

**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 1 Choose the option that is most nearly similar in meaning to the word: Candid  
(A) anxious (B) sallow  
(C) outspoken (D) experienced
- 2 The electrical state of the control leads in a serial interface is a concern of the .....  
(A) link layer protocol (B) network layer protocol  
(C) none of these (D) physical layer protocol
- 3 'ઢીયો' તજપદા શબ્દનું આપેલ વિકલ્પોમાંથી યોગ્ય માન્ય રૂપ શોધો.  
(A) ડોસો (B) જડ  
(C) પાપ (D) ભેસ
- 4 Identify the correct spelling out of the given options  
(A) Manageable (B) Managaable  
(C) Managible (D) Managable
- 5 Choose the grammatically INCORRECT sentence:  
(A) They belonged to Africa  
(B) She is an European.  
(C) They migrated from India to Australia.  
(D) He is of Asian Origin.
- 6 A coffee table book titled “.....” was released on the eve of the 16<sup>th</sup> Pravasi Bharatiya Divas in January 2021.  
(A) The Commonwealth of Cricket : A Lifelong Love Affair with the Most Subtle and Sophisticated Game known to Humankind  
(B) Manohar Parrikar – Off the Record  
(C) Modi India Calling – 2021  
(D) India 2030 : The Rise of a Rajasic Nation
- 7 Inline CSS applies a unique style over .....  
(A) Multiple Element (B) Whole Document  
(C) Half Document (D) Single Element
- 8 ..... is the smallest continent of world.  
(A) Antarctica (B) Australia  
(C) South America (D) Asia

93SO21\_03 ]

2

[ Contd...

**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 9 'ઉપા' શબ્દનો આપેલ વિકલ્પોમાંથી યોગ્ય વિરોધી શબ્દ શોધો.  
 (A) પ્રભાત (B) સવાર  
 (C) સ્નેહાળ (D) સંધ્યા
- 10 Attribute minimization in XHTML is .....  
 (A) Forbidden (B) Convertible  
 (C) None of these (D) Allowed
- 11 Which of these places is associated with 'Mahatma Buddha'?  
 (A) Kapilvastu (B) Rajghat  
 (C) Porbandar (D) Macedonia
- 12 A ladder 2.0 m long is placed in a street so as to reach a window 1.6 m high and on turning the ladder to the other side of a street, it reaches a point 1.2 m high. The width of the street is .....  
 (A) 2.4 m (B) 2.0 m  
 (C) 1.6m (D) 2.8 m
- 13 The output of a NOR gate is high if .....  
 (A) all of its inputs are low (B) one of its inputs is low  
 (C) one of its inputs is high (D) all of its inputs are high
- 14 ..... was known as Martin Luther of India.  
 (A) Dayanand Saraswati (B) Lala Lajpat Rai  
 (C) Subhash Chandra Bose (D) Swami Vivekananda
- 15 In JavaScript, the method toString() returns .....  
 (A) Alphanumeric pattern as a string (B) Number as a string  
 (C) Exponential as a string (D) String as a number
- 16 Which of the following is required to communicate between two computers?  
 (A) Protocol (B) Communication Hardware  
 (C) All of these (D) Communication Software
- 17 'સુમન' શબ્દનો આપેલ વિકલ્પોમાંથી યોગ્ય સમાનાર્થી શબ્દ શોધો.  
 (A) ડાખી (B) વસંત  
 (C) કુસુમ (D) સુવાસ

93SO21\_03 ]

3

[ Contd.



**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 18 For a magnetic disk with concentric circular tracks, the seek latency is not linearly proportional to the seek distance due to .....
- (A) arm starting and stopping inertia  
(B) higher capacity of tracks on the periphery of the platter  
(C) use of unfair arm scheduling policies  
(D) non-uniform distribution of requests
- 19 The HTML tag <pre> is used to define a block of .....
- (A) Preferred form text (B) Pre-linked text  
(C) Prepared text (D) Preformatted text
- 20 ..... has the highest melting point of approximately 3410 °C.
- (A) Tungsten (B) Lithium  
(C) Osmium (D) Iron
- 21 ..... is a dense region of space which has the ability to swallow up everything, even light.
- (A) Corona (B) Chromosphere  
(C) Black hole (D) Supernova
- 22 Four branches of a company are located at M, N, O and P.  
M is North of N at a distance of 4km;  
P is South of O at a distance of 3km;  
N is South East of O by 5km.  
What is the approximate distance between M and P in km?
- (A) 6.74 (B) 4.46  
(C) 7.55 (D) 5.65
- 23 Find the error in the following sentence :  
Every man, woman and child in the house on fire have been saved.
- (A) and child (B) in the house on fire  
(C) have been saved (D) Every man, woman
- 24 What does PEAR in PHP stand for?
- (A) PHP Extension and Appending Repository  
(B) PHP Extension and Application Repository  
(C) PHP Encapsulating and Abstraction Repository  
(D) PHP Existing Application Repository
- 25 In which of the following options will the expression  $P < M$  be definitely true?
- (A)  $M > S < P < F$  (B)  $Q < M < F < P$   
(C)  $P = A < R < M$  (D)  $M < R > P > S$

**MaruGujarat.in**  
**HCG System Officer 28-11-2021**

- 26 The city ..... meets in January.  
(A) counsel (B) council  
(C) concert (D) consul
- 27 Former Union Minister and senior Rajasthan Congress Leader ..... passed away at the age of 86 in January 2021.  
(A) Motilal Vora (B) Oscar Fernandes  
(C) Tajdar Babar (D) Buta Singh
- 28 The binary number 10101101 is equal to which hexadecimal number?  
(A) 9A (B) AD  
(C) DA (D) A9
- 29 Which of the following C statements is syntactically correct?  
(A) for(;) {.....} (B) for(.) {.....}  
(C) for(;;) {.....} (D) for() {.....}
- 30 Which of the following starts with    (double underscore) in PHP?  
(A) User-defined constants (B) Magic constants  
(C) Default constants (D) Inbuilt constants
- 31 In the following pairs of OSI protocol layer/sub-layer and its functionality, the incorrect pair is .....  
(A) Data Link Layer and bit synchronization  
(B) Transport Layer and end-to-end communication  
(C) Medium Access Control sub-layer and channel sharing  
(D) Network Layer and Routing
- 32 An Internet Service Provider(ISP) has the following chunk of CIDR-based IP addresses available with it: 245.248.128.0/20. The ISP wants to give half of this chunk of addresses to Organization A, and a quarter to Organization B, while retaining the remaining with itself. Which of the following is a valid allocation of addresses to A and B?  
(A) 245.248.128.0/21 and 245.248.128.0/22  
(B) 245.248.132.0/22 and 245.248.132.0/21  
(C) 245.248.136.0/22 and 245.248.132.0/21  
(D) 245.248.136.0/21 and 245.248.128.0/22



**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 33 Which of the following protocols is NOT used to resolve one form of address to another?  
(A) DHCP (B) ARP  
(C) RARP (D) DNS
- 34 An operating system contains 3 user processes each requiring 2 units of resource R. The minimum number of units of R such that no deadlocks will ever arise is.....  
(A) 4 (B) 5  
(C) 6 (D) 3
- 35 The average weight of 3 men A, B, C is 84 kg. Another man D joins the group and the average now becomes 80 kg. If another man E whose weight is 3 kg more than that of D replaces A then the average weight of B, C, D and E becomes 79 kg. The weight of A is.....  
(A) 72 kg (B) 75 kg  
(C) 80 kg (D) 70 kg
- 36 In terms of Computer Networks, Contention means.....  
(A) a continuous frequency capable of being modulated or impressed with a second signal.  
(B) the condition when two or more stations attempt to use the same channel at the same time.  
(C) a collection of interconnected functional units that provides a data communication service among stations attached to the network.  
(D) one or more conductors that serve as a common connection for a related group of devices.
- 37 ..... a few miles from modern Faizabad, near Lucknow, was the Capital of the Kosala and the Solar King of ancient India.  
(A) Ayodhya (B) Mithila  
(C) Daulatabad (D) Amravati
- 38 Variable name in PHP starts with.....  
(A) \$ (B) &  
(C) # (D) !

[ Contd.. ]

**MaruGujarat.in**  
HCG System Officer 28-11-2021

39 What will be the output of the following C Program?

```
#include <stdio.h>
int main()
{
    int i = 0;
    if(i=0)
        printf(i is zero);
    else
        printf(i is not zero);
}
```

- (A) i is not zero (B) compilation error  
(C) no output (D) i is zero

40 Which number does not belong in the series?

2,5,10,17,26,37,50,64

- (A) 37 (B) 64  
(C) 26 (D) 17

41 ..... in Karnataka is famous for its elaborately sculptured Cheena Kesava Temple of the Hoysala period.

- (A) Kannauj (B) Belur  
(C) Madurai (D) Bhubaneswar

42 Hexadecimal numbers are a mixture of .....

- (A) letters and decimal digits (B) binary and octal numbers  
(C) octal and decimal numbers (D) binary and decimal numbers

43 What does the following JavaScript segment display ?

```
<script>
var text = "System Officer!";
alert(text.substr(-5,5));
</script>
```

- (A) Office (B) icer!  
(C) ficer! (D) Syste

44 It is time that India and Pakistan buried the ..... and became friends again.

- (A) guns (B) hatchet  
(C) snowman (D) dead

45 'બાપુ એટલે બાપુ'. - અલંકાર ઓળખાવો.

- (A) વ્યાજ્ઞત્યુત્તિ (B) ઉપમા  
(C) રૂપક (D) અનુચય

93SO21 03 ]

7

10000



**MaruGujarat.in**  
HCG System Officer 28-11-2021

46. .... is the largest ocean of the World.  
(A) Indian Ocean (B) Pacific Ocean  
(C) South Indian Ocean (D) Atlantic Ocean
47. .... became the first World Test Champion by winning the ICC World Test Championship 2021.  
(A) Australia (B) England  
(C) New Zealand (D) India
48. Which of the following protocol is used for remote terminal connection?  
(A) FTP (B) RARP  
(C) UDP (D) TELNET
49. In JavaScript, if text is not found, methods lastIndexOf() and indexOf() returns .....  
(A) Error! (B) -1  
(C) Null (D) 0
50. If 30% of a number is 12.6, then the number is .....  
(A) 51 (B) 52  
(C) 42 (D) 41
51. 'અંશુ'નો અર્થ છે .....  
(A) કિરણ (B) ભાગ  
(C) દેવીજી (D) અંતર્ભાગ
52. The study of universe is called .....  
(A) Astronomy (B) History  
(C) None of these (D) Cosmology
53. Choose the option that is opposite in meaning to the word: Eccentric  
(A) wacky (B) aberrant  
(C) typical (D) bizarre
54. Two concentric circle are drawn in a field. The radius of outer circle is b while the radius of inner circle is a. The space outside the inner circle and inside the outer circle is called annular space. n number of circles, adjacent to each other are painted in this annular space such that the diameter of these circles is equal to b-a. Which of the following options depicts the area in the annular space that would remain unpainted?  
(A)  $\pi [(b^2-a^2)-n(b-a)^2]$  (B)  $\pi [(b^2-a^2)+n/4(b-a)^2]$   
(C)  $\pi [(b^2-a^2)+n(b-a)^2]$  (D)  $\pi [(b^2-a^2)-n/4(b-a)^2]$

[ Contd...

**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 55 Consider the following relation Hostel(id, name, address, capacity). Which of the following options will be needed at the end of the SQL query:  
SELECT P1.name, P1.address  
FROM Hostel P1  
Such that it always finds the names and addresses of theaters with maximum capacity?  
(A) WHERE P1.capacity >= ANY (SELECT P2.capacity FROM Hostel P2)  
(B) WHERE P1.capacity > ALL (SELECT max(P2.capacity) FROM Hostel P2)  
(C) WHERE P1.capacity > ANY (SELECT max(P2.capacity) FROM Hostel P2)  
(D) WHERE P1.capacity >= ALL (SELECT P2.capacity FROM Hostel P2)
- 56 What is the output of the following C Program?  
#include <stdio.h>  
int main()  
{  
    float f;  
    f=10/3;  
    printf("1 %f", f);  
}  
(A) 1 3.33333 (B) 1 3  
(C) 1 3.34 (D) 1 3.000000
- 57 What is displayed in the web page when the following html segment is used?  
<ol type="I">  
    <li>Coffee</li>  
    <li>Tea</li>  
    <li>Milk</li>  
</ol>  
(A) I. Coffee  
      II. Tea  
      III. Milk  
(B) i. Coffee  
      ii. Tea  
      iii. Milk  
(C) o Coffee  
      o Tea  
      o Milk  
(D) 1. Coffee  
      2. Tea  
      3. Milk
- 58 Dispur is the capital of .....  
(A) Chhattisgarh (B) Assam  
(C) Jharkhand (D) Arunachal Pradesh
- 59 What is the default value of max\_execution\_time directive in php.ini? This directive specifies the number of seconds a script can execute before being terminated.  
(A) 20 (B) 30  
(C) 40 (D) 10

93SO21\_03]

9

[ Contd...



**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 60 ..... has been named as the first-ever 'Kid of the Year' by the iconic TIME magazine in December 2020.  
(A) Angad Daryani (B) Akrit Jaswal  
(C) Priyanshi Somani (D) Gitanjali Rao
- 61 An HTML element that is used to group the footer content in a table is.....  
(A) <tfoot> (B) <tbody>  
(C) <tgroup> (D) <tfoot>
- 62 Who is the current Lieutenant Governor of the Union Territory of Ladakh?  
(A) Radha Krishna Mathur (B) Prafull Patel  
(C) DK Joshi (D) Manoj Sinha
- 63 Which layer of the OSI model is responsible for creating and recognizing frame boundaries?  
(A) Data Link Layer (B) Transport Layer  
(C) Network Layer (D) Physical Layer
- 64 Battle of Haldighati was fought between .....  
(A) Ashoka & King of Kalinga (B) Rana Pratap & Akbar  
(C) Ahmed Shah Abdali & Marathas (D) Alexander & Porus
- 65 By default, any real number in C is treated as .....  
(A) a double  
(B) a long double  
(C) Depends upon memory model that you are using  
(D) a float
- 66 When a decimal number 12 is converted to a binary number, the number of binary digits needed is .....  
(A) 4 (B) 5  
(C) 6 (D) 3
- 67 The angle between the two hands of a clock is 100 degrees when the hour hand is between 4 and 5. What time does the clock show?  
(A) 4 hrs 40 mins. (B) 4 hrs 45 mins.  
(C) None of these (D) 4 hrs 30 mins.
- 68 An attribute of one table matching the primary key of another table is called .....  
(A) Primary Key (B) Unique Key  
(C) Composite Key (D) Foreign Key



**MaruGujarat.in**  
**HCG System Officer 28-11-2021**

69. What is the output of the following PHP code ?

```
<?php  
echo "HELLO WORLD!";  
define("GREETING", "GOOD MORNING!", true);  
echo greeting;  
?>
```

- (A) HELLO WORLD!
- (B) HELLO WORLD!GREETING
- (C) ERROR
- (D) HELLO WORLD!GOOD MORNING!

70. In Java, which of the following options is false about the final keyword?

- (A) A final class cannot be extended
- (B) A final class cannot extend other classes
- (C) A final method can be inherited
- (D) A final method cannot be overridden in its subclass

71. Rajiv Gandhi International Airport is in .....

- (A) Delhi
- (B) Jaipur
- (C) Hyderabad
- (D) Mumbai

72. What error/warning will the following C Program give?

```
#include <stdio.h>  
int main()  
{  
    f(int a, int b){  
        int a; +  
        a = 20;  
        return a;  
    }  
    printf("%i",f(2,4));  
}
```

- (A) error: 'a' redeclared as different kind of symbol
- (B) Program executes without error/warning
- (C) None of these
- (D) warning: implicit declaration of function 'f'

73. Which technique is preferable for transferring a large amount of data to and from a memory in a short time?

- (A) Interrupt-driven I/O
- (B) Programmed I/O
- (C) None of these
- (D) DMA



**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 74 ..... is the study of heredity and variations.  
(A) Biology (B) Zoology  
(C) Genetics (D) History
- 75 'અનુવંશ જૂદિ' શબ્દનો આરેલ વિકલ્પોમાંથી યોગ્ય વિરોધી શબ્દ ચોધો.  
(A) અલ્પ જૂદિ (B) નીચ જૂદિ  
(C) વિનાશ જૂદિ (D) ધમકમ જૂદિ
- 76 In an Entity Relationship Diagram, ellipses represent .....  
(A) relation among entity set  
(B) attributes  
(C) link between attributes and entity set  
(D) entity set
- 77 માટે ભાગે વિરોધી .....ની પહેલાં આવે છે.  
(A) ક્રિયાપદ (B) સર્વનામ  
(C) નામ (D) વિશેષ્ય
- 78 Which backup procedure is the least time consuming?  
(A) Weekly Full Backup and Daily Incremental Backup  
(B) Daily Full backup and Weekly Differential Backup  
(C) Weekly Full Backup and Daily Differential Backup  
(D) Daily Full Backup and Weekly Incremental Backup
- 79 Which of the following for loop declaration is not valid in Java?  
(A) for ( int i = 7; i <= 77; i += 7 )  
(B) for ( int i = 20; i >= 2; -i )  
(C) for ( int i = 2; i <= 20; i = 2\* i )  
(D) for ( int i = 99; i >= 0; i / 9 )
- 80 'વલ્લભ' શબ્દનો આરેલ વિકલ્પોમાંથી યોગ્ય સમાનાર્થી શબ્દ ચોધો.  
(A) પ્રિય (B) વધ  
(C) ભગવાન (D) પ્રીતમ

**MaruGujarat.in**  
HCG System Officer 28-11-2021

- 81 Round Robin scheduling is essentially the preemptive version of .....  
(A) Shortest Job First (B) Shortest Remaining Time First  
(C) Longest Time First (D) First In First Out
- 82 He turned a deaf ear to my request. What does the underlined phrasal verb mean?  
(A) appreciated (B) twisted  
(C) returned (D) ignored
- 83 The 32 bit internet address 10000000 00001010 00000010 00011110 will be written in dotted decimal notation as .....  
(A) 128.8.2.30 (B) 128.10.2.32  
(C) 128.10.2.28 (D) 128.10.2.30
- 84 Choose the statement where underlined word is used correctly  
(A) He ensured that the company will not have to bear any loss.  
(B) The actor got himself ensured against any accident.  
(C) The teacher insured students of good results.  
(D) The minister insured the victims that everything would be all right.
- 85 Consider a main memory with five page frames and the following sequence of page references: 3, 8, 2, 3, 9, 1, 6, 1, 8, 9, 3, 6, 3, 2, 1, 3. How many page faults will occur if Least Recently Used page replacement policy is in place?  
(A) 8 (B) 9  
(C) 10 (D) 7
- 86 ..... is one of the most beautiful and well-planned places in India which was designed by a French Architect Le Corbusier.  
(A) Tripura (B) Gandhinagar  
(C) Shimla (D) Chandigarh
- 87 When an interrupt occurs, an operating system .....  
(A) always changes state of interrupted process after processing the interrupt  
(B) always resumes execution of interrupted process after processing the interrupt  
(C) may change state of interrupted process to blocked and schedule another process  
(D) ignores the interrupt
- 88 Half a byte is called a .....  
(A) byte (B) word  
(C) bit (D) nibble

935021\_03 ]

13

[Contd...



**MaruGujarat.in**  
HCG System Officer 28-11-2021

89. Select the pair that best expresses a relationship similar to that expressed in the pair:  
Medicine : Health  
(A) Wealth : Peace (B) Education : Knowledge  
(C) Money : Happiness (D) Science : Experiment
90. Which of the following is used for concatenation in PHP?  
(A) \*(asterisk) (B) &(ampersand)  
(C) .(dot) (D) +(plus)
91. What is the output of the following Java code?  

```

public class MyClass {
    Test1 t1 = new Test1(10);
    MyClass(int i) { t1 = new Test1(i); }
    public static void main(String[] args){
        MyClass t2 = new MyClass(5);
    }
}
class Test1{
    Test1(int x){
        System.out.println("Constructor called " + x);
    }
}

```

(A) Constructor called 5 Constructor called 10  
(B) Constructor called 15 Constructor called 10  
(C) Constructor called 10  
(D) Constructor called 10 Constructor called 5
92. In Regular Expression pattern matching, the metacharacter `\b` finds a .....  
(A) White-Space Character (B) Start of a word  
(C) Unicode Special Character (D) Digit
93. The `typeof` operator of JavaScript always returns a/an .....  
(A) Function (B) String  
(C) Number (D) Object
94. આપેલ શબ્દસમૂહ માટે એક શબ્દ આપો - 'રૂઝનાની ઉજ્જા'  
(A) પુષ્પા (B) પુષ્પાશી  
(C) રૂઝેશી (D) રૂઝી

**MaruGujarat.in**  
HCG System Officer 28-11-2021

95. Which normal form is considered adequate for normal relational database design?  
(A) 3 NF (B) 4 NF  
(C) 5 NF (D) 2 NF
96. Who is the present/current Indian Air Chief Marshall?  
(A) Air Chief Marshall RKS Bhadauria  
(B) Air Chief Marshall Vivek Ram Chaudhari  
(C) Air Chief Marshall Birender Singh Dhumron  
(D) Air Chief Marshall Sunil Lamba
97. Give synonym of : Hindsight  
(A) devotion (B) lenient  
(C) communication (D) retrospect
98. What is the output of the following Java Code?  

```

public class HelloWorld{
    public static void main(String []args){
        Integer a = 128, h = 128;
        System.out.println(a == b);
        Integer c = 100, d = 100;
        System.out.println(c == d);
    }
}

```

  
(A) true false (B) true true  
(C) false false (D) false true
99. 'સોમ્ય આપણ' - એટલે શું ?  
(A) ઝાઝી વસ્તુઓ ન લાવવી (B) ઉત્તરવું  
(C) દુઃખ થવું (D) સોમ્યા માણસો આવવા
100. A man travels from A to B to buy goods which he can get 10% cheaper in B than A. If the expenses of the journey are Rs. 15 and he makes a clear saving of Rs. 10, what does he pay for the goods?  
(A) Rs. 215 (B) Rs. 200  
(C) Rs. 225 (D) Rs. 230

93SO21\_03 ]

15

[ Contd...