 \times k - s)/Q$
- (d)  $(2 \times k + s \times Q)/Q$
- (e)  $(k + s)/Q$

5 Mohan earned twice as much as Deep. Yogesh earned rs.3/- more than half as much as Deep.

If the amounts earned by Mohan, Deep, Yogesh are M, D, Y respectively, Which of the following is the correct ordering of these amounts?

- a)  $M < D < Y$
- b)  $M < Y < D$
- c)  $D < M < Y$
- d) It can't be determined from the information given
- e)  $D < Y < M$

Questions 6 - 10 are to be answered on the following data

A causes B or C, but not both

F occurs only if B occurs

D occurs if B or C occurs

E occurs only if C occurs

J occurs only if E or F occurs

D causes G, H or both

H occurs if E occurs

G occurs if F occurs

6. If A occurs which of the following must occurs

- I. F and G
- II. E and H
- III. D

- (a) I only
- (b) II only
- (c) III only
- (d) I,II, & III
- (e) I & II (or) II & III but not both**

7. If B occurs which must occur

- (a) D**
- (b) D and G
- (c) G and H
- (d) F and G
- (e) J

8. If J occurs which must have occurred

- (a) E
- (b) either B or C**
- (c) both E & F
- (d) B
- (e) both B & C

9. Which may occurs as a result of cause not mentioned

- I. D
- II. A
- III. F
- (a) I only
- (b) II only
- (c) I & II**
- (d) II & III
- (e) I,II & III

10. E occurs which one cannot occurs

- (a) A
- (b) F**

- (c) D
- (d) C
- (e) J

11. Given that A,B,C,D,E each represent one of the digits between 1 and 9 and that the following multiplication holds:

A B C D E

X 4

-----  
E D C B A

----- what digit does E represent ?

- a) 4
- b) 6
- c) 8
- d) 7

12. HCL prototyping machine can make 10 copies every 4 seconds. At this rate, How many copies can the machine make in 6 min.?

- a) 900
- b) 600
- c) 360
- d) 240
- e) 150

13.  $10^2(10^8+10^8) = \text{-----} 10^4$

- a)  $2(10)^4$
- b)  $2(10)^6$
- c)  $10^8$
- d)  $2(10)^8$
- e)  $10^{10}$

14. Worker W produces n units in 5 hours. Workers V and W, workers independently but at the same time, produce n units in 2 hours. how long would it take V alone to produce n units?

- a) 1 hr 26 min
- b) 1 hr 53 min
- c) 2 hr 30 min
- d) 3 hr 30 min
- e) 3 hr 20 min

15. Six knights - P,Q,R,S,T and U - assemble for a long journey in Two traveling parties. For security, each traveling party Consists of at least two knights. The two parties travel by separate routes, northern and southern. After one month, the routes of the northern and southern groups converge for a brief time and at that point the knights can, if they wish, rearrange their traveling parties before continuing, again in two parties along separate northern and southern routes. Throughout the entire trip, the composition of traveling parties must be in accord with the following conditions P and R are deadly enemies and, although they may meet briefly, can never travel together. p must travel in the same party with s Q can't travel by the southern route U can't change routes

16. If one of the two parties of knights consists of P and U and two other knights and travels by the southern route,

the other members of this party besides P and U must be

- a) Q and S
- b) Q and T
- c) R and S
- d) R and T
- e) S and T

17. If each of the two parties of knights consists of exactly three members, which of the following is not a possible travelling party and route?

- a) P,S,U by the northern route
- b) P,S,T by the northern route
- c) P,S,T by the southern route
- d) P,S,U by the southern route
- e) Q,R,T by the southern route

18) If one of the two parties of knights consists of U and two other knights and travels by the northern route, the other members of this party besides U must be

- a) P and S
- b) P and T
- c) Q and R
- d) Q and T
- e) R and T

19) If each of the two parties of knights consists of exactly three members of different parties, and R travels by the northern route, then T must travel by the

- a) southern route with P and S
- b) southern route with Q and R
- c) southern route with R and U
- d) northern route with Q and R
- e) northern route with R and U

20. If, when the two parties of knights encounter one another after a month, exactly one knight changes from one travelling party to the other travelling party, that knight must be

- a) P
- b) Q
- c) R
- d) S
- e) T

## **C Programming**

1. Which of the following about the following two declaration is true

- i ) int \*F()

ii) int (\*F)()

Choice :

a) Both are identical

b) The first is a correct declaration and the second is wrong

c) The first declaration is a function returning a pointer to an integer and the second is a pointer to function

returning int

d) Both are different ways of declaring pointer to a function

2. What are the values printed by the following program?

```
#define dprintf(expr) printf(#expr "=%d\n",expr)

main()
{
    int x=7;
    int y=3;
    dprintf(x/y);
}
```

Choice:

a) #2 = 2 b) expr=2 c) x/y=2 d) none

3. What is the output of the following program?

```
int x= 0x65;

main()
{
    char x;
    printf("%d\n",x)
}
```

a) compilation error    b) 'A'    c) 65    d) unidentified

4. What is the output of the following program

```
main()
{
    int a=10;
    int b=6;
```

```

if(a=3)
b++;
printf("%d %d\n",a,b++);
}
a) 10,6 b)10,7 c) 3,6 d) 3,7 e) none

```

5. What can be said of the following program?

```

main()
{
    enum Months {JAN =1,FEB,MAR,APR};
    Months X = JAN;
    if(X==1)
    {
        printf("Jan is the first month");
    }
}

```

- a) Does not print anything
- b) Prints : Jan is the first month**
- c) Generates compilation error
- d) Results in runtime error

6. What is the output of the following program?

```

main()
{
    int l=6;
    switch(l)
    { default : l+=2;
        case 4: l=4;
        case 5: l++;
        break;
    }
}

```

```
    printf("%d",l);
}
a)8 b)6 c)5 d)4 e)none
```

7. What is the output of the following program?

```
main()
{
    int x=20;
    int y=10;
    swap(x,y);
    printf("%d %d",y,x+2);
}
swap(int x,int y)
{
    int temp;
    temp =x;
    x=y;
    y=temp;
}
a)10,20 b) 20,12 c) 22,10 d)10,22 e)none
```

8. What is the size of the following union. Assume that the size of int =2, size of float =4 and size of char =1.

```
Union Tag{
    int a;
    float b;
    char c;
}
a)2 b)4 c)1 d) 7
```

### General computer concepts

1. Which of the following involves context switch,

- (a) system call
- (b) privileged instruction
- (c) floating point exception
- (d) all the above

- (e) none of the above
2. In OST, terminal emulation is done in
- (a) sessions layer
  - (b) application layer**
  - (c) presentation layer
  - (d) transport layer
3. For 1 MB memory, the number of address lines required,
- (a)11**
  - (b)20
  - (c)22
  - (d) 24
4. Semaphore is used for
- (a) synchronization**
  - (b) dead-lock avoidance
  - (c) box
  - (d) none
5. Piggy backing is a technique for a) Flow control b) sequence **c) Acknowledgement** d) retransmition
6. the **operating system** (mapping of virtual to physical address)
- 7 A 177333 (conversion of HEX "0xFEDB" in octal)
- 8 In signed magnitude notation what is the minimum value that can be represented with 8 bits
- (a) -128**
  - (b) -255
  - (c) -127
  - (d) 0

This is all that I can recollect.

## **Technical Interview:**

There were 3 members in the Panel.

They were really friendly.

They make u really comfortable.

- Be well versed with ur project.
- Be prepared with at least one software language ( They almost cover all the topics in the subj chosen) I told them that I was more comfortable with JAVA. They covered all the topics. Be clr with all the basic concepts. If u don't know the answer 2 any question then just admit it.
- They may also ask u questions from ur resume
- The most important thing is RELAX( KEEP SMILING).

## **HR Interview:**

This was not the regular kinda HR round.

- I was asked abt my parents
  - My project
  - Was given a realistic problem 2 solve.
  - As I was from Hyd, he wanted me 2 convince him abt my commitment to HCL.
- 

## **Aptitude.**

1.  $a=2, b=3, c=6$  Find the value of  $c/(a+b)-(a+b)/c$

Ans. 11/30

2. What does the hexa number E78 in radix 7.

- (a) 12455
- (b) 14153
- (c) 14256
- (d) 13541
- (e) 131112

Ans. (d)

3.  $10 : 4 \text{ seconds} :: ? : 6 \text{ minutes}$

Ans. 90

4. Q is not equal to zero and  $k = (Q \times n - s)/2$ . What is n?

- (a)  $(2 \times k + s)/Q$

- (b)  $(2 \times s \times k)/Q$
- (c)  $(2 \times k - s)/Q$
- (d)  $(2 \times k + s \times Q)/Q$
- (e)  $(k + s)/Q$

5. From the following statements determining the order of ranking

M has double the amount as D Y has 3 rupess more than half the amount of D

Ans. Data insufficient

Questions 6 - 10 are to be answered on the following data

- A causes B or C, but not both
- F occurs only if B occurs
- D occurs if B or C occurs
- E occurs only if C occurs
- J occurs only if E or F occurs
- D causes G,H or both

H occurs if E occurs

G

occurs if F occurs

6. If A occurs which of the following must occurs

- I. F and G
  - II. E and H
  - III. D
- (a) I only
  - (b) II only
  - (c) III only
  - (d) I,II, & III
  - (e) I & II (or) II & III but not both

Ans. (e)

7. If B occurs which must occur

- (a) D
- (b) D and G
- (c) G and H
- (d) F and G

(e) J

Ans. (a)

8. If J occurs which must have occurred

(a) E

(b) either B or C

(c) both E & F

(d) B

(e) both B & C

Ans. (b)

9. Which may occurs as a result of cause not mentioned

I. D

II. A

III. F

(a) I only

(b) II only

(c) I & II

(d) II & III

(e) I,II & III

Ans. (c)

10. E occurs which one cannot occurs

(a) A

(b) F

(c) D

(d) C

(e) J

Ans. (b)

11. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution

spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the

resulting solution in the jug is salt?

- (A)7.5%    (B)9.5%    (C) 10.5%    (D)12%    (E)15%

12. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do

the same job in 9 hours. If Tina Works independently at the job for 8 hours and then Ann works

independently, how many hours will it take Ann to complete the remainder of the jobs?

- (A)2/3    (B)3/4    (C)1    (D)2    (E)3

Answer :E)3

13. In a murder case there are four suspects P,Q,R,S. Each of them makes a statement. They are p:

"I had gone to the theatre with S at the time of the murder".q: "I was playing cards with P at the time

of the murder".r: "Q didn't commit the murder".s: "R is not the murderer".Assuming the only one of the

above statement is false and that one of them is the murderer, who is the murderer?

- a) P
- b) Q
- c) R
- d) Cann't be concluded
- e) S

Ans: E

14. Mohan earned twice as much as Deep. Yogesh earned rs.3/- more than half as much as deep.

If the amounts earned by Mohan,Deep,Yogesh are M,D,Y respectively, Which of the following is

the correct ordering of these amounts?

- a) M < D < Y
- b) M< Y < D
- c) D< M < Y

- d) It can't be determined from the information given
- e)  $D < Y < M$

15. Statistics indicate that men drivers are involved in more accidents than women drivers.

Hence

it may be concluded that

- a) sufficiently information is not there to conclude anything
- b) Men are actually better drivers but drive more frequently
- c) Women Certainly drive more cautiously than Men
- d) Men chauvinists are wrong about women's abilities.
- e) Statistics sometimes present a wrong picture of things

16. Given that A,B,C,D,E each represent one of the digits between 1 and 9 and that the following multiplication holds:

A B C D E

X 4

-----

E D C B A

----- what digit does E represent ?

- a) 4
- b) 6
- c) 8
- d) 7

Ans: c

17. HCL prototyping machine can make 10 copies every 4 seconds. At this rate, How many copies

can the machine make in 6 min.?

- a) 900
- b) 600
- c) 360
- d) 240
- e) 150

Ans: a

18. If  $a=2, b=4, c=5$  then

$$\frac{a+b}{c} =$$

$$c/a+b$$

- a) 1
- b)  $11/30$
- c) 0
- d)  $-11/30$
- e) -1

Ans: b

19.  $10^2(10^8+10^8) = \dots 10^4$

- a)  $2(10)^4$
- b)  $2(10)^6$
- c)  $10^8$
- d)  $2(10)^8$
- e)  $10^{10}$

Ans: b

20. Worker W produces n units in 5 hours. Workers V and W, workers independently but at the same time, produce n units in 2 hours. How long would it take V alone to produce n units?

- a) 1 hr 26 min
- b) 1 hr 53 min
- c) 2 hr 30 min
- d) 3 hr 30 min
- e) 3 hr 20 min

Ans: d

Six knights - P, Q, R, S, T and U - assemble for a long journey in two travelling parties. For security, each travelling

party consists of at least two knights. The two parties travel by separate routes, northern and southern. After one

month, the routes of the northern and southern groups converge for a brief time and at that point the knights can, if

they wish, rearrange their travelling parties before continuing, again in two parties along separate northern and

southern routes. Throughout the entire trip, the composition of traveling parties must be in accord with the following

conditions P and R are deadly enemies and, although they may meet briefly, can never travel together. p must travel

in the same party with s

Q cann't travel by the southern route U cann't change routes

21. If one of the two parties of knights consists of P and U and two other knights and travels by the southern route,

the other members of this party besides P and U must be

- a) Q and S
- b) Q and T
- c) R and S
- d) R and T
- e) S and T

Ans: e

22. If each of the two parties of knights consists of exactly three members, which of the following is not a possible

travelling party and route?

- a) P,S,U by the northern route
- b) P,S,T by the northern route
- c) P,S,T by the southern route
- d) P,S,U by the southern route
- e) Q,R,T by the southern route

Ans: b

23) If one of the two parties of knights consists of U and two other knights and travels by the northern route, the

other memnbers of this party besides U must be

- a) P and S
- b) P and T

- c) Q and R
- d) Q and T
- e) R and T

Ans: c

24) If each of the two parties of knights consists of exactly three members of different parties, and R travels by the

northern route, then T must travel by the

- a) southern route with P and S
- b) southern route with Q and R
- c) southern route with R and U
- d) northern route with Q and R
- e) northern route with R and U

Ans: a

25. If, when the two parties of knights encounter one another after a month, exactly one knight changes from

one travelling party to the other travelling party, that knight must be

- a) P
- b) Q
- c) R
- d) S
- e) T

Ans: e

26. A gambler bets on the team of seven players ABCDEFG whose winning a-4 to 1 against b-4 to 1 against c-4

to 1 against d-4 to 1 against e-5 to 1 against f-6 to 1 against g. how should he bet on g to set 20% profit.

27. If a person buy radio worth Rs 2468 and pay 7% sales .how much price of radio should reduce to pay

only Rs 2468.

28 What is vasu salary if salary of vasu is more than rajan salary working in same company  
i)vasu salary is 100 more than rajan salary.

ii) rajan found 2000 allows which is 50 less than vasu.

(iii) basic salary of rajan is 1000.

(i) only i is required

(ii) i & ii is required

(iii) i& iii is required

(iv) i&ii&iii is required

(v) none of these

29 If in 100 miles race 8 person is running winner takes 9.8 sec and fifth man takes 10.4 sec the time of 8 man is

in AP if in 4\*100 meters really on side is 1,4,5,8 position then win by.

a).3 sec    b).1 sec    c).7 sec    d).5 sec    e)none

30. How many sons X have we based on relation

i)

ii)

iii)

ans(data i,ii,iii is insufficient)

31. A sink has 12 lits of water some quantity of water is taken out. if the remaining water is 6 litres less than the

water taken out then quantity of water taken out is.

a.3

b.6

c.9

d.1

32 .which is the 4 digit number whose second digit is thrice the first digit and 3'rd digit is sum of 1'st and 2'nd and

last digit is twice the second digit.

1.2674

2.1349.

3.3343

4.3678

33. In a straight highway 2 cars starts from the same point in opposite directions each travels for

8 Kms and take

left turn then travel for 6 Kms what is the distance between them now.

- 1.16
- 2.20
- 3.25
- 4.10

34. A problem based on house numbers.

35. Five students compare their test and quiz marks.some datas given.5 questions based on this.

### **C Programming**

1. Which of the following about the following two declaration is true

- i ) int \*F()
- ii) int (\*F)()

Choice :

- a) Both are identical
- b) The first is a correct declaration and the second is wrong
- c) The first declaration is a function returning a pointer to an integer and the second is a pointer to function returning

int

d) Both are different ways of declarin pointer to a function    Answer : c) The first de...

2. What are the values printed by the following program?

```
#define dprint(expr) printf(#expr "%d\n",expr)
main()
{
    int x=7;
    int y=3;
    dprintf(x/y);
}
```

Choice:

- a) #2 = 2 b) expr=2 c) x/y=2 d) none

Answer: c)x/y=2

3. Which of the following is true of the following program

```
main()
{
    char *c;
    int *p;
    c =(char *)malloc(100);
```

```
    ip=(int *)c;
    free(ip);
}
```

ans: The code functions properly releasing all the memory allocated

4.output of the following.

```
main()
{
    int i;
    char *p;
    i=0X89;
    p=(char *)i;
    p++;
    printf("%x\n",p);
}
```

ans:0X8A

5 which of the following is not a ANSI C language keyword? ans:Function.

6. When an array is passed as parameter to a function, which of the following statement is correct choice:

- a) The function can change values in the original array
- b) In C parameters are passed by value. The funciton cannot change the original value in the array
- c) It results in compilation error when the function tries toaccess the elements in the array
- d) Results in a run time error when the funtion tries to access the elements in the array

Answer: a) The fu...

7. The type of the controlling expression of a switch statement cannot be of the type

- a) int
- b) char
- c) short
- d)float
- e) none

Answer : d)float

8. What is the value of the expression  $(3^6) + (a^a)$ ?

- a) 3
- b) 5
- c) 6
- d) a+18
- e) None

Answer : 5

9. What is the value assigned to the variable X if b is 7 ?

X = b>8 ? b <<3 : b>4 ? b>>1:b;

- a) 7
- b) 28
- c) 3
- d) 14
- e) None

ans: 3;

10. Which is the output produced by the following program

```
main()
{
    int n=2;
    printf("%d %d\n", ++n, n*n);
```

}

- a) 3,6 b) 3,4 c) 2,4 d) cannot determine

Answer : b) 3,4

11. What is the output of the following program?

```
int x= 0x65;  
main()  
{  
    char x;  
    printf("%d\n",x)  
}
```

- a) compilation error    b) 'A'    c) 65    d) unidentified

12. What is the output of the following program

```
main()  
{  
    int a=10;  
    int b=6;  
    if(a=3)  
        b++;  
    printf("%d %d\n",a,b++);  
}
```

- a) 10,6 b)10,7 c) 3,6 d) 3,7 e) none

Answer : d) 3,7

13. What can be said of the following program?

```
main()  
{  
    enum Months {JAN =1,FEB,MAR,APR};  
    Months X = JAN;  
    if(X==1)  
    {  
        printf("Jan is the first month");  
    }  
}
```

- a) Does not print anything  
b) Prints : Jan is the first month  
c) Generates compilation error  
d) Results in runtime error

Answer: b) Prints : Jan..

14. What is the output of the following program?

```
main()
{
    char *src = "Hello World";
    char dst[100];
    strcpy(src,dst);
    printf("%s",dst);
    }strcpy(char *dst,char *src)
    {while(*src) *dst++ = *src++;
}
 ) "Hello World" b)"Hello" c)"World" d) NULL e) unidentified
```

Answer: d) NULL

15. What is the output of the following program?

```
main()
{
    int l=6;
    switch(l)
    { default : l+=2;
        case 4: l=4;
        case 5: l++;
        break;
    }
    printf("%d",l);
}
```

a)8 b)6 c)5 d)4 e)none

Answer : c)5

16. What is the output of the following program?

```
main()
{
    int x=20;
    int y=10;
    swap(x,y);
    printf("%d %d",y,x+2);
}
swap(int x,int y)
{
    int temp;
```

```
temp =x;  
x=y;  
y=temp;  
}
```

- a)10,20 b) 20,12 c) 22,10 d)10,22 e)none

Answer:d)10,22

17. What is the output of the following problem ?

```
#define INC(X) X++  
  
main()  
{  
    int X=4;  
    printf("%d",INC(X++));  
}
```

a)4 b)5 c)6 d)compilation error e) runtime error

Answer : d) compilation error

18. what can be said of the following

```
struct Node {  
    char *word;  
    int count;  
    struct Node left;  
    struct Node right;  
}
```

- a) Incorrect definition  
b) structures cannot refer to other structure  
c) Structures can refer to themselves. Hence the statement is OK  
d) Structures can refer to maximum of one other structure

Answer :c)

19. What is the size of the following union. Assume that the size of int =2, size of float =4 and size of char =1.

```
Union Tag{  
    int a;  
    float b;  
    char c;  
};
```

- a)2 b)4 c)1 d) 7

20. What is the output of the following program? (. has been used to indicate a space)

```
main()
```

```

{
    char s[]={Hello,.world};
    printf(%15.10s,s);
}
a )Hello,.World...
b)....Hello,.Wor
c)Hello,.Wor....
d)None of the abov

```

---

### **Aptitude**

1. How many of the integers between 25 and 45 are even ?

(A)21 (B)20 (C)11 (D)10 (E)9

Ans:d)10

2. If taxi fares were Rs 1.00 for the first 1/5 mile and Rs 0.20 for each 1/5 miles thereafter. The taxi fare for

a 3-mile ride was

(A)Rs 1.56 (B)Rs 2.40 (C)RS 3.00 (D)Rs 3.80 (E)Rs 4.20

Answer :d)Rs 3.80

3. A computer routine was developed to generate two numbers (x,y) the first being a random number between

0 and 100 inclusive, and the second being less than or equal to the square root of the first. Each of the following

pair satisfies the routine EXCEPT

(A) (99.10) (B) (85.9) (C) (50.7) (D) (1.1) (E) (1.0)

Answer : A) (99.10)

4. A warehouse had a square floor with area 10,000 sq.meters. A rectangular addition was built along one entire side

of the warehouse that increased the floor by one-half as much as the original floor. How many meters did the

addition extend beyond the original buildings ?

(A)10 (B)20 (C)50 (D)200 (E)500

Ans: c)50

5. A digital wristwatch was set accurately at 8.30 a.m and then lost 2 seconds every 5 minutes. What time was

indicated on the watch at 6.30 p.m of the same day if the watch operated continuously that time ?

- (A)5:56    (B)5:58    (C)6.00    (D)6.23    (E)6.26

Ans :E) 6.26

6. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution spills out

of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution

in the jug is salt?

- (A)7.5%    (B)9.5%    (C) 10.5%    (D)12%    (E)15%

Ans :A)7.5%

7. A plane travelled K miles in the first 96 miles of flight time. If it completed the remaining 300 miles of the

trip in 1 minute, what was its average speed in miles per hour for the entire trip ?

- (A)  
(B)  
(C)  
(D)  
(E)

Ans :(300+k)/97 \* 60

8. A merchant sells an item at a 20 percent discount. but still makes a gross profit of 20 percent of the cost.

What percent of cost would be gross profit on the item have been if it had been sold without the discount?

- (A)20%    (B)40%    (C)50%    (D)60%    (E)66.6%

Ansr :c) 50%

9. A millionaire bought a job lot of hats 1/4 of which were brown. The millionaire sold 2/3 of the hats including

4/5 of the brown hats. What fraction of the unsold hats were brown.

- (A)1/60    (B)1/15    (C)3/20    (D)3/5    (E)3/4

Ans :c)3/20

10. How many integers n greater than and less than 100 are there such that,if the digits of n are reversed,

the resulting integer is n+9 ?

- (A)5    (B)6    (C)7    (D)8    (E)9

Ans :D)8

11. An investor purchased a shares of stock at a certain price. If the stock increased in price Rs 0.25 per share

and the total increase for the x shares was Rs 12.50, how many shares of stock had been purchased ?

- (A)25      (B)50      (C)75      (D)100      (E)125

Ans :B)50

12 At a special sale, 5 tickets can be purchased for the price of 3 tickets. If 5 tickets are purchased at the sale,

the amount saved will be What percent of the original price of the 5 tickets?

- (A) 20%      (B) 33.3%      (C) 40%      (D) 60%      (E) 66.6%

Ans :c)40%

13. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do the same job

in 9 hours. If Tina Works independently at the job for 8 hours and then Ann works independently, how many hours

will it take Ann to complete the remainder of the jobs?

- (A) 2/3      (B) 3/4 (C) 1 (D) 2      (E) 3

Ans :E)3

14. A decorator bought a bolt of d m number of red chips in any one stack ?

- (A) 7 (B) 6 (C) 5      (D) 4      (E) 3

Ans :C) 5

15. A sink has 12 lits of water some quantity of water is taken out. if the remainng water is 6 litres less then the

water taken out then quantity of water taken out is.

- a. 3
- b. 6
- c. 9
- d. 1

16. which is the 4 digit number whose second digit is thrice the first digit and 3'rd digit is sum of 1'st and 2'nd and

last digit is twice the second digit.

- 1.2674
- 2.1349.
- 3.3343
- 4.3678

17. In a straight highway 2 cars starts from the same point in opposite directions each travels for 8 Kms and take

left turn then travel for 6 Kms what is the distance between them now.

- 1.16
- 2.20
- 3.25

#### 4.10

- 4.A problem based on house numbers.  
18. Five students compare their test and quiz marks. some datas given. 5 questions based on this.

#### **Technical Section**

- 1 In ANSI C which is such thing is not in Java.

typedef struct node

```
{  
    int  
    NODEPTR * NODE  
}
```

- 2 Q. In signed magnitude notation what is the minimum value that can be represented with 8 bits

a) -128 b) -255 c) -127 d) 0

- 3 Q. there is an employer table with key fields as employer no. data in every n'th row are needed for a simple following

queries will get required results.

- a) select A employe no. from employe A , where exists from employe B where A employe no. = B employe

having (count(\*) mod n)=0

- b) select employe no. from employe A, employe B where A employe no. = B employ no.

groupby employe no. having (count(\*) mod n=0 )

- c) both a& b

- d) none of the above

4. Piggybacking is done for, Ans=>Acknowledgement.

5. WHICH IS NOT BASIC data type ans.Char\*

6. which of the following statement is valid for string copy

char \*srt,\*ptr;

- a) while(\*str) {

\*str=\*ptr;

++str=++ptr;

}

- b ) while(\*str)

{\*++str=\*++ptr};

- c)

- 7 Two variable cannot have the same name in

a)function b) block c) file d)--- C Section

- 8 #define inc(x) x++

main()

```
{  
    int t=1;  
    printf("%d",inc(t++));  
}
```

- 9 . one or two que for the complicated declaration.
10. Const char \*a="Abcd"; char const \*a="Imno"; base do this,Two que were there.
11. char \*p ;  
 char q[20];
12. int i,\*p=&i;  
 p=malloc(10);  
 free(p);  
 printf("%d",p);  
 ans : garbage
13. int i=20,\*j=&i  
 f(i)  
 printf("%d",i);
14. #define val 1+2  
 printf("%d%d",val/val,val^3)  
 ans : 3 9
15. #define "this" "#  
#define (x,y) x##y  
printf("this","this is")  
ans: compilation error (tested)
16. (2^2)+(a^a)
17. int a ,b=7  
 a=b<4?b<<1:b>4?7>>1:a  
 ans.3
18. one que on c++ class member function  
 ans.d
19. work of memory management unit.
20. who relate virtual memory to physical memory ans.os
21. memory is allocated to variable  
 a)when declared b)when define c)...
22. Question on double linked list
23. Define success 1  
 define failure -1  
 if(condition)

- ```
printf(success);
else
    printf(failure);
ans success
```
- 24 . main()
- ```
{  
    int var=25,varp;  
    varp=&var;  
    varp=10;  
    fun(varp);  
    printf("%d%d",var,varp);  
    ans a)45,45 b)55,55 c) 20,55;
```
25. u r given two statements
- ```
a=(10.15);  
b=10,15;  
if they are executed what is the output printf("%d%d",a,b);  
a)10,15 b)15,10 c)10,10 d)15,15 ans a
```
26. define null 0 ans=0;
27. #define inc(x) x++
- ```
main()  
{  
    int t=1;  
    printf("%d",inc(t++));  
}  
ans.error
```
28. argument in function can be passed
- ```
1)by value 2)by reference 3)....
```
29. main
- ```
{int x=1,y=2,z=3;  
x=y==z;  
printf(x);  
}
```
30. in switch float is not used
31. one question on register variable.

---

### Section A

1. Which of the following involves context switch,

- (a) system call
- (b) privileged instruction
- (c) floating point exception
- (d) all the above
- (e) none of the above

Ans: (a)

2. In OST, terminal emulation is done in

- (a) sessions layer
- (b) application layer
- (c) presentation layer
- (d) transport layer

Ans: (b)

3. For a 25MHz processor , what is the time taken by the instruction which needs 3 clock cycles,

- (a)120 nano secs
- (b)120 micro secs
- (c)75 nano secs
- (d)75 micro secs

4. For 1 MB memory, the number of address lines required,

- (a)11
- (b)16
- (c)22
- (d) 24

Ans. (b)

5. Semaphore is used for

- (a) synchronization
- (b) dead-lock avoidance
- (c) box
- (d) none

Ans. (a)

6. Which holds true for the following statement class c: public A, public B

- a) 2 member in class A, B should not have same name
- b) 2 member in class A, C should not have same name
- c) both
- d) none

Ans. (a)

7. Question related to java

8. OLE is used in

- a) inter connection in unix
- b) interconnection in WINDOWS
- c) interconnection in WINDOWS NT

Ans. (b)

9. Convert a given HEX number to OCTAL

10. Macros and function are related in what aspect?

- (a)recursion
- (b)varying no of arguments
- (c)hypochecking
- (d)type declaration

Ans.(b) Varying No. of Arguments.

11.Preproconia.. does not do which one of the following

- (a) macro
- (b) conditional compilation
- (c) in type checking
- (d) including load file

Ans. (c)

12. Piggy backing is a technique for

- a) Flow control
- b) Sequence
- c) Acknowledgement
- d) retransmition

Ans. (c)

13. In signed magnitude notation what is the minimum value that can be represented with 8 bits

- (a) -128
- (b) -255
- (c) -127
- (d) 0

Ans.(a) -128

14. There is an employer table with key fields as employer number data in every n'th row are needed for a simple following

queries will get required results.

(a) select A employee number from employee A , where exists from employee B where A employee no.  $\geq$  B

employee having (count(\*) mod n)=0

(b) select employee number from employe A, employe B where A employe number $\geq$ =B employ number  
group by employee number having(count(\*) mod n=0 )

- (c) both (a) & (b)  
(d) none of the above
15. Type duplicates of a row in a table customer with non uniform key field customer number you can see
- delete from costomer where customer number exists( select distinct customer number from customer having count )
  - delete customer a where customer number in b rowid
  - delete customer a where custermor number in( select customer number from customer a, customer b )
  - none of the above

### **Section B**

1. Given the following statement enum day = { jan = 1 ,feb=4, april, may} What is the value of may?
- 4
  - 5
  - 6
  - 11
  - None of the above

Ans c) 6

2. Find the output for the following C program

```
main()
{
    int x,j,k;
    j=k=6;x=2;
    x=j*k;
    printf("%d", x);
```

Ans.36

3. Find the output for the following C program

```
fn f(x)
{
    if(x<=0)
        return;
    else f(x-1)+x;
}
```

4. Find the output for the following C program

```
i=20,k=0;
for(j=1;j<i;j=1+4*(i/j))
{k+=j<10?4:3;
}
printf("%d", k);
```

Ans. k=4

5. Find the output for the following C program

```
int i =10
main()
{int i =20,n;
for(n=0;n<=i;)
{int i=10;
 i++;
}
printf("%d", i);
```

Ans. i=20

6. Find the output for the following C program

```
int x=5;
y= x&y
```

7. Find the output for the following C program

```
Y=10;
if( Y++>9 && Y++!=10 && Y++>10)
{printf("%d", Y);
else
printf("%d", Y);
}
```

Ans. 13

8. Find the output for the following C program

```
f=(x>y)?x:y
a) f points to max of x and y
b) f points to min of x and y
c) error
```

Ans. (a)

9. What is the sizeof(long int)

- (a) 4 bytes
- (b) 2 bytes
- (c) compiler dependent
- (d) 8 bytes

10. Which of the function operator cannot be over loaded

- (a) <=
- (b) ?:
- (c) =
- (d) \*

11. Find the output for the following C program

```
main()
{intx=2,y=6,z=6;
 x=y==z;
 printf("%d",x)
 }
```

### Section C

Section C (Programming Skills) Answer the questions based on the following program

```
STRUCT DOUBLELIST
{ DOUBLE CLINKED
INT DET; LIST VOID
STRUCT PREVIOUS; (BE GIVEN AND A PROCEDURE TO DELETE)
STRUCT NEW; (AN ELEMENT WILL BE GIVEN)
}
DELETE(STRUCT NODE)
{NODE-PREV-NEXT NODE-NEXT;
 NODE-NEXT-PREV NODE-PREV;
 IF(NODE==HEAD)
 NODE
}
```

1. In what case the prev was

- (a) All cases
- (b) It does not work for the last element
- (c) It does not for the first element
- (d) None of these

Answer the questions based on the following program

```
VOID FUNCTION(INT KK)
{KK+=20;
}
VOID FUNCTION (INT K)
INT MM,N=&M
KN = K
KN+-=10;
}
```

2. What is the output of the following program

```
main()
{ int var=25,varp;
```

```

varp=&var;
varp p = 10;
fnc(varp)
printf("%d%d, var, varp);
}
(a) 20,55
(b) 35,35
(c) 25,25
(d) 55,55

```

3. Here is the structure declaration of a doubly linked list

```

struct dlink {
    int nodeid;
    struct dlink *next;
    struct dlink *prev;
} dlink_t;

```

A pointer of the head of the linked list is maintained as a global variable, whose definition is `dlink_t *head;` The function

`remove_element(dlink_t *rp)`, needs to remove the node pointed to the rp and adjust the head. The first node's prev

and the last node's next are NULL. `remove_element(dlink_t *rp)`

```

{
    rp->prev->next = rp->next;
    rp->next->prev = rp->prev;
    if( head == rp)
        head = rp->next;
}
```

Which of the following statement is true about the function `remove_element`

- a) It works when head is the same as rp
- b) It does not work when rp is the last element on the list
- c) It sets the head of the list correctly
- d) It works in all cases

Answer :B) It does...

4. Consider the following function written in c:

```

#define NULL 0
char *
index(sp,c)
register char *sp,c;
{

```

```

do {
    if(*sp == c)
        return (sp);
    } while (*sp++);
return NULL;
}

```

The first argument sp, is a pointer to a C string. The second argument, c, is a character. This function searches

for the character c, in the string. If it is found a pointer to that location is returned else NULL is returned. This

function works

- a) Always
- b) Always, but fails when the first byte contains the character c
- c) works when c is a non NULL character only
- d) Works only when the character c is found in the string

ans: a

5. What is printed when this program is executed

```

main()
{
    printf ("%d\n",f(7));
}
f(X)
{
    if ( x<= 4)
        return x;
    return f(--x);
}

```

- a) 4
- b) 5
- c) 6
- d) 7

ans: a

6. On a machine where pointers are 4 bytes long, what happens when the following code is executed.

```

main()
{
    int x=0,*p=0;
    x++; p++;
}

```

```
    printf ("%d and %d\n",x,p);
}
```

- a) 1 and 1 is printed
- b) 1 and 4 is printed
- c) 4 and 4 is printed
- d) causes an exception

7. Which of the following is the correct code for strcpy, that is used to copy the contents from src to dest?

a) strcpy (char \*dst,char \*src)

```
{  
    while (*src)  
        *dst++ = *src++;  
}
```

b) strcpy (char \*dst,char \*src)

```
{  
    while(*dst++ = *src++)  
}
```

c) strcpy (char \*dst,char \*src)

```
{  
    while(*src)  
    { *dst = *src;  
        dst++; src++;  
    }  
}
```

d) strcpy(char \*dst, char \*src)

```
{  
    while(*++dst = *++src);  
}
```

ans:b

8. Consider the following program

```
main()  
{  
    int i=20,*j=&i;  
    f1(j);  
    *j+=10;  
    f2(j);  
    printf("%d and %d",i,*j);  
}
```

```

f1(k)
int *k;
{
    *k +=15;
}
f2(x)
int *x;
{
    int m=*x,*n=&m;
    *n += 10;
}

```

The values printed by the program will be

- a) 20 and 55
- b) 20 and 45
- c) 45 and 45
- d) 45 and 55
- e) 35 and 35

9. what is printed when the following program is compiled and executed?

```

int
func (int x)
{
    if (x<=0)
        return(1);
    return func(x -1) +x;
}
main()
{
    printf("%d\n",func(5));
}

```

- a) 12
- b) 16
- c) 15
- d) 11

Ans..b) 16.

10. Consider the following of c code in two files which will be linked together and executed .

```

a.c: int i;
main()

```

```

{
    i = 30;
    f1();
    printf("%d\n",i)
}
b.c: static int f1()
{
    i+=10;
} which of the following is true ?
a) a.c will fail in compilation phase because f1() is not declared
b) b.c will fail in compilation because the variable i is not declared
c) will print 30
d) will print 40
e) a & b
ans: e) a & b

```

11. Consider the following prg

```

void funca (int *k)
{
    *k += 20
}
void funcb (int *x)
{
    int m=*x,*n = &m;
    *n+=10;
}
main()
{
    int var = 25,*varp=&var;
    funca(varp);
    *varp += 10;
    funcb(varp);
    printf ("%d and %d\n",var,*varp);
}

```

The values printed when the above prg is complied and executed are:

- a) 20 and 55
- b) 20 and 45
- c) 45 and 55

d) 55 and 55

e) 35 and 35

ans: d

12. consider the following program:

```
# include
class x {
public:
    int a;
    x();
};

x::x() { a=10; cout
class b:public x {
public:
    b();
};

b::b() { a=20; cout
main ()
{ b temp;
}
```

what will be the output of this prg?

a) 10

b) 20

c) 2010

d) 1020

ans: b

---

### **APTITUDE PAPER**

1 The closing of the resturant by Mr.X on SEPT 1 was considered an unfinancial one, as the weather

remained unusually clear and sunny for another one month. An author who criticizes the act of Mr. X

would be proved wrong if the following was true??

ANS choice a) the weather did not usually remained fine after SEPT 1.

2 SUSAN works in a company who has restricted its employees from smoking cigerrates in the canteen.

As susan is the employee of the company she does not smoke cigerrate in the canteen.Which of the following

unused phrases strengthens the rules of the company??

ANS the employees normally do not do the work for which the company has forbidden them to do.

3 A q's on family relation was given like How many sons X has, I P is the daughter of X ,II some condts., III some

condt. ANS al I ,II, III together are not sufficient.

4 A q's in which a name KAPIL is given he visits manoj's home.some condts given. ANS b)

5 A,B,C,D are the 4 plays which are organised starting from tuesday.find the day on which C was played.in this

2 condt. will be given as , I....., II....., ANS both I and II

6 A quest on crypto graphy like

A B C D

E F G H

-----  
. .... .is A=, find the other values. practice these types of quest.

7. A question on race was given.hell lot of condts.finally they make a team for 4\*100 metres medaly.

ANS E none of the above

8. Piggy backing is a technique for a) Flow control b) sequence c) Acknowledgement d) retransmition

ans: c piggy backing

9.. The layer in the OST model handles terminal emulation a) session b) application c) presentation d) transport

ans: b application

10 ans: a odd numbers of errors

11. In signed magnitude notation what is the minimum value that can be represented with 8 bits  
a) -128 b) -255 c) -127 d) 0 ANS a)

12 c 20(no of address lines in 1MB of memory)

13 A 120(25 hz processor,what is the time taken by the instr which needs 3 clock cycles)

- 14 B synchronise the access(semaphores used for)
- 15 A system call(context switching is used in)
- 16 B the operating system(mapping of virtual to physical address)
- 17 A 177333(conversion of HEX "0xFEDB"in octal)
- 18 D used as a network layer protocall in network and windows(OLE) system
- 19 B has to be unique in the sub network(internet address)
- 20. There is an employer table with key feilds as employer no. data in every n'th row are needed for a simple

following queries will get required results.

- a) select A employe no. from employe A , where exists from employe B where A employe no.  $\geq$  B employe

having (count(\*) mod n)=0

- b) select employe no. from employe A, employe B where A employe no.  $\geq$  B employ no. groupby employe no.

having (count(\*) mod n=0 )

- c) both a& b   d)none of the above

- 21 . type duplicates of a row in a table customer with non uniform key feild customer no. you can see

- a) delete from costomer where customer no. exists ( select distinct customer no. from customer having count )

- b) delete customer a where customer no. in (select customer b where custermer no. equal to b custemor no.)

- and a rowid  $>$  b rowid c) delete customer a where custermor no. in ( select customer no. from customer a,

customer b ) d) none of the above

- 22. which feature in ANSI C but not in JAVA.??ANS variable arguments.

- 23. preprocessor does not do one of the following??ANS type checking.

- 24. long int size a) 4 bytes b) 2 bytes c) compiler dependent d) 8 bytes

ans: compiler dependent

- 25. x=2,y=6,z=6 x=y==z;

printf("%d",x) ?ANS 1

26. class c : public A,publicB

- a) 2 members in class a,b can have member functions with same name.
- b) 2 members in class a,c can have member functions with same name.
- c) both
- d)none(ANS)

27. What will be the out put of the following program

```
main()
```

```
{  
char *p;  
p=malloc(10);  
free(p);  
printf("%d",p);  
}
```

ANS compilation error

28. a=(10,15), b=10,15 what are the values of a & b in ANSI C ANS 15,10

29 main()

```
{  
int x=10,y=15,z=16;  
x=y=z;  
printf("%d",x);  
}
```

ANS 0

30 f(n) f(x)

```
{  
if(x<=0)  
    return;  
else f(x-1)+x;  
}
```

find the value of fn(5)? ANS 15.

31 struct {

```
int det;
```

```

struct prevoius;
struct new;
}

delete(struct node)
{
    node->prev->next=node->next;
    node->next->prev=node->prev;
    if(node==head)node
}

```

one element will be given. ANS::it does not work when rp is the last element in the link list.

32A code will be given which searches a particular char in the string. ANS:: it always works.

33. main()

```

{
    int var =25,varp;
    varp=&var;
    varp p=10;
    fnc(varp);
    printf("%d%d",var,varp);
}

```

ANS::55,55 (check this out)

34. #define VALUE 1+2

```

main()
{
    printf("%d and %d\n",VALUE/VALUE,VALUE*3);
}

```

ANS:: 5,7

35What is the value assigned to the variable a if b is 7 a=b>8?b<<2:b>4?b>>1:b; ANS::3

36.the value of the following expr  $(2^3)+(a^a)$  is a) 1 b)2 c) 3 d) insufficient data

37 which of the following is not basic data type ANS char\*

38. the declaration of the variable does not result in one of the following ANS allocatrion of the

storage space for the  
variable.

39. in C parameters are passed by ANS:: value only.
  40. 2 variables cannot have the same name if they are ANS:: in the same block.
  - 41.a static funct. say s(),in as file f.c can be invoked from ANS all functs. in f.c after the definitions of s.
  - 42.macros and functions do not differ in the following aspects ANS::variable no of arguments.
  - 43.one q's in which he will give some different forms of STRCPY function you will have to find out which form is correct.
- 
-

## **TEST PAPER-3**

### **Latest Sample Placement Paper Of HCL For Year-2009-10 ( Reasoning, English)**

**Directions (1-7):** Study the following arrangement and answer the questions given below:  
R 4 T M 7 W % J 9 5 I # 1 P B 2 T A 3 D \$ 6 E N F 8 U H @

**1.) How many such vowels are there in the above arrangement, each of which is immediately preceded by a number and not immediately followed by a consonant?**

- 1) None    2) One    3) Two    4) Three    5) Four

**2.) What should come in place of the question mark (?) in the following series based on the above arrangement?**

**TM% 951 B23 ?**

- 1) \$EF    2) \$6F    3) D\$N    4) \$E8    5) None of these

**3.) How many such consonants are there in the above arrangement, each of which is neither preceded by a number nor followed by a consonants?**

- 1) None    2) One    3) Two    4) Three    5) More than three

**4.) Four of the following five are alike in a certain way based on their positions in the above arrangement and so from a group. Which is the one that does not belong to that group?**

- 1) 5J1    2) 7TJ    3) 8N@    4) 32\$    5) 6DF

**5.) Which of the following is sixth to the right of the fourteenth from the right end?**

- 1) 5    2) 6    3) I    4) \$    5) None of these

**6.) How many such consonants are there in the above arrangement, each of which is immediately followed by a symbol but not immediately preceded by another consonant?**

- 1) None    2) One    3) Two    4) Three    5) None of these

**7.) Which of the following is the eighth to the left of the sixteenth from the left end?**

- 1) J    2) E    3) %    4) 6    5) None of these

**Directions (8-12):** In the following questions, the symbols @, ?, %, ?, and \$ are used with the following meanings illustrated. 'P % Q' means 'P is either greater than or equal to Q'. 'P ? Q' means 'P is neither greater than nor smaller than Q'.

'P \$ Q' means 'P is smaller than Q'. 'P @ Q' means 'P is either smaller than or equal to Q'. 'P ? Q' means 'P is greater than Q'. In each of the following questions assuming the given statements to be true, find out which of the three conclusion I, II and III given below them is/are definitely true and mark your answer accordingly.

**8.) Statements: M \$ T, T@ K, K ? D**

**Conclusions:** I. D % T II. K? M III. D ? M

- 1) Only I and II are true
- 2) Only I and III are true
- 3) Only II and III are true
- 4) All are true
- 5) None of these

**9.) Statements: B ? H, H % A, A ? K**

**Conclusions:** I.B % K II. K@ H III.A \$ B

- 1) Only I and II are true
- 2) Only I and III are true
- 3) Only II and III are true
- 4) Only II is true.
- 5) None of these

**ANSWERS :**

- 1. (2) 2. (2) 3. (5) 4.  
(4) 5.(2) 6. (4) 7. (1) 8. (4) 9.  
(3) 10(2) 11. (5) 12. (1) 13.  
(4) 14. (4) 15. (4) 16. (2) 17.  
(4) 18. (5) 19. (1) 20. (3) 21.  
(1) 22. (5) 23. (3) 24. (2) 25.  
(3)

**10.) Statements: W % N, N? R, R @ F**

**Conclusions:** I.F ? N II. W ? N III.R \$ W

- 1) None is true
- 2) Only III is true
- 3) Only I and II are true
- 4) Only II and III are true
- 5) None of these

**11.) Statements: F ? K, K ? M, M @ V**

**Conclusions:** I. F % V II. V @ K III.M ? K

- 1) Only I is true
- 2) Only II is true
- 3) Only III is true
- 4) All are true
- 5) None of these

**12.) Statements: N @ D, D \$ T, T % J**

**Conclusions:** I.J \$ D II. N ? J III.T ? N

- 1) Only III is true
- 2) Only II is true
- 3) Only I and II are true
- 4) Only I is true
- 5) None of these

**13.) Four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

- 1) Building    2) Toy    3) Vehicle    4) Mountain    5) Machine

**14.) In a certain code language 'pik na ha' means 'who is there ', 'na ta ka' means 'what is that' and 'ha ja pa' means 'here and there'. Which of the following means 'here' in that code language?**

- 1) ha    2) pa    3) ja    4) pa or ja    5) None of these

**15.) Four of the following five are alike in a certain way and so form a group. Which of the following does not belong to that group?**

- 1) HR    2) PR    3) NP    4) BE    5) VX

**Directions (Q. 16-22): In each of the following sentences there are two blank spaces. Below each sentence there are five pairs of words denoted by numbers 1), 2), 3), 4) and 5). Find out which pair of words can be filled up in the blanks in the sentence in the same sequence to make it meaningfully complete.**

**16.) The truth is that in a highly capital-intensive business \_\_\_\_\_ deep pockets, domestic civil aviation is \_\_\_\_\_ undercapitalized.**

- 1) ascertaining, highly  
2) requiring, woefully  
3) sustaining, alarmingly  
4) balancing, astonishingly  
5) demanding, niggardly

**17.) Time has now come for all agencies working in the development sector to launch a multi-pronged \_\_\_\_\_ to \_\_\_\_\_ malnutrition.**

- 1) system, abjure  
2) weapon, annihilate  
3) policy, deviate  
4) strategy, eradicate  
5) fact, demolish

**18.) A well-\_\_\_\_\_, physically and mentally active \_\_\_\_\_ alone can contribute to the speedier economic progress of a nation.**

- 1) educated, subjects  
2) organized, systems  
3) advanced, brethren  
4) formulated, citizens  
5) nourished, populace

**19.) We must develop \_\_\_\_\_ systems from the village upwards and up to the national level to constantly \_\_\_\_\_ the nutritional status of the people.**

- 1) monitoring, review
- 2) machinery, tackle
- 3) efficient, emancipate
- 4) sound, harbour
- 5) inherent, inundate

**20.) Democracy has taken a \_\_\_\_\_ in a system which promotes sycophancy and \_\_\_\_\_.**

- 1) dive, bureaucracy
- 2) delve, dictatorship
- 3) beating, mediocrity
- 4) ride, heredity
- 5) privilege, intolerance

**21.) People in power love to \_\_\_\_\_ the freedom of expression by the players because it might \_\_\_\_\_ their position.**

- 1) suppress, undermine
- 2) counter, reveal
- 3) contradict, focus
- 4) exploit, hamper
- 5) violate, degrade

**22.) Rituals play an important role in \_\_\_\_\_ growth and growth of our minds to its full \_\_\_\_\_.**

- 1) cultural, measure
- 2) religious, maximum
- 3) mystical, exposure
- 4) traditional, limits
- 5) spiritual, potential

**23.) If it is possible to make only one meaningful English word with the first, the fifth, the seventh and the eighth letters of the word ORGANISED, which of the following will be the third of that word? If no such word can be made give 'X' as the answer and if more than one such word can be made, give 'Y' as the answer.**

- 1) N
- 2) D
- 3) S
- 4) X
- 5) Y

**24.) The position (s) of how many letters in the word PRODUCT will remain unchanged, when the letters within the word are rearranged alphabetically?**

- 1) None
- 2) One
- 3) Two
- 4) Three
- 5) More than three

**25.) Mohan walked 25 metres towards South, took a right turn and walked 15 metres. He then took a left turn and walked 25 metres. Which direction is he now from his starting point?**

- 1) South-East
- 2) South
- 3) South-West
- 4) North-West
- 5) None of these

## TEST PAPER-2

**Directions (Q. 1-5):** In each of the following number series one of the given numbers is wrong. Find out the wrong number.

**1. 8 34 207 1661 16617 199417**

- 1) 8    2) 34    3) 207    4) 1661    5) None of these

**2. 7 75 395 2379 11879 47541**

- 1) 7    2) 75    3) 395    4) 2379    5) None of these

**3. 420 70 75 300 197 148.5**

- 1) 70    2) 75    3) 300    4) 197    5) None of these

**4. 9 21 51 155 540 2163**

- 1) 9    2) 21    3) 51    4) 2163    5) None of these

**5. 22 37 59 97 155 251**

- 1) 37    2) 59    3) 97    4) 155    5) None of these

**6. An angry Arjun carried some arrows for fighting with Bheeshm. With half the arrows, he cut down the arrows thrown by Bheeshm on him and with six other arrows he killed the Chariot driver of Bheeshm. With one arrow each he knocked down respectively the Chariot, the flag and the bow of Bheeshm. Finally, with one more than four times the square root of arrows he laid Bheeshm unconscious on an arrow bed. Find the total number of arrows Arjun had.**

- 1) 100    2) 121    3) 144    4) 169    5) None of these

**Directions (Q. 7-11):** Study the following information carefully and answer the questions given below:

Total population of a village is 64000. Out of this 65% is literate. 60% of the total population is male. Out of the total illiterate population, males and female are in the ratio 3:4

**7. What is the ratio of illiterate females to literate ones?**

- 1) 1:1    2) 1:2    3) 4:7    4) Data inadequate    5) None of these

**8. Among the males what is the ratio of literate ones to illiterate ones?**

- 1) 3:1    2) 1:3    3) 9:4    4) Data inadequate    5) None of these

**9. What is the ratio of literate males to literate females?**

- 1) 4:9    2) 9:4    3) 9:13    4) Data inadequate    5) None of these

**10. What is the total number of illiterate males?**

- 1) 6400    2) 12800    3) 9600    4) 3200    5) None of these

**11. What is the total number of literate females?**

- 1) 6400    2) 12800    3) 9600    4) 3200    5) None of these

**Directions (Q.12-16):** Study the following table and answer the questions given below:

Following table shows the rural population and the percentage of total population living in the rural areas of the country X.

**Censes Population (in million) Percentage**

1901 213 89.2

1911 246 89.7

1921 223 88.8

## ANSWERS:

1. (5) 2. (2) 3. (4) 4. (1) 5. (3)

6. (1) 7. (1) 8. (1) 9. (2)

10. (3) 11. (2) 12.(3) 13. (2) 14. (5)  
15. (2)

16. (5) 17. (1) 18. (5) 19. (2) 20.(1)

1931 246 88.0  
1941 275 86.1  
1951 299 82.7  
1961 360 82.0

1971 439 80.1  
1981 524 76.7  
1991 629 74.2  
2001 743 72.3

**12. Approximately what was the urban population of country X in the census year 1981?**

- 1) 109 million 2) 129 million 3) 159 million 4) 218 million 5) 155 million

**13. In which of the following census years was the population of the urban area 79 million?**

- 1) 1951 2) 1961 3) 1971 4) 1981 5) 1991

**14. Approximately what was total population of the country X in the census year 2001?**

- 1) 1050 million 2) 1129 million 3) 1000 million 4) 743 million 5) 1029 million

**15. The total population of the country X was approximately how much more in the census year 1931 with respect to the same in the census year 1921?**

- 1) 23 million 2) 29 million 3) 25 million 4) 32 million 5) 34 million

**16. The population of urban area in the census year 1941 was approximately what percent of the same in the census year 1951?**

- 1) 55% 2) 60% 3) 62% 4) 65% 5) 70%

**Passage(Questions From 17-21):** A spate of soul-searching is guaranteed by two major anniversaries that loom this year: the abolition of the slave trade in the British empire in 1807, and the Act of Union of England and Scotland in 1707. Both will feed into Britain's nagging sense of self-doubt: who are we? As the debates around integrated and multi-culturalism show no sign of flagging, both anniversaries will be mind for their contemporary relevance.

Television programmes, books, ceremonies, conferences, and newspaper supplements have been in the planning for months.

Some might regard this self-referentialism as tedious; they might advocate an apology for the slave trade and let's be done with 2007's anniversaries. But our reckoning with British history has been so limited that these two anniversaries provide us with a good opportunity for an overdue reality check.

Any chance of reinventing a plausible national identity now (as many are keen to do) is only possible if we develop a much better understanding of how our nation behaved in the past and how nationalisms (English, Scottish, and British) were elaborately created over the past few hundred years — and how incomplete and fragile that process always was.

The coincidence of these two anniversaries is fortuitous. The abolition of the slave trade is a painful reminder of British imperial history, which we have, incredible, managed to largely

forget. Who remembers the Bengal famine or Hola camp, the empire's opium trade with China or our invention of concentration camps in the Boer war? We too easily overlook how empire was a linchpin to British national identity, vital to welding Scotland and England together. Indeed, historian Linda Colley suggests three ingredients for British identity: "Great Britain is an invented nation that was not founded on the suppression of older loyalties so much as superimposed on them, and that was heavily dependent for its *raison d'être* on a broadly Protestant culture, on the treat and tonic of recurrent war, especially war with France, and on the triumphs, profits and Otherness represented by a massive overseas empire."

These three props for Britishness have collapsed: Protestant Christianity has declined sharply, war with France is the pastime only of a few drunken football fans, and the empire is no more. No wonder Britishness is no longer the decline; over the past couple of decades, people have become increasingly likely to define themselves in polls as English or Scottish rather than British.

This is the social trend in defining identity that politicians such as Gordon Brown watch closely. Could this re-emergence of the older loyalties to which Ms Colley refers have political consequences? Could the Scottish National Party translate that into significant electoral gains in the Scottish elections only a few days after the official commemoration of the Act of Union in May?

It's not just the Scots who could decide they've had enough of the English — the feeling could become mutual. The grumbles are getting louder about Scottish MPs who vote on legislation affecting the English and the disproportionate amount of public spending swallowed up by the Scots.

Mr Brown clearly has a vested interest in silencing such complaints. He's been at the forefront of an establishment attempt to redefine Britishness on the grounds of "common values" such as fair play and tolerance.

Who is going to define Englishness? Julian Baggini has a stab at it in a book to be published in March, *Welcome to Every town: A Journey into the English Mind*. He spent six months living in Rotherham to get beyond the metropolitan, liberal elite's perceptions of Englishness and establish what most people (that is, the white working class) understand by their Englishness.

Parochial, tightly knit, focused on family and local communities; nostalgic, fearful of the future and insecure; a dogged belief in common sense: these are his conclusions. Mr Baggini confesses to feeling that his six months in Rotherham was like visiting a foreign country, and no doubt many of the people he met would regard six months in London as profoundly alienating. How do you weld national identities out of global metropolises disconnected from hinterland? Englishness is riven with huge regional and class divides. The stakes are high — for example, a rising British National Party vote, a fear of asylum, and hostility to Islam. The anniversary of the Act of union will provide a stage for all this to be played out. It's just as painful a commemoration for the English as for the Scottish. It required one nation to lose its sovereignty and the other its identity.

**17. According to the passage, the two major anniversaries will**

- 1) give an impetus to the questioning of British national identity.
- 2) set the Britons thinking who they really are.
- 3) be just another occasion to raise the issue of British national identity.
- 4) be just another occasion to give rise to a debate on multiculturalism.
- 5) not be celebrated because of the shame attached with slave trade.

**18. According to Linda Colley, Great Britain owes its nation-state concept to**

- 1) ceding of its territory by Scotland to England.
- 2) a shared relation of race, religion and economy.
- 3) what can today be seen as a concept of free trade area.
- 4) the perpetuation of slave trade.
- 5) commonality of interest between its constituents.

**19. Going by the passage, which of the following may instill a sense of national identity among the Britons?**

- 1) The return of Catholics to the Protestant fold
- 2) Britain going to war with Germany
- 3) Britain going to war as an Allied force
- 4) Regular football matches between British and French clubs
- 5) Any of the above

**20. According to the facts stated in the passage, if England and Scotland decide to split,**

- 1) it is the former that stands to gain.
- 2) it is the latter that stands to gain.
- 3) it will be a win-win situation.
- 4) it will be a lose-lose situation.
- 5) both the parties will lose their face but gain materially

**21. According to the passage, the post-modern mind views imperialism as**

- 1) something that was necessary in the context of the times.
- 2) a thing of the past which need not be mentioned further.
- 3) a blot on the history of mankind.
- 4) the white man's burden.
- 5) a concept relevant even in the present times, given the inability of the developing countries to catch up with the West.

**22. Oranges are bought at 7 for Rs.3. At what rate per hundred must they be sold to gain 33%?**

- (1) Rs.56      (2) Rs.60      (3) Rs.58      (4) Rs.57

**23. The cost price of 36 books is equal to the selling price of 30 books. The gain is :**

- (1) 20%      (2) 16%      (3) 18%      (4) 82%

**24. A person sells two machines at Rs.396 each. On one he gains 10% and on the other he loses 10%. His profit or loss in the whole transaction is :**

- (1) No gain, no loss      (2) 1% loss      (3) 1% profit      (4) 8% profit

**25.A trader bought 10kg of apples for Rs.405 out of which 1kg of apples were found to be rotten. If he wishes to make a profit of 10%, at what rate should he sell the remaining apples per kg?**

- (1) Rs.45      (2) Rs.49.50      (3) Rs.50      (4) Rs. 51