016/2018

Question Booklet Alpha Code	A	Question Booklet Serial Number	

Total Number of Questions : 100 **Time : 75 Minutes**

Maximum Marks : 100

INSTRUCTIONS TO CANDIDATES

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz. **A**, **B**, **C** & **D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is un-numbered, please get it replaced by new question booklet with same alpha code.
6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

016/2018

1.
```
#define AND &&
#define OR !!
#define LE <=
#define GE >=
main()
{
    char ch='D' :
    if ((ch GE 65 AND ch LE 90) OR (ch GE 97 AND ch LE 122))
    printf("alphabet");
    else
        printf("not an alphabets"):
}
```

(A) Compilation error (B) Not an alphabet

(C) Alphabet (D) None of the above

2.
```
main()
{
    static char * s[] = {"ice", "green", "core", "please"}:
    static char **ptr[] = {s+3, s+2, s+1,s}:
    char ***p=ptr;
    printf("%s\n", **++p);
    printf("%s\n", *--*++p+3);
    printf("%s\n", *p[-2]+3);
    printf("%s\n",p[-1][-1]+1);
    }
```

(A) ice (B) core (C) please (D) None

plea ase core

gr reen gr

3.
```
main()
{
    int k=35,z;
    K=func1(k=func1(k=func1(k)));
    printf("k=%d",k);
}
Funct1(k)
int k:
{
K++;
return(k):
}
```
(A) 35 (B) 37 (C) 38 (D) 40

4.
```
main ()
{
int j=1;
while (j<=255);
printf("%c%d\n", j,j);
j++;
}
}
```
(A) 255 (B) 255, 255 (C) No output (D) 256

5.
```
main()
{
int a=500, b=100,c;
if (!a>=400)
b=300;
c=200;
printf("b=%d c=%d",b,c);
}
```
(A) b=100, c=400 (B) b=100, c=300
(C) b=100, c=200 (D) None of the above

6. Multiple inheritance in java can be achieved by :
(A) interface (B) polymorphism (C) abstraction (D) encapsulation

7. Which is the base class of all classes in java ?
(A) system.lang (B) class.object (C) java.lang.object (D) none of the above

8. class output
{
public static void main (string args[ ])
{string Buffer sb=new string Buffer ("Hello");
Sb.delete (0,2);
system.out.println(c);
}
(A) He (B) Hel (C) lo (D) llo

9. Which of the interface contain all the method used for handling thread related operations in java ?
(A) Runnable interface (B) Math interface
(C) System interface (D) Thread handling interface

10. Which of the package contains abstract keyword ?
(A) java.lang (B) java.util (C) java.io (D) java.system

11. A member function which initializes data member of an object in :
(A) Destructor (B) Constructor (C) Inline function (D) Friend function

12. A C++ key word, which, when used inside a member function of a class, represents a pointer to the particular class object that invoked it :
(A) * (B) this (C) → (D) None

13. Which of the following is a non linear data structure ?
(A) Tree (B) Array
(C) Linked list (D) None of the above

14. Which of the following is NOT a method for performing amortized analysis of algorithms ?
(A) Aggregate method (B) Accounting method
(C) Potential method (D) None of the above

15. 0-1 Knapsack problem can be solved by :
(A) Greedy method (B) Dynamic programming method
(C) Divide and conquer method (D) None of the above

16. Which is NOT a collision resolution technique in Hashing ?
(A) Chaining (B) Linear probing
(C) Quadratic Probing (D) None of the above

17. If any NP complete problem is in P class, then :

(A) $P = NP$ (B) $P! = NP$

(C) $P \leq NP$ (D) None of the above

18. Which of the following problem is NOT NP-complete ?

(A) Hamiltonian cycle problem (B) Clique problem

(C) Travelling – salesman problem (D) None of the above

19. The running time of Kruska'ls algorithm for a graph $G = (V, E)$ for finding Minimum–spanning–tree is :

(A) $O(E \log_2 V)$ (B) $O(E + V \log_2 V)$

(C) $O(E^2)$ (D) $O(V^2)$

20. The data structure used in breadth–first–search (BST) is :

(A) Stack (B) Queue

(C) B–Tree (D) None of the above

21. Strassen's algorithm for multiplying $n \times n$ matrices runs in :

(A) $O(n^2)$ time (B) $O(n^3)$ time (C) $O(2^n)$ time (D) $O(n^{2.81})$ time

22. The postfix representation of the expression $(a + b*c) + ((d*e + f)*g)$ is :

(A) $abc* + de*f + g* +$ (B) $ab + c*de*f + g + *$

(C) $ab + c*de*f + g* +$ (D) $abc* + def* + g* +$

23. The worst case time complexity of merge sort is :

(A) $O(n^2)$ (B) $O(n \log n)$ (C) $O(n^3)$ (D) $O(2^n)$

24. A set of $n >= 0$ disjoint trees :

(A) Tree (B) Forest (C) B Tree (D) All of the above

25. Which of the following is a linear data structures ?

(A) Array (B) Linked list

(C) Both (A) and (B) (D) None of the above

26. The worst case time complexity of Quick sort is :

(A) $O(n^2)$ (B) $O(n \log n)$ (C) $O(n^3)$ (D) $O(2^n)$

27. Which of the following data structure is frequently used to implement priority queue ?

(A) Stack (B) Heap

(C) Treap (D) None of the above

28. A list in which contain nodes of different types :

(A) Homogenous list (B) Heterogeneous list

(C) Doubly linked list (D) None of the above

29. An ordered list in which insertion and deletion of nodes are made at one end ?

(A) Deque (B) Queue

(C) Stack (D) None of the above

30. A matrix whose most of the elements are zeroes :

(A) sparse matrix (B) dense matrix

(C) square matrix (D) none of the above

31. Which of the following is a self balancing binary search tree ?

(A) B– Tree (B) AVL Tree

(C) B+ Tree (D) None of the above

32. A network with bandwidth of 10 Mbps can pass only an average of 12000 frames per minute with each frame carrying an average of 10,000 bits. What is the throughput of this network ?

(A) 22 Mbps (B) 2 Mbps (C) 10 Mbps (D) 100 Mbps

33. A system is using NRZ-l to transfer 10-Mbps data. What is the average signal rate ?

(A) 500 Kbaud (B) 1000 MHz (C) 500 MHz (D) 1000 Kbaud

34. What is the minimum required bandwidth to send data at 1-Mbps rate using Manchester Encoding ?

(A) 10 MHz (B) 2 MHz (C) 5 MHz (D) 1 MHz

35. To send 3 bits data at a time at a bit rate of 3 Mbps with a carrier frequency of 10 MHz calculate the baud rate and bandwidth :

(A) 10 Mbaud and 10 MHz (B) 2 Mbaud and 2 MHz

(C) 1 Mbaud and 8 MHz (D) None of these

36. Eight channels each with a 100-kHz bandwidth are to be multiplexed together. What is the minimum bandwidth of the link if there is a need for a guard band of 10 kHz between channels to prevent interference ?

(A) 540 kHz (B) 870 kHz (C) 1020 kHz (D) 1080 kHz

37. The digital multiplexing technique for combining several low-rate channels into high-rate one :

(A) TDM (B) FDM (C) CDM (D) none of these

38. RG-59 category cables are used for :

(A) Telephone (B) LAN
(C) Cable TV networks (D) None of these

39. The bit oriented protocol for communication over point to point and multipoint links is :

(A) HDLC (B) Stop and wait protocol
(C) PPP (D) PAP

40. The service not provided by PPP is :

(A) network address configuration (B) authentication
(C) flow control (D) none of these

41. Encryption is done at :

(A) Presentation Layer (B) Application Layer
(C) Session Layer (D) Transport Layer

42. One channel carries all transmissions simultaneously in :

(A) TDMA (B) CDMA (C) FDMA (D) PDMA

43. The IEEE standard for Wifi is :

(A) 802.4 (B) 802.1 (C) 802.2 (D) 802.11

44. An example for cell switched network is :

(A) SONET (B) ATM (C) UPSR (D) None of these

45. GSM is a digital cellular phone system using :

(A) TDMA and packet switching (B) CDMA and packet switching
(C) TDMA and FDMA (D) FDMA and CDMA

46. UDP is a :

(A) Connectionless unreliable protocol

(B) Reliable and connection oriented protocol

(C) Connectionless reliable protocol

(D) Connection oriented unreliable protocol

47. SCTP is a _____ layer protocol.

(A) Session Layer (B) Application Layer

(C) DLL (D) Transport Layer

48. The result which operation contains all pairs of tuples from the two relations, regardless of whether their attribute values match ?

(A) Join (B) Cartesian product

(C) Intersection (D) Set difference

49. The most commonly used operation in relational algebra for projecting a set of tuple from a relation is :

(A) Join (B) Projection (C) Select (D) Union

50. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute.

(A) Domain (B) Relation (C) Set (D) Schema

51. Managers salary details are hidden from employees. This is :

(A) Conceptual level data hiding (B) Physical level data hiding

(C) External level data hiding (D) None of these

52. In SR flip-flop, if $S = R = 1$ then $Q(t+1)$ will be :

(A) Q(t) (B) 0

(C) 1 (D) indeterminate state

53. If an encoder has 2^n (or less) input lines. Then output line is :

(A) $n/2$ (B) n (C) 2^n (D) $n-1$

54. The 10's complements of 13250 is :

(A) 86740 (B) 86750 (C) 97850 (D) 97859

55. DeMorgan's theorem says that a NOR gate is equivalent to _____ gate.

(A) Bubbled XOR (B) Bubbled AND (C) NOR (D) Bubbled NOR

56. $AB + B((B + C') + B'C)$ can be simplified to :

(A) $AB + BC$ (B) $B + BC$

(C) $B + C$ (D) None of the above

57. The self complementing unweighted code is :

(A) 8421 (B) 2421 (C) Excess 3 (D) Gray code

58. In 8086 microprocessor the following has the highest priority among all the type of interrupt :

(A) NM 1 (B) type 255 (C) over flow (D) Div 0

59. Which among the following is the maximum mod signal in 8085 ?

(A) DT/R' (B) HOLD (C) ALE (D) LOCK

60. INT2 in 8086 is :

(A) Single step interrupt (B) Non maskable interrupt

(C) Division by zero interrupt (D) Overflow interrupt

61. Which among the following is the programmable DMA controller in 8086 ?

(A) 8259 (B) 8257 (C) 8251 (D) 8250

62. In cyclomatic complexity, if E is the number of edges and N is the number of nodes, V(G), for a flow graph is defined as :

(A) $E - N + 2$ (B) $E - N - 1$ (C) $E + N - 2$ (D) $E + N - 1$

63. Which among the following is the risk driven process model ?

(A) Prototyping (B) Spiral model

(C) Component based development (D) Waterfall model

64. Which testing method is normally used as the acceptance test for a software system ?

(A) Unit testing (B) Integration testing

(C) Functional testing (D) Regression testing

65. Application like Banking and Reservation require which type of operating system :

(A) Hard real time (B) Soft real time

(C) Real time (D) Time sharing

66. Preemptive scheduling is the strategy of temporally suspending a running process :

(A) To avoid collision (B) When it request i/o

(C) Before the CPU time slice expires (D) None of the above

67. Time for the disk, rotate to the start of the desired sector is known as :
(A) Seek time (B) Transfer time (C) Latency time (D) Access time

68. Mutual exclusion problem occurs between :
(A) Process that share resources
(B) Process use not the same resources
(C) Two disjoint process that do not interact
(D) None of the above

69. PNG stands for :
(A) Packet network graphics (B) Portable network graphics
(C) Protocol for network graphic (D) None of the above

70. The maintenance activity to find and fix error during operation of error is :
(A) adaptive maintenance (B) corrective maintenance
(C) perfective maintenance (D) preventive maintenance

71. Which method uses small increments with minimum planning and iterations are short time frames ?
(A) Water fall model (B) Spiral model
(C) Agile model (D) Prototype model

72. Telnet is a :
(A) Remote login (B) Television network
(C) Network of telephone (D) None of the above

73. Trends to outsource IT functions t other countries is known as :
(A) Outer outsourcing (B) External outsourcing
(C) Foreign outsourcing (D) Offshore outsourcing

74. Which of the following method of channelization are used for mobile data internet working ?
(A) Time division multiple access (B) Frequency division multiple access
(C) Code division multiple access (D) All of the above

75. Honey pot is an example for :
(A) Security auditing software (B) Encryption – decryption software
(C) Intrusion – detection software (D) Virus

76. 'Hibernate' in Windows XP/Windows 7 means :
(A) Shutdown the computer without closing the running application
(B) Shutdown the computer terminating all running applications
(C) Restart the computer
(D) Restart the computer in safe mode

77. The UNIX Shell is :
(A) A command line interpreter (B) Set of user commands
(C) A GUI interface (D) All of the above

78. If every non key attribute is functionally depend on primary key, then the relation will be :
(A) First normal form (B) Second normal form
(C) Third normal form (D) Fourth normal form

79. An attribute of one table is matching the primary key of another table, is known as :
(A) Secondary key (B) Foreign key
(C) Candidate key (D) Composite key

80. In relational model, tuple is equivalent to :
(A) Record (B) Table (C) File (D) Field

81. Who among the following leaders is not associated with the formation of the Congress Socialist Party in 1934 ?
(A) Sardar Vallabhai Patel (B) Jayaprakash Narayanan
(C) Achyuth Patwardhan (D) R.M. Lohya

82. The code name "Operation Barbarosa" is associated with the following countries in the Second World War :
(A) England and France (B) France and Germany
(C) Germany and Soviet Union (D) U.S.A. and Japan

83. Who among the following is the author of "Prince of the folly" ?
(A) Erasmus (B) Machiavelly (C) Thomas More (D) Boccassio

84. Which of the following social reformer of Kerala founded the "Sadhu Jana Sangam" ?
(A) Mannath Padmanabhan (B) Vagbhatanantha
(C) Ayyankali (D) Pandit Karuppan

85. Which National leader of India is nicknamed as "Prince of workers" ?
(A) Dadabhai Naoroji (B) Gopalakrishna Gokhale
(C) Bal Gangadhara Tilak (D) Surendra Natha Bannarjee

86. "New India" is the Newspaper published by :
(A) Mahatma Gandhi (B) Annie Beasant
(C) Syed Ahammed Khan (D) Lala Lajpath Rai

87. The Indian Independence Act Passed by the British Parliament in :
(A) August 14, 1947 (B) July 1, 1947
(C) February 12, 1947 (D) July 18, 1947

88. Which social reformer of Kerala started the weekly "Prabhodakam" ?
(A) Mannath Padmanabhan (B) Muhammed Abdul Rahman
(C) Kesari Balakrishna Pillai (D) Swadeshabhimani Ramakrishna Pillai

89. Which of the following state of India is called the "Botanist paradise" ?
(A) Assam (B) Kashmir
(C) Sikkim (D) Arunachal Pradesh

90. Who among the following ruler built the famous "Charminar" ?
(A) Firus Shah Tuglak (B) Shahjahan
(C) Aurangazeb (D) Quli Qutub Shah

91. Which among the following is India's National river ?
(A) Indus (B) Ganga (C) Brahmaputhra (D) Narmada

92. Swaraj Party was the outcome of which of the following incident ?
(A) Chauri-Chaura (B) Quit India
(C) Simon Commision (D) Bardoli Satyagraha

93. Who is called the "Lincoln of Kerala" ?
(A) Pandit Karuppan (B) Dr. Palpu
(C) Sahodharan Ayyappan (D) Poikayil Yohannan

94. In the constitution of India article 32 deals with :
(A) Writ (B) Equal pay for equal work
(C) Panchayath raj system (D) Uniform civil code

95. "Panmana Asramam" is related to :

(A) Kumarasenan (B) Chattambi Swamikal

(C) Vagbadanandhan (D) Vaikunda Swamikal

96. Who among the following is the President of Karachi Session of INC in 1931 ?

(A) Sardar Vallabhai Patel (B) Mothilal Nehru

(C) Jawaharlal Nehru (D) Annie Besant

97. Which among the following year the famous Malayalam historical novel "Martandavarma" published ?

(A) 1901 (B) 1906 (C) 1891 (D) 1896

98. In which of the following year last Mamankam was held at Thirunavaya ?

(A) 1775 (B) 1780 (C) 1792 (D) 1802

99. Which ruler of Cochin started "Thrissur Pooram" ?

(A) Swathi Thirunal (B) Marthanda Varma

(C) Sakthan Thampuran (D) Sree Chithira Thiruna

100. Who among the following raised the slogan "Inquilab Zindabad" for the first time ?

(A) Surya Sen (B) Bhagat Singh

(C) V.D. Savarkar (D) Chandrasekhar Azad

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SPACE FOR ROUGH WORK

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