

03/2019

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.

03/2019

1. Who organized the society of '*Khudai Khidmatgars*' ?
(A) Nawab Salimulla (B) Nawab Muhsinul Mulk
(C) Khan Abdul Gaffar Khan (D) Motilal Nehru
2. *Kanchenjunga* mountain peak is situated in the state of :
(A) Sikkim (B) Jammu and Kashmir
(C) Nagaland (D) West Bengal
3. *Jog* waterfalls is created by in which of the river ?
(A) Varani (B) Sharavati (C) Cauvery (D) Mahanadi
4. The name of first electric train in India :
(A) Calcutta Express (B) Deccan Queen
(C) Himasagar Express (D) Fairy Queen
5. Darjeeling the famous hill station is situated in :
(A) Himachal Pradesh (B) Jammu and Kashmir
(C) West Bengal (D) Sikkim
6. Ellora Caves located at :
(A) Aurangabad (B) Mumbai (C) Bijapur (D) Allahabad
7. Who is the author of the book "*The Great Indian Novel*" ?
(A) Shashi Tharoor (B) Arundhati Roy (C) Vikram Seth (D) V.S. Naipaul
8. The present Secretary General of United Nations Organization :
(A) Peter Thomson (B) Amina J. Muhamed
(C) Antonio Gutterres (D) Elbio Rosseli
9. India's first Sports Museum opened at :
(A) Mumbai (B) Kolkata (C) Ahmedabad (D) Pune
10. FIFA's best footballer of the year 2018 :
(A) Luka Modric (B) Cristiano Ronaldo
(C) Lionel Messi (D) Mohamed Salah

A

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{P.T.O.}

11. The social reformer who is known as '*Sarva Vidhyadiraja*' ?
(A) Chattampi Swamikal (B) Sahodaran Ayyappan
(C) Ananda Theerthan (D) V.T. Battathirippad
12. Who was the founder of *Vala Samudaya Parishkarini Sabha* ?
(A) Pandit Karuppan (B) Kumaranasan
(C) Brahmananda Sivayogi (D) Vaikunda Swamikal
13. Headquarters of UNICEF is situated in :
(A) Norway (B) London (C) New York (D) Sweden
14. Who was the first Indian president who visited *Siachin Base Camp* ?
(A) K.R. Narayanan (B) Ramnath Kovind
(C) Fakhruddin Ali Ahmad (D) APJ Abdul Kalam
15. Which was the first Insurance Company in India ?
(A) Oriental Life Insurance Company
(B) Life Insurance Corporation of India
(C) New India Insurance Company
(D) General Insurance Company
16. Nobel Peace Prize for the year 2018 has been awarded to :
(A) Yazid Mugabe and Jiran Manuel Santos
(B) Nadia Murad and Denis Mukwege
(C) Denis Mukwege and Elihu Root
(D) Malala Yousafzai and Kailash Satyarthi
17. Who was the first Union Minister of Education in India ?
(A) Dr. Rajendra Prasad (B) Maulana Abul Kalam Azad
(C) Sardar Vallabai Pattel (D) Motilal Nehru
18. Where the Headquarters of FIFA is situated ?
(A) Qatar (B) Brazil (C) Sweden (D) Switzerland
19. Mexico country is situated in which of the following continent ?
(A) South America (B) North America (C) Africa (D) Europe

20. Malampuzha Dam situated in the district of :
 (A) Palakkad (B) Wynad (C) Edukki (D) Pathanamthitta
21. The small current developed in a P-N junction diode when it is in reverse bias is called :
 (A) Reverse current (B) Forward current
 (C) Reverse saturation current (D) Active current
22. Which among the following factor doesn't change the diode current ?
 (A) Temperature (B) External voltage to the diode
 (C) Boltzman's constant (D) Resistance
23. If the peak current is I_m and the load resistance is R_L , the DC power output of bridge fullwave rectifier is equal to :
 (A) $2I_m^2 R_L$ (B) $4I_m^2 R_L$ (C) $I_m^2 R_L$ (D) $I_m^2 R_L / 2$
24. The cut-in point of a capacitor filter is :
 (A) The instant at which the conduction starts
 (B) The instant at which the conduction stops
 (C) The time after which the output is not filtered
 (D) The time during which the output is perfectly filtered
25. An optoisolator is :
 (A) A combination of LED and varactor in the same package
 (B) A combination of a varactor and photodiode in the same package
 (C) A combination of LED and a photodiode in the same package
 (D) A combination of photodiode and a Shottky-Barrier diode in the same package
26. The magnitude of thermal voltage is given by :
 (A) k/Tq (B) kT/q (C) q/kT (D) Tk/q
27. The form factor is the ratio of :
 (A) Peak value to r.m.s. value (B) r.m.s. value to average value
 (C) Average value to r.m.s. value (D) None of the above
28. If the number of turns, area and current of an ac circuit is doubled, the new inductance will be :
 (A) Equal to the former (B) Twice of the former
 (C) Four times the former (D) Half of the former

29. An electric heater draws 3.5 A from a 110 V source. The resistance of the heating element is approximately :
- (A) 385 Ohms (B) 38.5 Ohms (C) 3.1 Ohms (D) 31 Ohms
30. Thevenin resistance is found by :
- (A) Shorting all voltage sources and opening all current sources
 (B) Opening all current sources
 (C) Shorting all voltage sources
 (D) Opening all voltage sources and shorting all current sources
31. Mutual flux _____ at the lagging loading and it _____ at the leading power factor.
- (A) Decreases, increases (B) Increases, increases
 (C) Decreases, decreases (D) Increases, decreases
32. Eddy currents are induced in the pole shoes of a DC machine due to :
- (A) Oscillating magnetic field
 (B) Pulsating magnetic flux
 (C) Relative rotation between field and armature
 (D) All of the above
33. Convert $1E2_H$ to decimal :
- (A) 480 (B) 482 (C) 483 (D) 484
34. Which of the following is not true ?
- (A) $0 + A = A$ (B) $1 + A = 1$ (C) $A + A = A$ (D) $1.A = 1$
35. A positive AND gate is also a negative :
- (A) NAND gate (B) NOR gate (C) AND gate (D) OR gate
36. As compared to MOS memories, bipolar memories have :
- (A) Faster access time and are costly
 (B) Slower access time and are costly
 (C) Faster access time and are cheaper
 (D) Slower success time but are cheaper
37. The output Q_n of a J-K flip-flop is zero. It changes to 1 when a clock pulse is applied. The input J_n and K_n are respectively.
- (A) 1 and X (B) 0 and X (C) X and 0 (D) X and 1

38. A digital multiplexer is basically a combination logic circuit to perform the operation :
 (A) AND-AND (B) OR-OR (C) AND-OR (D) OR-AND
39. The instruction that is used as prefix to an instruction to execute it repeatedly until CX register becomes zero is :
 (A) SCAS (B) REP (C) CMPS (D) STOS
40. The Bus Interface Unit of 8086 contains FIFO register of size _____ bytes.
 (A) 8 (B) 6 (C) 4 (D) 16
41. In 8086, the instruction providing both segment base and offset address are called :
 (A) High address (B) Low address (C) Far address (D) Below address
42. The 8086 instruction which is used for translating from one code to another code is :
 (A) XLAT (B) XCHG (C) POP (D) PUSH
43. In 8086, the overflow flag is set when _____.
 (A) The sum is more than 16 bits
 (B) Signed numbers go out of their range after arithmetic operation
 (C) Carry and sign flags are set
 (D) Subtraction
44. Among the following, Access time is faster for :
 (A) SRAM (B) DRAM (C) ERAM (D) ROM
45. Which method by-passes the CPU for certain types of data transfer ?
 (A) Software Interrupts (B) Interrupt driven I/O
 (C) Polled I/O (D) Direct Memory Access (DMA)
46. Which group of instructions do not affect flags ?
 (A) Arithmetic operations (B) Logic Operations
 (C) Data Transfer Instructions (D) Branch Instructions
47. The result of MOV AL, 65 is to store :
 (A) 01000010 in AL (B) 42H in AL
 (C) 40H in AL (D) 01000001 in AL

48. In a pre-emptive multitasking operating system, the saving and restoring of FP and MMX states are performed by :
- (A) Control unit (B) Operating system
(C) MMX instructions (D) MMX registers
49. Which motherboard form factor uses one 20 pin connector ?
- (A) ATX (B) AT (C) BABY AT (D) All of the above
50. Among the following, which standard governs parallel communications ?
- (A) RS232 (B) RS-232a (C) CAT 6 (D) IEEE 1284
51. Which common bus specification provides the fastest data transfer rate ?
- (A) VL BUS (B) ISA (C) PCI (D) All of the above
52. What is the data transfer rate for USB 2.0 ?
- (A) 10 Mbps (B) 480 Mbps (C) 512 Mbps (D) 256 Mbps
53. How many pins a DIMM have ?
- (A) 72 (B) 32 (C) 32 to 72 (D) 71
54. How many address lines are required to address each memory location in a 2048x4 memory chip ?
- (A) 10 (B) 11 (C) 8 (D) 12
55. Pseudo instruction are :
- (A) Instructions in any program that have no corresponding machine code
(B) Instructions that are partially executed
(C) Instructions for caching
(D) Assembler directives
56. Associative memory is a :
- (A) Pointer Addressable Memory (B) Very Cheap Memory
(C) Content Addressable Memory (D) Slow Memory
57. Which of the following addressing modes permits relocation without any change whatsoever in the code ?
- (A) Indirect addressing (B) Indexed addressing
(C) Base register addressing (D) PC relative addressing

58. In a digital camera, which sensor converts light energy into electrical energy ?
(A) PCB (B) CCD (C) DSLR (D) Photons
59. Number of pins in an HDMI cable is :
(A) 19 (B) 20 (C) 21 (D) 22
60. Inventor of computer mouse is :
(A) Alan Shugart (B) Steve Russel
(C) Douglas Engelbart (D) Faggin
61. Which module of operating system gives control of the CPU to the process selected by the short term scheduler ?
(A) Dispatcher (B) Interrupt (C) Scheduler (D) DMA
62. Aging is :
(A) Keeping track of cache contents
(B) Keeping track of what pages are currently residing in memory
(C) Keeping track of how many times a given page is referenced
(D) Increasing the priority of jobs to ensure termination in a finite time
63. Which one of the following is the deadlock avoidance algorithm ?
(A) Round robin algorithm (B) Bankers algorithm
(C) Elevator algorithm (D) Karn's algorithm
64. In internal fragmentation, memory is internal to a partition and :
(A) Is being used (B) Is not being used
(C) Is always used (D) None of the above
65. External fragmentation will not occur when :
(A) First fit is used
(B) Best fit is used
(C) Worst fit is used
(D) No matter which algorithm is used, it will always occur
66. A heavy weight process :
(A) Has multiple threads of execution
(B) Has a single thread of execution
(C) Can have multiple or a single thread for execution
(D) None of the above

67. Consider the following page reference string :
 1 2 3 4 2 1 5 6 2 1 2 3 7 6 3 2 1 2 3 6
 For FIFO page replacement algorithm with 4 frames, the number of page fault is :
 (A) 16 (B) 15 (C) 14 (D) 11
68. The time taken to move the disk arm to the desired cylinder is called :
 (A) Positioning time (B) Random access time
 (C) Seek time (D) Rotational latency
69. Consider a disk queue with requests for I/O to blocks on cylinders :
 98, 183, 37, 122, 14, 124, 65, 67.
 Considering FCFS scheduling, the total number of head movements is, if the disk head is initially at 53 :
 (A) 600 (B) 620 (C) 630 (D) 640
70. The segment of code in which the process may change common variables, update tables, write into files is known as :
 (A) Critical section (B) Program (C) Synchronising (D) Starvation
71. ADSL stands for :
 (A) Asymmetric Digital Subscriber Line
 (B) Asynchronous Digital Subscriber Line
 (C) Associated Digital Subscriber Link
 (D) Asynchronous Data Sending Line
72. TCP/IP model does not have _____ layer, but OSI model have this layer.
 (A) Session Layer (B) Transport Layer
 (C) Application Layer (D) None of the above
73. Automatic repeat request error management mechanism is provided by :
 (A) Media access control sub layer
 (B) Logical link control sub layer
 (C) Network interface control sub layer
 (D) None of the mentioned
74. The resources needed for communication between end systems are reserved for the duration of session between end systems in :
 (A) Packet switching (B) Circuit switching
 (C) Line switching (D) Frequency switching

75. Electronic mail uses this application layer protocol :
(A) HTTP (B) FTP (C) SMTP (D) SNMP
76. Traffic in VPN is :
(A) Visible to public networks
(B) Not logically separated from other traffic
(C) Not restricted to a single protocol in IPSEC
(D) Not accessible from unauthorised public networks
77. Suppose a TCP connection is transferring a file of 1000 bytes. The first byte is numbered 10001. What is the sequence number of the segment if all data is sent in only one segment ?
(A) 10000 (B) 10001 (C) 11001 (D) 11002
78. The header size of an IPv6 datagram is :
(A) 40 bytes (B) 128 bytes (C) 64 bytes (D) 32 bytes
79. Which of the following is **not** an IPv4 to IPv6 transition strategy ?
(A) Dual stack (B) Tunnelling
(C) Conversion (D) Header translation
80. In OSPF, which protocol is used to discover neighbour routers automatically ?
(A) Link state protocol (B) Error correction protocol
(C) Routing information protocol (D) Hello protocol
81. If you need to change the typeface of an MS Word document, which menu will you choose ?
(A) Edit (B) View (C) Format (D) Tools
82. In which view Headers and Footers are visible in MS Word ?
(A) Normal View (B) Print layout View
(C) Page layout View (D) Draft View
83. To apply the center alignment to a paragraph, we can press :
(A) Ctrl+S (B) Ctrl+C (C) Ctrl+Shift+A (D) Ctrl+E

84. In MS Excel, what is the smallest width of a column ?
(A) 0 (B) 0.5" (C) 1' (D) 1.5"
85. In MS Word, pressing F8 for three times selects :
(A) Entire document (B) A Paragraph
(C) A Sentence (D) A word
86. In MS Access, which of the field has width 8 bytes ?
(A) Memo (B) Number (C) Date/Time (D) All of the above
87. A gutter margin is :
(A) Margin that is added to the binding side of page when printing
(B) Margin that is added to the outside of the page when printing
(C) Margin that is added to the left margin when printing
(D) Margin that is added to the right margin when printing
88. What is the smallest and largest font size available in Font Size tool on formatting toolbar of MS Word ?
(A) 8 and 64 (B) 8 and 72 (C) 6 and 72 (D) 6 and 68
89. In MS Excel, which among the following keyboard shortcut can be used for creating chart from selected cells ?
(A) F2 (B) F6 (C) F10 (D) F11
90. Which of the following is valid field name in MS Access ?
(A) Student.Address (B) Student'sAddress
(C) Student_address (D) Student Address
91. Intellectual Property Rights (IPR) protect the use of information and ideas that are of :
(A) Ethical value (B) Moral value
(C) Social value (D) Commercial value

92. In 'quid-pro-quo', quo stands for :
- (A) Knowledge disclosed to the public
 - (B) Monopoly granted for the term of the patent
 - (C) Exclusive privilege of making, selling and using the invention
 - (D) None of the above
93. Which of the following is not one of the major types of e-commerce ?
- (A) C2B
 - (B) B2C
 - (C) B2B
 - (D) C2C
94. What is DES ?
- (A) Bit cipher
 - (B) Stream cipher
 - (C) Block cipher
 - (D) None of the above mentioned
95. Which of the following is a cryptographic protocol used to secure HTTP connection ?
- (A) Stream control transmission protocol
 - (B) Transport layer protocol
 - (C) Explicit congestion notification
 - (D) Resource reservation protocol
96. Network layer firewall works as a :
- (A) Frame filter
 - (B) Packet filter
 - (C) Both frame and packet filters
 - (D) None of the above mentioned
97. A proxy firewall filters at :
- (A) Physical layer
 - (B) Data link layer
 - (C) Network layer
 - (D) Application layer
98. What is the type of injection, in which malicious scripts are injected into trusted websites ?
- (A) XSS
 - (B) SQL Injection
 - (C) Access
 - (D) Broadcasting

99. When an attempt is to make a machine or network resource unavailable to its intended users, the attack is called :

- (A) Slow read attack
- (B) Spoofed attack
- (C) Starvation attack
- (D) Denial of service attack

100. In asymmetric encryption :

- (A) Same key is used for encryption and decryption
- (B) Different keys are used for encryption and decryption
- (C) No key is required for encryption and decryption
- (D) No key is used for encryption and a public key is used for decryption

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SPACE FOR ROUGH WORK

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