

Question Booklet and Answer Key

For Recruitment Test

Held on 17.01.2015

Post: Programmer

(ENGLISH VERSION)

1. ਸ਼ਬਦ-ਰਚਨਾ ਦੇ ਕਿੰਨੇ ਭਾਗ ਹੁੰਦੇ ਹਨ:  
(A) ਦੋ (B) ਤਿੰਨ (C) ਚਾਰ (D) ਪੰਜ
2. ਕਿਹੜਾ ਸ਼ਬਦ ਮੂਲ ਸ਼ਬਦ ਹੈ:  
(A) ਫੁੱਲਦਾਨ (B) ਪਾਕਦਾਨ (C) ਪਾਇਦਾਨ (D) ਮੈਦਾਨ
3. ਗੁਰਮੁਖੀ ਕੀ ਹੈ:  
(A) ਪੰਜਾਬੀ (B) ਪੰਜਾਬੀ ਭਾਸ਼ਾ (C) ਲਿੱਪੀ (D) ਵਰਣ-ਬੋਧ
4. 'ਪੁਲਿਸ ਨੇ ਚੋਰ ਨੂੰ ਫੜਿਆ' ਤੇ ਹਥਕੜੀ ਲਾ ਦਿੱਤੀ, ਵਾਕ ਦੀ ਕਿਹੜੀ ਕਿਸਮ ਹੈ:  
(A) ਸਾਧਾਰਨ (B) ਸਿਸ਼ਰਤ (C) ਸੰਯੁਕਤ (D) ਹਾਂ-ਵਾਚਕ
5. ਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜ ਚੁਣੋ:  
(A) ਪੜਾਈ (B) ਪੜ੍ਹਾਈ (C) ਪਢਾਈ (D) ਪਡ੍ਹਾਈ
6. ਹੇਠ ਲਿਖਿਆਂ ਵਿੱਚੋਂ ਠੀਕ ਸਮਾਸੀ ਸ਼ਬਦ ਚੁਣੋ:  
(A) ਵੈਰੀ-ਮਿੱਤਰ (B) ਵੈਰੀ-ਦੁਸ਼ਮਣ (C) ਸੱਚ-ਝੂਠ (D) ਖੁਸ਼-ਖ਼ਬਰੀ
7. ਬਾਲ, ਨਿਆਣਾ, ਬੱਚਾ ਦਾ ਹੋਰ ਸਮਾਨਾਰਥੀ ਸ਼ਬਦ ਕਿਹੜਾ ਹੋ ਸਕਦਾ ਹੈ:  
(A) ਨਿੱਕਾ (B) ਬੁੱਢਾ (C) ਬਾਲਕ (D) ਛੋਟਾ
8. ਕਾਰਕ ਕਿੰਨੀ ਪ੍ਰਕਾਰ ਦੇ ਹੁੰਦੇ ਹਨ:  
(A) ਅੱਠ (B) ਸੱਤ (C) ਪੰਜ (D) ਚਾਰ
9. 'ਅੰਦਰ ਹੋਵੇ ਸੱਚ..... ਅਖਾਣ ਪੂਰਾ ਕਰੋ:  
(A) ਤਾਂ ਕਿਸੇ ਨੂੰ ਨਾ ਦੱਸ (B) ਸਾਰਿਆਂ ਨੂੰ ਦੱਸ  
(C) ਝੂਠ ਬੋਲਣ ਤੋਂ ਬਚ (D) ਤਾਂ ਕੋਠੇ ਚੜ੍ਹ ਕੇ ਨੱਚ
10. ਸ਼ੁੱਧ ਮੁਹਾਵਰਾ ਚੁਣੋ:  
(A) ਸੁੱਤੀਆਂ ਕਲਾਂ ਭਜਾਉਣੀਆਂ (B) ਸੁੱਤੀਆਂ ਕਲਾਂ ਸਵਾਣੀਆਂ  
(C) ਸੁੱਤੀਆਂ ਕਲਾਂ ਨਚਾਉਣੀਆਂ (D) ਸੁੱਤੀਆਂ ਕਲਾਂ ਜਗਾਉਣੀਆਂ

Directions (Q.No.11-13): Mark the correct synonym of the given word :

11. Intransigent  
A) inflexible (B) complex (C) launch (D) coward
12. Intrepid  
A) kind (B) dauntless (C) successful (D) cruel
13. Martinet  
A) amazing (B) open-hearted (C) taskmaster (D) satisfied

Directions (Q. No. 14-16): Mark the correct antonym of the given word :

14. Peevish  
A) fretful (B) fractions (C) petulant (D) affable
15. Profane  
A) sacred (B) secular (C) worldly (D) earthy
16. Remiss  
A) neglectful (B) careful (C) nostalgic (D) repetitive

Directions (Q. NO. 17-20): Mark the correct preposition to be filled in the gap :

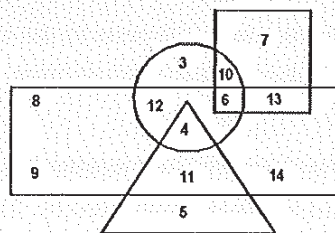
17. The company is crying \_\_\_\_\_ for fresh new talent.  
A) at (B) in (C) out (D) off
18. The fire fighters had to break \_\_\_\_\_ the door to reach the people trapped inside.  
A) out (B) with (C) off (D) down

19. He finally managed to break free \_\_\_\_\_ his attacker.  
A) from                      B) with                      C) at                      D) on
20. The function has been put \_\_\_\_\_.  
A) out                      B) off                      C) of                      D) on
21. Which Commission advocated the establishment of a permanent Inter-State Council, called 'Inter-government Council'?  
A) Sarkaria Commission                      B) Punchhi Commission  
C) Radhakrishnan Commission                      D) Moily Commission
22. The layer of atmosphere which is used for telecommunication is  
A) Troposphere                      B) Ionosphere                      C) Thermosphere                      D) Stratosphere
23. Which one of the following is not a department in the Ministry of Finance?  
A) Expenditure                      B) Economic Affairs                      C) Banking Division                      D) Revenue
24. The Aswan High Dam is located in  
A) Sudan                      B) Israel                      C) U.S.A.                      D) Egypt
25. Kaziranga is famous for  
A) its Rhinoceros                      B) its Tiger                      C) its Birds                      D) its Lion
26. Robusta is a variety of  
A) wheat produced in Africa                      B) coffee produced in Africa  
C) rice produced in Africa                      D) tea produced in Africa
27. Which one of the following is not correctly matched  
A) Rohtang – Himachal Pradesh                      B) Palghat – Kerala  
C) Nathu La – Arunachal Pradesh                      D) Lipulekh – Uttarakhand
28. Which of the following group of gases contribute most to the 'Green House Effect'?  
A) Ammonia and Ozone                      B) Carbon Monoxide and Sulphur dioxide  
C) Carbon Tetrafluoride and Nitrous oxide                      D) Carbon dioxide and Methane
29. Indian state with the longest coast line is  
A) Gujarat                      B) Kerala                      C) Tamil Nadu                      D) Andhra Pradesh
30. The state through which Tropic of Cancer passes is  
A) Uttar Pradesh                      B) Gujarat                      C) Bihar                      D) Assam
31. The state with highest urban population is  
A) Uttar Pradesh                      B) Punjab                      C) Maharashtra                      D) Karnataka
32. Arundhati Bhattacharya is  
A) the Chairperson of National Commission for women  
B) Chairperson of Human Right Commission  
C) the CEO of ICICI  
D) the first woman Chairman of the State Bank of India
33. The Chairman of the 20<sup>th</sup> Law Commission of India is  
A) Justice Ajit Prakash Shah                      B) Justice Leila Seth  
C) Justice R.M.Lodha                      D) Justice Markandeya Katju

34. Ranjan Mathai is the  
 A) Chairman and Managing Director of Vijaya Bank  
 B) Foreign Secretary of India who has taken over as the country's next High Commission to U.K.  
 C) former Foreign Secretary of India who became India's envoy to USA  
 D) CEO of WIPRO
35. Who was crowned the Miss Universe 2013?  
 A) Olivia Culpo      B) Man Moghe      C) Gabriela Isler      D) Patricia Roderigues
36. Complete the series  
 2 3 B - 6 - F G - 5 D - 8 - H I  
 A) C, 7, 4, E, 9      B) D, 8, 6, C, 7      C) E, 8, 7, D, 9      D) W, 8, 7, I, 6
37. Select the pair of words from the four alternatives that has same relationship as the given pair has  
 Given pair - **Authenticity : Apocryphal**  
 A) Integrity : Hypocritical      B) Assertiveness : Dogmatic  
 C) Artifice : Deceptive      D) Wickedness : Nefarious
38. Find the odd one  
 i) V T      ii) M Q      iii) P R      iv) D F      v) F G  
 A) ii)      B) iii)      C) iv)      D) v)
39. In a certain code, EXECUTIVE is written as TCIEUXVEE, then how is MAUSOLEUM coded in that language?  
 A) AUUCOSLMM      B) LSEUOAUMM  
 C) AUEUOSEMM      D) SLUEOAUMM
40. Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's son. Brothers and sister I have none". At whose portrait was Harsh looking at?  
 A) his cousin      B) his nephew      C) his uncle      D) his son
41. Sudhanshu is as much older than Kokila as he is younger than Parveen. Nitin is as old as Kokila, which of the following statements is wrong?  
 A) Kokila is younger than Parveen      B) Nitin is younger than Parveen  
 C) Parveen is not the oldest      D) Sudhanshu is older than Nitin
42. A person starts from point A and walks 3 km eastwards B and then turns left and travels thrice that distance to reach C. He again turns left and travels five times the distance he covered between A and B and reached his destination D. The shortest distance between starting point and the destination is  
 A) 12 km.      B) 15 km.      C) 16 km.      D) 18 km.

43. In the Fig. who are neither a civil servant nor educated but is urban and not a male where:

- (i) rectangle represents males  
 (ii) triangle represents educated  
 (iii) circle represents urban  
 (iv) square represents civil servants



- A) 2      B) 3      C) 6      D) 10



44. Select the combination of numbers so that the letters so arranged accordingly will form a meaningful word.  
 R V T N D E I A O I  
 1 2 3 4 5 6 7 8 9 0  
 A) 5102674938      B) 5180427639      C) 5617283094      D) 7450823196
45. In the following arrangement, if total number of pairs of adjacent symbol and letter is (X); total number of pairs of adjacent letter and number is (Y) and total number of pairs of adjacent number and symbol is (Z) are written in the descending order, which of the following will indicate the same  
 A) X, Y, Z      B) X, Z, Y      C) Y, X, Z      D) X=Y=Z
46. 36 vehicles are parked in a row. After first car, there is one scooter. After the second car, there are two scooters. After third car there are three scooters and so on. Find how many scooters are in the second half of the row.  
 A) 10      B) 12      C) 15      D) 17
47. A monkey climbs 30 feet at the beginning of each hour and rests for a while when he slips back 20 feet before he again starts climbing in the beginning of next hour. If he begins his ascent at 8.00 A.M., at what time will he first touch the flag 120 feet high from the ground?  
 A) 4.00 P.M.      B) 5.00 P.M.      C) 6.00 P.M.      D) none of these
48. If '>' denotes '+', '<' denotes '-', '+' denotes '÷', '^' denotes 'x', '=' denotes '=', 'x' denotes '>' and '=' denotes '<', choose the correct statement  
 A)  $13 >> < 6 + 2 = 3 \wedge 4$       B)  $9 > 5 > 4 - 18 + 9 > 16$   
 C)  $9 < 3 < 2 > 1 \times 8 \wedge 2$       D)  $28 + 4 \wedge 2 = 6 \wedge 4 + 2$
49. Replace the question mark (?) with one among given alternatives
- |   |    |    |   |    |   |
|---|----|----|---|----|---|
| 3 | 8  | 10 | 2 | ?  | 1 |
| 6 | 56 | 90 | 2 | 20 | 0 |
- A) 0      B) 3      C) 5      D) 7
50.  $3^{3.5} \times 21^2 \times 42^{2.5} \div 2^{2.5} \times 7^{3.5} = (21)^?$   
 A) 8      B) 10      C) 12.5      D) 6.5
51. The average of four positive integers is 72.5. The highest integer is 117 and lowest is 15. The difference between the remaining two integers is 12. Which is the higher of these two integers?  
 A) 70      B) 73      C) 84      D) 85
52. "The ratio of Laxmi's age to the age of her mother is 3:11. The difference between their ages is 24 years. The ratio of their ages after 3 years will be  
 A) 1:3      B) 2:3      C) 3:5      D) 2:5
53. A wholesaler sells 20 pens at the market price of 16 pens to a retailer. The retailer in turn sells them at the market price. The gain per cent of the retailer is  
 A) 20%      B) 25%      C) 30%      D) 35%
54. From a point within an equilateral triangle, perpendiculars drawn to three sides are 6 cm, 7 cm and 8 cm respectively. The length of each side of the triangle is  
 A) 7cm      B) 10.5cm      C)  $14\sqrt{3}$  cm      D)  $\frac{14\sqrt{3}}{3}$  cm

55. The difference between compound interest and simple interest at the same rate on Rs. 5000 for 2 years is Rs.72. The rate of interest per annum is  
A) 6%                      B) 8%                      C) 10%                      D) 12%

- 56) Consider the following C-function:  
*void ago(void)*

```
{  
    for (int i = 0; i < 5; i++)  
    {  
        static int sum = 0;  
        sum += i*i;  
    }  
    printf("sum = %d\n", sum);  
}
```

What is printed when the ago( ) function is executed?

- A) sum = 0    B) sum = 16                      C) sum = 30    D) This code will not compile
- 57) Consider the following C-code:  
*#define triple(x) x \* 3*

```
void ago(void)  
{  
    int x = 5;  
    printf("Answer = %d\n", triple(x+1));  
}
```

What is printed when the ago( ) function is executed?

- A) Answer = 8                      B) Answer = 16                      C) Answer = 18                      D) Answer = 20
- 58) Which of the following statements about character arrays in C is/are true?  
i.        Indexing starts from 1.  
ii.       Character arrays are always terminated by the null-byte.  
iii.      The maximum size of the array must be defined at compile-time.  
A) i only                      B) ii. Only                      C) iii. Only                      D) None of them

- 59) Consider the following C-code:

```
#define MAXSIZE 50  
struct Point  
{  
    int x;  
    int y;  
};  
struct Polygon  
{  
    int nPoints;  
    struct Point points[MAXSIZE];  
};  
void go(void)  
{  
    struct Polygon P;  
    ...
```

What is the correct way to access the x-coordinate of the first point in the Polygon represented by the variable P?

- A) P[0].x                      B) P[0].points.x                      C) P.points[0].x                      D) P.points.x[0]

60) Consider the following pseudo-code:

```
if (Y < 0)
{
    X = -X;
    Y = -Y;
}
Z = 0;
while (Y > 0)
{
    Z = Z + X;
    Y = Y - 1;
}
```

Assume that X, Y, and Z are integer variables, and that X and Y have been initialized. Which of the following best describes what this code segment does?

- A) Sets Z to be the sum X + Y                      B) Sets Z to be the absolute value of X  
C) Sets Z to be the value of Y                      D) Sets Z to be the product X \* Y

61) Consider the array declaration: `int *x[];`

Which statement best describes this declaration?

- A) x is an array of integers whose values are pointers.  
B) x is an array of pointers to integers.  
C) x is an integer whose value points to an array.  
D) x is a pointer to an array of integers.

62) Consider the following C-functions:

```
char *process(char *s)
{
    char *t = s;
    while (*s)
    {
        while (isdigit(*s))
        {
            *t = *s++;
        }
        ++s;
    }
    return t;
}

void good(void)
{
    char date[100];
    strcpy(date, "13th November 2016");
    printf("%s\n", process(date));
}
```

What is printed when the good( ) function is executed?

- A) th November                                      B) ovember 2016  
C) 13th November 2016                              D) 63th November 2016

- 63) In structured programming, a program is divided into modules. Coupling and cohesion describe the characteristics of modules. A good decomposition should attempt to:
- A) Maximize coupling and Minimize cohesion
  - B) Minimize coupling and Maximize cohesion
  - C) Maximize coupling and Maximize cohesion
  - D) Minimize coupling and Minimize cohesion
- 64) In Object Oriented Programming, base class's \_\_\_\_\_ members can be accessed only on the base-class definition or in derived-class definitions.
- A) Public
  - B) Private
  - C) Protected
  - D) Static
- 65) Three of the following numbers are same. Which one is different?
- A)  $(110100100.01)_2$
  - B)  $(12210.1)_4$
  - C)  $(644.1)_8$
  - D)  $(1A4.4)_{16}$
- 66) What is the correct order of the operations in the instruction cycle?
- A) Fetch, Execute, Decode, Update
  - B) Fetch, Decode, Update, Execute
  - C) Fetch, Update, Decode, Execute
  - D) Fetch, Decode, Execute, Update
- 67) Communication between a computer and a keyboard involves \_\_\_\_\_ transmission.
- A) Simplex
  - B) Half-duplex
  - C) Full-duplex
  - D) Automatic
- 68) Cookies were designed as a response to which problem in the original design of HTML and HTTP?
- A) Lack of privacy and confidentiality in viewing web-pages
  - B) Inequality of information between clients and servers
  - C) The open and distributed nature of the Internet
  - D) Persistence of state between web-sessions
- 69) Which of the following HTML code will affect the vertical alignment of the table content?
- A) `<td style= "vertical-align: middle">Text goes here.</td>`
  - B) `<td valign= "center">Text goes here.</td>`
  - C) `<td style= "text-align: center">Text goes here.</td>`
  - D) `<td align= "middle">Text goes here.</td>`
- 70) Match the following:
- |         |       |   |
|---------|-------|---|
| a) HTML | (i)   | Protocol for sending electronic mail on the Internet.   |
| b) HTTP | (ii)  | Organization that charges a fee to enable individuals and organizations to connect to the Internet. |
| c) ISP  | (iii) | Set of tags and related rules that are used to create web pages.                                    |
| d) SMTP | (iv)  | Internet standard that supports exchange of information on Web.                                     |
- A) a)-(iv) b)-(i) c)-(ii) d)-(iii)
  - B) a)-(iii) b)-(iv) c)-(ii) d)-(i)
  - C) a)-(iii) b)-(ii) c)-(iv) d)-(i)
  - D) a)-(iv) b)-(i) c)-(iii) d)-(ii)
- 71) The process of rewriting parts of a file in contiguous sectors on a hard disk to increase the speed of access and retrieval is known as:
- A) Format
  - B) Defragmentation
  - C) File Allocation Table (FAT)
  - D) Configuration



- 72) Which of the following is FALSE?  
 A) ASCII is a fixed-length code  
 B) A Java compiler converts class definitions written in the Java programming language into byte-codes that are hardware-independent  
 C) Java is an object-oriented language that supports class variables, class methods, instance variables, instance methods, and multiple inheritance  
 D) There are 256 different sequences, or arrangements, of length 8 that can be represented by a byte.
- 73) Which is the correct order of operations for system startup?  
 A) Power supply signal, BIOS POST test, OS kernel load, CMOS comparison  
 B) Power supply signal, BIOS POST test, CMOS comparison, OS kernel load  
 C) Power supply signal, OS kernel load, CMOS comparison, BIOS POST test  
 D) Power supply signal, CMOS comparison, OS kernel load, BIOS POST test
- 74) By putting multiple CPUs on a single chip, chip makers have created:  
 A) parallel processors  
 B) multi-core processors  
 C) CPU duplicate processors  
 D) clusters
- 75) What is it called when you can remove and replace devices without turning off your computer?  
 A) Hot swapping  
 B) Plug-N-Play  
 C) Bay swap  
 D) USB swapping
- 76) Which software is free to use for a trial period, but requires some minimal payment after the trial period?  
 A) Freeware  
 B) Proprietary Software  
 C) Open Source Software  
 D) Shareware
- 77) The language which has recently become the defacto standard for interfacing application programs with relational database system is  
 A) Oracle  
 B) SQL  
 C) DBase  
 D) 4GL
- 78) In RDBMS, an entity set that does not have sufficient attributes to form a primary key is a  
 A) strong entity set  
 B) weak entity set  
 C) simple entity set.  
 D) primary entity set
- 79) A virtual relation composed of columns from one or more related relations is called a(n):  
 A) Index  
 B) View  
 C) Relational map  
 D) Base table
- 80) The constraint that no key attribute (column) may be null is referred to as:  
 A) Referential integrity  
 B) Multi-valued dependency  
 C) Entity integrity  
 D) Functional dependency
- 81) In the context of databases, ACID test implies transactions should hold following properties:  
 A) Accountability, Commitment, Independence, Durability  
 B) Atomicity, Commitment, Isolation, Durability  
 C) Atomicity, Consistency, Independence, Durability  
 D) Atomicity, Consistency, Isolation, Durability
- 82) In RDBMS, identify the factor which enforces a relation in 3NF?  
 A) Every non-key attribute is fully functionally dependent on primary key  
 B) Every non-key attribute is partially dependent on super key  
 C) The domain of attribute must include only atomic values.  
 D) Every non-key attribute is non-transitively dependent on primary key.

- 83) What result set is returned from the following SQL query?
- ```

select customer_name, telephone
  from customers
 where city in ('Agra', 'New Delhi', 'Chandigarh');

```
- A) The customer\_name and telephone of all customers  
 B) The customer\_name and telephone of all customers living in either Agra, New Delhi or Chandigarh  
 C) The customer\_name and telephone of all customers living in Agra, New Delhi and Chandigarh  
 D) The customer\_name of all customers living in either Agra, New Delhi or Chandigarh
- 84) Which of the following is the most appropriate format for graphics that are to be embedded within an Internet document?  
 A) BMP                      B) TIFF                      C) GIF                      D) HTML
- 85) Virtual machines are used in Cloud Computing by Amazon to:  
 I. Protect users from each other  
 II. Offer more price points  
 III. Simplify introduction of new and faster hardware  
 A) I and II                      B) II and III                      C) I and III                      D) I, II, and III
- 86) What does BCC means in E-Mail?  
 A) Black Carbon Copy                      B) Blind Carbon Copy  
 C) Business Computer Center                      D) Business Computer Card
- 87) A storage technique that a DVD-ROM uses to achieve a higher storage capacity than a CD-ROM is \_\_\_\_.
- I. Making the disc denser by packing the pits closer together  
 II. Using two layers of pits  
 III. Using both sides of the disc  
 A) I only                      B) I & II                      C) II & III                      D) I, II & III
- 88) From what has the term 'Wi-Max' been derived?  
 A) Worldwide Interoperability for Microwave Access  
 B) Worldwide Interconnection for Microwave Access  
 C) Worldwide Interchangeability for Microwave Access  
 D) Worldwide Interconnection for Multiple Access
- 89) System programs such as compilers are designed so that they are:  
 A) Recursive                      B) Re-enterable                      C) Non-reusable                      D) Serially usable
- 90) Consider the regular expression:  $R = (ab|abb)^* bbab$   
 Which of the following strings is NOT in the set denoted by R?  
 A) ababab                      B) abbbab                      C) abbabbbab                      D) ababbabbbab
- 91) \_\_\_\_\_ abstraction is used in both structured design and object-oriented design, while \_\_\_\_\_ abstraction is only used in object-oriented design.  
 A) Fast, Slow                      B) Data, Procedural                      C) Procedural, Data                      D) Off-line, On-line
- 92) Which UNIX system call is used to create a new process?  
 A) create()                      B) new()                      C) open()                      D) fork()

- 93) Which of these are the 5 generic software engineering framework activities?  
 A) Communication, Planning, Modeling, Construction, Deployment  
 B) Communication, Risk management, Measurement, Production, Reviewing  
 C) Analysis, Designing, Programming, Debugging, Maintenance  
 D) Analysis, Planning, Designing, Programming, Testing
- 94) What ASP.NET object encapsulates the state of the client and the browser?  
 A) The Session object  
 B) The Application object  
 C) The Response object  
 D) The Request object
- 95) C# compiler produces intermediate code called as:  
 A) Byte Code      B) MSIL      C) Hex Dump      D) Intel Assembler
- 96) In systems programming, an interrupt is a signal to the processor emitted by hardware or software indicating an event that needs immediate attention. Which of the following situations will generate an interrupt?  
 I.      The hard drive has located data and is ready to transfer.  
 II.     An overflow has occurred in the running of a program.  
 III.    A key is pressed on the keyboard.  
 IV.    A program has run out of memory.  
 A) I and IV only                                  B) I and III only  
 C) II and IV only                                 D) All of I, II, III and IV
- 97) Consider a relational database schema with the following instance of a relation R(A,B,C) :

| A | B | C |
|---|---|---|
| 1 | 1 | 1 |
| 1 | 2 | 3 |
| 2 | 2 | 4 |

Assuming the instance above is valid, which of the following functional dependencies must be FALSE?

- I.  $A \rightarrow B$   
 II.  $A \rightarrow C$   
 III.  $AB \rightarrow C$   
 A) I only                                  B) II only                                  C) I and II                                 D) II and III
- 98) Consider the relation:

*Proj(pno, pname, budget, city), where pno is a primary key and the following SQL query:*  
*SELECT city, count(pno) AS totproj, sum(budget) AS totbudget*  
*FROM proj*  
*GROUP BY city*

The SQL query:

- A) Computes the number of cities having at least one project and the total budget over all projects.  
 B) Computes, for each city, the number of projects that are located in that city and the total budget over all projects in the city.  
 C) Computes, for each city, the number of projects that are located in that city and the total budget over all projects in all the cities together.  
 D) Computes the total number of projects that are located in all the cities together and the total budget over all projects in all the cities together.



- 99) In some systems, when there is no more free memory, the system automatically determines what is in use and reorganizes memory so that the available memory is in one big contiguous block. What is this process called?
- A) Garbage Collection
  - B) Sewage treatment
  - C) Data Structure beautification
  - D) Memory Leak
- 100) You have a class C network, and you need to design it for 5 usable subnets with each subnet handling a minimum of 18 hosts each. Which of the following network masks should you use?
- A) 255.255.224.0
  - B) 225.255.240.0
  - C) 255.255.255.224
  - D) 225.255.255.240



**Answer Key- 17.01.2015 (M) (Programmer)**

| Q. | Ans | Q. | Ans. | Q. | Ans | Q.  | Ans. |
|----|-----|----|------|----|-----|-----|------|
| 1  | A   | 26 | B    | 51 | D   | 76  | D    |
| 2  | D   | 27 | C    | 52 | A   | 77  | B    |
| 3  | C   | 28 | D    | 53 | B   | 78  | B    |
| 4  | C   | 29 | A    | 54 | C   | 79  | B    |
| 5  | B   | 30 | B    | 55 | D   | 80  | C    |
| 6  | C   | 31 | C    | 56 | D   | 81  | D    |
| 7  | C   | 32 | D    | 57 | A   | 82  | D    |
| 8  | A   | 33 | A    | 58 | D   | 83  | B    |
| 9  | D   | 34 | B    | 59 | C   | 84  | C    |
| 10 | D   | 35 | C    | 60 | D   | 85  | D    |
| 11 | A   | 36 | A    | 61 | B   | 86  | B    |
| 12 | B   | 37 | A    | 62 | D   | 87  | D    |
| 13 | C   | 38 | D    | 63 | B   | 88  | A    |
| 14 | D   | 39 | B    | 64 | C   | 89  | B    |
| 15 | A   | 40 | D    | 65 | C   | 90  | A    |
| 16 | B   | 41 | C    | 66 | D   | 91  | C    |
| 17 | C   | 42 | B    | 67 | A   | 92  | D    |
| 18 | D   | 43 | B    | 68 | D   | 93  | A    |
| 19 | A   | 44 | C    | 69 | A   | 94  | A    |
| 20 | B   | 45 | D    | 70 | B   | 95  | B    |
| 21 | A   | 46 | C    | 71 | B   | 96  | B    |
| 22 | B   | 47 | C    | 72 | C   | 97  | C    |
| 23 | C   | 48 | B    | 73 | B   | 98  | B    |
| 24 | D   | 49 | C    | 74 | B   | 99  | A    |
| 25 | A   | 50 | A    | 75 | A   | 100 | C    |