General Aptitude Test (DCIO)

CBRT- held on 21st January 2018 (A/N)

1. If twice the Son's age in years is added to Father's age, the sum is 70 years. And if twice the Father's age is added to the Son's age, the sum is 95 years. The age of Father and Son are:

   (a)   45 *years* and 15 *years*

   (b)   40 *years* and 15 *years*

   (c)   40 *years* and 20 *years*

   (d)   45 *years* and 20 *years*

2. In a Cricket match Kapil took one wicket less than twice the number of wickets taken by Ravi. If the product of the number of wickets taken by these two players is 15, the number of wickets taken by Kapil and Ravi respectively are:

   (a)   5 and 3

   (b)   3 and 5

   (c)   5 and 4

   (d)   4 and 5

3. A chord *AB* of a circle of radius 10 *cm* makes a right angle at the centre of the circle. The area of the minor segment is:

   (a)   78.5 cm^2

   (b)   50.0 cm^2

   (c)   40.0 cm^2

   (d)   28.5 cm^2

4. A cone of height $24\ cm$ has a curved surface area $550\ cm^2$. Its volume is:

    (a) $1332\ cm^3$

    (b) $1232\ cm^3$

    (c) $1132\ cm^3$

    (d) $1322\ cm^3$

5. What number must be added to each of the number $7, 16, 43$ and 79 to make the numbers in proportion?

    (a) 6

    (b) 5

    (c) 4

    (d) 3

6. The area of the curve $r = a\ (1 - \cos\theta)$ is:

    (a) $\dfrac{a^2\pi}{2}$

    (b) $\dfrac{5\,a^2\pi}{2}$

    (c) $\dfrac{4\,a^2\pi}{2}$

    (d) $\dfrac{3\,a^2\pi}{2}$

7. The value of integral $\int_0^1 e^{2x} \cdot x^2 \, dx$ is:

(a) $\dfrac{e^2}{4}$

(b) $\dfrac{e^2}{2}$

(c) $\dfrac{e^2-1}{2}$

(d) $\dfrac{e^2-1}{4}$

8. The distance of the point $(1, -2, 3)$ from the plane $x - y + z = 5$ measured parallel to the line, $\dfrac{x}{2} = \dfrac{y}{3} = \dfrac{z}{-6}$ is:

(a) $\dfrac{1}{2}$

(b) 1

(c) $\dfrac{1}{3}$

(d) 2

9. In an LPP: Minimize $Z = 3\, x_1 + 2\, x_2$

Subject to: $5\, x_1 + x_2 \geq 10$

$x_1 + x_2 \geq 6$

$x_1 + 4x_2 \geq 12$

$x_1, \; x_2 \geq 0$

The values of x_1 and x_2 respectively, are:

(a) 5 and 1

(b) 1 and 5

(c) 3 and 2

(d) 2 and 3

10. The energy required for a satellite to leave its orbit around the earth and escape to infinity is called:

    (a) Potential energy

    (b) Binding energy

    (c) Gravitational energy

    (d) Positive energy

11. Which of the following characteristics are required by the medium for transfer of energy to take place?

    1. Elastic property

    2. Property of inertia

    3. Large frictional resistance

    (a) 1 and 2 only

    (b) 1 and 3 only

    (c) 2 and 3 only

    (d) 1, 2 and 3

12. A substance undergoes a change in pressure or volume but no heat is allowed to enter or leave. Such a change is known as:

    (a) Isothermal change

    (b) Reversible change

    (c) Irreversible change

    (d) Adiabatic change

13.   Which of the following are non-polar molecules?

    1.   Oxygen (O_2)

    2.   Nitrogen(N_2)

    3.   Hydrogen (H_2)

    (a)   1 and 2 only

    (b)   1 and 3 only

    (c)   2 and 3 only

    (d)   1, 2 and 3

14.   A transparent plate of thickness $10^{-5}m$ is placed in the path of interfering beam of bi-prism experiment using light of wavelength $500\,nm$. If the central fringe shifts by a distance equal to the width of 10 fringes, then the refractive index of the material of the plate is:

    (a)   1.10

    (b)   1.35

    (c)   1.85

    (d)   1.50

15.   What is the highest order spectrum which may be seen with monochromatic light of wavelength $600\,nm$ by means of diffraction grating with $5000\,lines/cm$?

    (a)   1

    (b)   2

    (c)   3

    (d)   4

16. A diffraction grating has $0.15\ m$ of surface ruled with $6 \times 10^5\ lines/m,$ the refractive index of first order is:

(a) 9×10^6

(b) 6×10^5

(c) 9×10^4

(d) 6×10^3

17. Wavelength λ associated with a moving particle depends on its mass m, velocity of motion v and Plank's constant h. then the wavelength is proportional to:

(a) $\dfrac{h^2}{m\ v}$

(b) $\dfrac{h}{m\ v^2}$

(c) $\dfrac{h}{m\ v}$

(d) $\dfrac{h}{m^2\ v}$

18. A reversible engine takes in a mixture of fuel and air at $27\degree C$ and the highest temperature after combustion is $427\degree C$. What is the Carnot's efficiency of the engine working between these two temperature limits?

(a) 52.7 %

(b) 57.1 %

(c) 47.1 %

(d) 42.7 %

19. What resistance must be connected in series with an inductor of $5\ millihenry$ so that the circuit has a time constant of $2 \times 10^{-3} sec$?

    (a) 1.5 Ω

    (b) 4.5 Ω

    (c) 3.5 Ω

    (d) 2.5 Ω

20. The luminous efficiency of a lamp is $5\ lumen/watt$ and its power is $88\ watt$. What is the illuminance on a surface placed at a distance of $10\ m$, when the light is falling normally?

    (a) 0.35 lux

    (b) 0.6 lux

    (c) 0.5 lux

    (d) 0.45 lux

21. A biconvex lens has a focal length $\frac{2}{3}$ times the radius of curvature of either surface. The refractive index of lens is:

    (a) 1.55

    (b) 1.65

    (c) 1.75

    (d) 1.85

22. An audio signal of amplitude $0.1\ V$ is used in amplitude modulation of a carrier wave of amplitude $0.2\ V$. The modulation index is:

   (a)   0.1

   (b)   0.3

   (c)   0.5

   (d)   0.7

23.   Consider the following:

   1.   Byte

   2.   Double

   3.   Long

   4.   Short

   Which of the above are the valid integer types of *JAVA*?

   (a)   1, 2 and 3 only

   (b)   1, 2 and 4 only

   (c)   2, 3 and 4 only

   (d)   1, 3 and 4 only

24. In *JAVA*, the math class has a powerful method, which generates a random value:

   (a)   Greater than or equal to 0.0 and less than 1.0

   (b)   Greater than or equal to 0.0 and less than or equal to 1.0

   (c)   Greater than 1.0

   (d)   Less than or equal to 1.0

25.   In *JAVA*, ''Welcome''. replaceFirst ("e", "AB") returns a new string:

(a)   WABlcomAB

(b)   WABlcome

(c)   Welcome

(d)   WABLCOME

26.   An object whose contents cannot be changed once the object is created is called:

(a)   Immutable object

(b)   Mutable object

(c)   Smart object

(d)   Rich object

27.   Which one of the following fundamental features of the $OOPs$ is not supported by $C++$?

(a)   Persistence

(b)   Delegation

(c)   Genericity

(d)   Data abstraction

28.   Which one of the following features is supported by $C++$ but not by *JAVA*?

(a)   Encapsulation

(b)   Multiple inheritance

(c)   Concurrency

(d)   Garbage collection

29. Consider the following statements regarding $JAVA$:

   1. It is a high performance programming language

   2. It does not support pointers

   3. It omits features that make $C + +$ complex

   4. It provides platform-dependent solution

   Which of the above statements are correct?

   (a)   1, 2 and 4 only

   (b)   1, 3 and 4 only

   (c)   1, 2 and 3 only

   (d)   2, 3 and 4 only

30. Consider the following features regarding $C + +$:

   1. Emphasis on algorithm rather than data

   2. Improvement over the structural programming paradigm

   3. Relationship can be created between similar, yet distinct data types

   Which of the above features are correct?

   (a)   2 and 3 only

   (b)   1 and 2 only

   (c)   1 and 3 only

   (d)   1, 2 and 3

31. A mobile is located $5\ km$ away from a base station and makes use of a vertical ¼ monopole antenna with a gain of $2.55\ dB$ to receive cellular radio signals. The E-field at 1 km from the transmitter is measured to be $10^{-3}\ V/m$. The carrier frequency used for this system is $900\ MHz$, the length and the effective apertures of the receiving antenna are nearly:

(a) $0.05\ m$ and $0.01\ m^2$

(b) $0.08\ m$ and $0.01\ m^2$

(c) $0.05\ m$ and $0.06\ m^2$

(d) $0.08\ m$ and $0.06\ m^2$

32. What is the far field distance for an antenna with largest dimension $1.5\ m$ and the corresponding frequency of $1200\ MHz$?

(a) $12\ m$

(b) $3\ m$

(c) $6\ m$

(d) $8\ m$

33. The block length and size of check code in Reed-Solomon code for $m = 2$ and $t = 1$ are respectively:

(a) 4 bits and 6 bits

(b) 6 bits and 6 bits

(c) 4 bits and 4 bits

(d) 6 bits and 4 bits

34. What is the total power P_T in amplitude modulated signal (AM), if the modulation indices are $0.3, 0.2, 0.5$ and 0.6, where the carrier signal power is $28\,Watts$?

   (a) $38.36\,Watts$

   (b) $28.26\,Watts$

   (c) $32.16\,Watts$

   (d) $18.89\,Watts$

35. A telephone voice transmission needs transmission of recurrences up to $3.6\,kHz$, the broadcast video using North American standard needs transmission of frequencies upto $4.5\,MHz$. If certain modulation scheme requires $10\,kHz$ for its audio transmission, the bandwidth required to transmit video using the same scheme is:

   (a) $08.5\,MHz$

   (b) $10.0\,MHz$

   (c) $12.5\,MHz$

   (d) $15.0\,MHz$

36. A vehicle travels through the cellular mobile system at $150\,kmph$. How often handoffs take place if the cell radius is $4\,km$?

   (a) $192.3\,sec$

   (b) $180.3\,sec$

   (c) $163.5\,sec$

   (d) $150.9\,sec$

37. A truck travels at $65\ km$ in $1\ hour$ and if it uses a PCS phone at $1900\ MHz$, the time period between the fades is:

    (a) $5.9\ m/sec$

    (b) $4.4\ m/sec$

    (c) $8.3\ m/sec$

    (d) $6.1\ m/sec$

38. What is the bandwidth efficiency if a $\frac{\pi}{4}$ $DQ\ PSK$ supports data transmission of three various $48.6\ kB/sec$ digitized voice signal in a bandwidth of $30\ kHz$?

    (a) $6.66\ bytes/sec/Hz$

    (b) $5.75\ bytes/sec/Hz$

    (c) $4.86\ bytes/sec/Hz$

    (d) $3.96\ bytes/sec/Hz$

39. The bandwidth of a network is $1\ Gbps$, the distance between sender and the receiver is $12,000\ km$ and light travels at $2.4 \times 10^8\ m/s$, the propagation time and transmission time for a $2.5\ kB$ message (an e-mail) are:

    (a) $50\ ms$ and $40\ ms$

    (b) $40\ ms$ and $40\ ms$

    (c) $50\ ms$ and $0.02\ ms$

    (d) $40\ ms$ and $0.02\ ms$

40. A bandwidth of $100\,kHz$ spans $200\,kHz$ to $300\,kHz$. If the data is modulated by using ASK with $d = 1$ and $r = 1$ the carrier frequency and bit rates are:

    (a) $110\,kHz$ and $30kbps$

    (b) $100\,kHz$ and $50kbps$

    (c) $110\,kHz$ and $50kbps$

    (d) $100\,kHz$ and $30kbps$

41. A pure ALOHA network transmits $200\,bit$ frames on a shared channel of $200\,kbps$. If the system with all stations together produces $1000\,frames/s$, the throughput is: (Assuming $S = 0.135\ (13.5\%)$)

    (a) $135\,frames$

    (b) $140\,frames$

    (c) $145\,frames$

    (d) $150\,frames$

42. A network using CSMA/CD has a bandwidth of $10\,Mbps$. If the maximum propagation time including the delays in the devices and ignoring the time needed to send a jamming signal is $25.6\,\mu s$, the minimum size of the frame is:

    (a) $256\,bits$

    (b) $1024\,bits$

    (c) $128\,bits$

    (d) $512\,bits$

43. The data rate of an *STS*-1 signal is:

    (a)   155.52 *Mbps*

    (b)   51.84 *Mbps*

    (c)   100 *Mbps*

    (d)   150 *Mbps*

44. In an *IPv*4 packet, the value of *HLEN* is $(1000)_2$. The number of bytes of options carried by the packet is:

    (a)   08 *bytes*

    (b)   16 *bytes*

    (c)   02 *bytes*

    (d)   12 *bytes*

45. In a stop-and-Wait system, the bandwidth of the line is 1 *Mbps*, 1 *bit* takes 20 *ms* to make a round trip and the system data packets are 1000 *bits* in length. The bandwidth-delay product and the utilization of the link are:

    (a)   10,000 *bits* and 5 %

    (b)   20,000 *bits* and 10 %

    (c)   10,000 *bits* and 10 %

    (d)   20,000 *bits* and 5 %

46. The frequency f, peak-voltage amplitude V and phase θ for the voltage waveform, $v(t) = 6\sin(2\pi\ 10{,}000\ t + 30)$ are:

    (a) $20\ kHz, 6\ volts$ and 45°

    (b) $10\ kHz, 6\ volts$ and 30°

    (c) $20\ kHz, 3\ volts$ and 30°

    (d) $10\ kHz, 3 volts$ and 45°

47. For a binary FSK signal with mark frequency of $49\ kHz$, space frequency of $51\ kHz$ and an input bit rate of $2\ kbps$, the peak frequency deviation Δf, the minimum bandwidth B and the baud, are:

    (a) $3\ kHz$, $9\ kHz$ and 1000

    (b) $3\ kHz$, $9\ kHz$ and 2000

    (c) $1\ kHz$, $6\ kHz$ and 2000

    (d) $1\ kHz$, $6\ kHz$ and 1000

48. What is the length of an $ICMP$ data field for an Ethernet frame that is carrying an IP datagram with a $20\ byte$ header, an $ICMP$ message with a header length of $8\ bytes$ and the Ethernet data field is $480\ bytes$ long?

    (a) $452\ bytes$

    (b) $480\ bytes$

    (c) $256\ bytes$

    (d) $280\ bytes$

49. For a single-channel PCM system with sample rate $f_s = 6000$ samples per second and $7bit$ compressed PCM code, the line speed is:

    (a)   42,000 bps

    (b)   32,000 bps

    (c)   22,000 bps

    (d)   12,000 bps

50. For an $UART$ receiving data at $1000\ bps$ (f_b) with a receiver clock 16 times faster than the incoming data, the bit time, the receive clock rate and the maximum detection error are:

    (a) $1\ ms,\ 8\ kHz$ and $62.5\ \mu s$

    (b) $3\ ms,\ 8\ kHz$ and $66.5\ \mu s$

    (c) $1\ ms, 16\ kHz$ and $62.5\ \mu s$

    (d) $3\ ms, 16\ kHz$ and $66.5\ \mu s$

51. Which one of the following is used in banks, business and networks all over the world for security aspects?

    (a) AES

    (b) DES

    (c) RSA

    (d) $NIST$

52. *IDEA* stands for:

    (a)   Information Digital Encryption Agency

    (b)   International Digital Encryption Algorithm

    (c)   Information Data Encryption Agency

    (d)   International Data Encryption Algorithm

53. Pretty Good Privacy (PGP) is a cryptosystem intended for use of:

    (a)   Voice security

    (b)   E-mail security

    (c)   Internet security

    (d)   Bank security

54. Microsoft cryptographic providers support three hash algorithms are:

    (a) MD_2, MD_3 and secure Hash Algorithm (SHA)

    (b) MD_4, MD_5 and secure Hash Algorithm (SHA)

    (c) MD_1, MD_2 and secure Hash Algorithm (SHA)

    (d) MD_3, MD_4 and secure Hash Algorithm (SHA)

55. *S/MIME* stands for:

    (a)   Secure Mobile Internet Mail Extension

    (b)   Service Mobile Internet Multipurpose Extension

    (c)   System Multipurpose Internet Mobile Extension

    (d)   Secure Multipurpose Internet Mail Extension

56. Biometric characteristics cannot be directly used as cryptographic key, because biometric images are:

    (a) Difficult to obtain

    (b) Difficult to process

    (c) Difficult to recognize

    (d) Variable by nature

57. The operations performed in *AES* algorithm for each round are:

    1. Substitute bytes

    2. Shift columns

    3. Mix rows

    4. Add round key

    (a) 1 and 4 only

    (b) 1 and 3 only

    (c) 2 and 3 only

    (d) 2 and 4 only

58. A stream cipher is designed to operate:

    (a) On a block of plain text

    (b) One bit or units larger than a byte at a time

    (c) One that has a sequence of rounds

    (d) One block of data at a time

59.	In the Cipher Block Chaining (CBC) mode, the input to the encryption algorithm is:

(a)	The each plain text block encoded using same key

(b)	The each plain text block encoded using different key

(c)	The XOR of the current plain text block and the preceding cipher text block, same key used for each block

(d)	The XOR of the current plain text block and the preceding cipher text block, different key used for each block

60.	Message Authentification Code (MAC) is:

(a)	Accepting a variable size message M as input and producing a fixed size message digest $H(M)$ as output

(b)	Using a secret key to generate a small block of data

(c)	The statistical structure of the plaintext dissipated into long range statistics of the cipher text

(d)	A technique in which chosen plain texts with particular XOR difference pattern are encrypted

61.	The principal attraction of Elliptical Curve Cryptography is (ECC):

(a)	Reducing processing time

(b)	A smaller bit size reducing processing overhead

(c)	Reducing computation

(d)	Increasing security

62. An information security policy provides rules for the protection of:

    (a) Internet security

    (b) Information assets of an organization

    (c) E-mail security

    (d) Voice security

63. Design, selection and implementation of all security program elements including policy and risk measurement programs, education and training programs, technological controls and maintenance of the security program is referred as:

    (a) Security Blueprint

    (b) Security Framework

    (c) Security Policy

    (d) Security Management

64. Firewalls can be characterized by:

    (a) Processing mode, development era and structure

    (b) Packet filtering and application gateways

    (c) Trusted network and structure

    (d) Processing mode and Packet filtering

65. Intrusion Detection and Prevention Systems (*IDPS*) are:

    (a) Host based systems only

    (b) Network based systems only

    (c) Network based systems or Host based systems

    (d) Special security systems

66. Which one of the following statements is correct?

The Company is getting rid of:

(a) Damp squib and retaining only productive workers

(b) Guinea-pig and retaining only productive workers

(c) Warts and all and retaining only productive workers

(d) Dead wood and retaining only productive workers

67. The channel of communication in Science and Technology has which of the following elements?

1. Hearing

2. Touching

3. Tasting

4. Knowledge

(a) 1, 2 and 3 only

(b) 1, 2 and 4 only

(c) 1, 3 and 4 only

(d) 2, 3 and 4 only

68. Which one of the following is the correct meaning of *'Serried'* ?

(a) Notched

(b) Scattered

(c) Pursed

(d) Packed together

69. Which one of the following statement is grammatically correct with usage of words?

    (a)   My aunt bereaved Rs. 5, 00,000 in her will to cancer research

    (b)   If I remember rightly she had two brothers, both older than her

    (c)   If you want information about the publisher of this book, you can accede their website

    (d)   Eating all those Peanuts has attacked my appetite

70. Which one of the following is the opposite meaning of '*Braggart*' ?

    (a)   Modest

    (b)   Harangue

    (c)   Adept

    (d)   Competent

71. 'Tinu is happy *because* she scored good marks'. The word '*because*' is:

    (a)   Interjection

    (b)   Preposition

    (c)   Conjunction

    (d)   Adjective

72. Which one of the following word is correctly spelt?

    (a)   Ubiquitous

    (b)   Unasailable

    (c)   Unanimus

    (d)   Unenyviable

73. 'After the ***approbation*** by the council, the due procedure would come into play'. Which one of the following correctly sums up the underlined expression?

    (a)   Proper hearing

    (b)   Negotiation

    (c)   Approval

    (d)   Settlement

74. 'He is ***loquacious***. So people avoid him'. Which one of the following correctly defines the underlined word?

    (a)   One who hates mankind

    (b)   One who loves women

    (c)   One who loves to talk

    (d)   One who hates to love

75. 'It appears that we are going to win'. Which one of the following is the appropriate question tag that should follow the sentence?

    (a)   Doesn't it?

    (b)   Don't we?

    (c)   Do we?

    (d)   Doesn't we?

76. The judge ordered him to restrain *'to'* entering the premises of his office. Which one of the following will improve the sentence?

    (a) Off

    (b) Of

    (c) With

    (d) From

77. Consider the following sentences:

    1. The introduction to the U.N. Charter expresses

    2. Whose Governments joined together to form the U.N.

    3. In one long sentence

    4. The ideas and common aims of all the people

    What is the correct sequence?

    (a) 3, 4, 1 and 2

    (b) 2, 1, 4 and 3

    (c) 3, 1, 4 and 2

    (d) 2, 4, 1 and 3

78. Consider the following sentences:

    1. The people will make him king

    2. Promises should be kept

    3. I am sometimes vexed at his behaviour

    4. The audience loudly cheered the Mayor's speech

    Which of the above sentences are in Active Voice?

    (a) 1 and 3 only

    (b) 1 and 4 only

    (c) 2 and 3 only

    (d) 2 and 4 only

79. The information about the conceptual, external and physical schema is stored in:

    (a) System catalogs

    (b) System files

    (c) File allocation tables

    (d) Configuration systems

80. In Entity-Relationship (ER) model, an Aggregation allows to indicate:

    (a) A relationship set to participate in another relationship set

    (b) The monitor's relationship set

    (c) A weak entity set

    (d) The owner of the entity

81. A candidate key for the relation in a Database Management System can be defined as:

    (a) The subset of the set of fields in a key which is a unique identifier for a tuple

    (b) A set of fields that uniquely identifies a tuple according to the key constant

    (c) Two tuples which have identical values in all the fields

    (d) A field of relation is a unique identifier for a tuple

82. The conceptual schema is the collection of schemes of the relations stored in

    (a) Tables

    (b) Database

    (c) Decision tree

    (d) Files

83. In Database Management System (DBMS) architecture, the buffer manager is the software layer which is responsible for:

    (a) Bringing pages from disk to the main memory

    (b) Holding the slot of the page

    (c) Transferring the pages to primary memory

    (d) Sequencing the pages

84. A data structure that organizes the data records on a disk to optimize certain kinds of retrieval operations is known as:

   (a)   Decision tree

   (b)   Indexing

   (c)   File allocation tables

   (d)   Records

85. Which of the following operation is/are used in the equality operators to join the two relations?

   1.   Normal join

   2.   Equijoin

   (a)   1 only

   (b)   2 only

   (c)   Both 1 and 2

   (d)   Neither 1 nor 2

86. The query optimization in Database Management System (DBMS) is responsible for identifying:

   (a)   An efficient execution plan with the least estimated cost

   (b)   The tuples and fields

   (c)   The number of records present in database

   (d)   The non-relationship of the database

87. Which of the following rules is/are associated with Armstrong's Axioms for finding the functional dependency(FD)?

   1. Reflexivity

   2. Augmentation

   3. Transitivity

   (a) 1, 2 and 3

   (b) 1 only

   (c) 2 only

   (d) 3 only

88. Fourth Normal Form $(4NF)$ is designed to cope up with:

   (a) Multivalued dependency

   (b) Join dependency

   (c) Transitive dependency

   (d) Both Join and Transitive dependency

89. Information warfare must be dealt with:

   (a) Continuously because the potential damage or disruption is so high

   (b) Immediately because the potential damage or disruption is so high

   (c) Ahead of time because the potential damage or disruption is so high

   (d) Diplomatically because the potential damage or disruption is so high

90. While national power grid may be necessary for transmitting huge blocks of power from one region to the other, which one of the following systems would still be required to serve the large number of villages and isolated communities?

    (a)   Grid connected stand alone

    (b)   Non- grid connected stand alone

    (c)   Grid connected service

    (d)   Non-grid connected service

91. Energy Audit to be made compulsory for industries so that it helps to focus the essential requirements of energy:

    (a)   Consumption

    (b)   Conservation

    (c)   Cost

    (d)   Generation

92. Which one of the following type of freezing is preferred so that temperatures are rapidly lowered to $0°F (-18°C)$ for keeping the ice crystals small, so that upon defrosting, the food is not mushy?

    (a)   Deep

    (b)   Slow

    (c)   Quick

    (d)   Blast

93. With which one of the following technology, a single disc format is used for computer data, video and audio?

    (a) Digital Audio Tape (DAT)

    (b) Video Tape (VT)

    (c) Compact Disc (CD)

    (d) Digital video Disc (DVD)

94. Carbon dioxide lasers do not penetrate into the surfaces; they are used for which one of the following tumors in body sites where underlying structures would otherwise be in danger of damage?

    (a) Cutting

    (b) Vaporizing

    (c) Liquidifying

    (d) Crystallizing

95. A method that can be used to transfer information in a manner that violates the system's security policy is:

    (a) Secrete channels

    (b) Carrier channels

    (c) Co- channels

    (d) Covert channels

96. Which one of the following Operating Systems (OS) is the process of security configuring a system to protect it against malicious users and software, but also making the system more reliable?

    (a)   Design Operating Systems

    (b)   Security Operating Systems

    (c)   Hardening Operating Systems

    (d)   Protocol Operating Systems

97. Which one of the following is the use of specialized techniques for recovery, Authentification and analysis of electronic data when a case involves issues relating to reconstruction of computer usage?

    (a)   Computer Analysis

    (b)   Image Processing

    (c)   Wire Trapping

    (d)   Computer Forensics

98. Which one of the following modes has revolutionized the informational use of crime data?

    (a)   Digital Imaging

    (b)   Digital Processing

    (c)   Data Mining (DM)

    (d)   Digital Analysis

99. Artificial Intelligence (*AI*) is the construction of artificial brains - electronic system:

    (a)   That replicates the exact functioning of biological neurons, their arrangement and interaction with the brain

    (b)   Construction of electronic system similar to the human brain

    (c)   That reacts with interaction with the brain

    (d)   Similar to brain without interaction with the brain

100. The hydrogen atom is unusual in:

    (a)   One proton, one neutron and no electron

    (b)   Not having any neutron

    (c)   One electron, one neutron and no proton

    (d)   Only electron, no proton and no neutron