

Computer Science & Engineering (CSE)

Dated: 15.04.2019

Total Marks: 100,

Time: 2 Hours

Instructions

This paper is divided in two sections A and B of 50 marks each. Section A consists of technical objective and subjective questions of 1 mark each. Section B consists of non-technical objective and subjective questions of 1 mark each. There is only one correct answer in each objective question. There is no negative marking. Do not mutilate or damage or put any extraneous marking in the answer sheet. If any change or over-writing or correction or cutting is found in answering any question, it will not be evaluated. In case of any doubt follow English version.

Section A (50 Marks) Technical Subjects

1. Conversion of hexadecimal number $1D7F_{16}$ to a decimal number is
 - (a) 7551_{10}
 - (b) 8771_{10}
 - (c) 5557_{10}
 - (d) 7781_{10}
2. In which addressing mode, the effective address of the operand is generated by adding a constant value to the contents of a register?
 - (a) Absolute mode
 - (b) Indirect mode
 - (c) Immediate mode
 - (d) Index mode
3. The two main components of the CPU are
 - (a) Control unit and registers
 - (b) Registers and main memory
 - (c) Control unit and ALU
 - (d) ALU and bus
4. RS-232 is a standard that applies to?
 - (a) Parallel port
 - (b) Serial port
 - (c) Game port
 - (d) all of the above
5. If a computer's BIOS allows it, you can boot from a CD-ROM.
 - (a) True
 - (b) False
6. A program
 - (a) Is a sequence of instructions.
 - (b) Is the device where information is stored.
 - (c) Is a device that performs a sequence of operations specified by instructions in memory.
 - (d) none of the above
7. Which of the following software types is used to simplify using systems software?
 - (a) spreadsheet
 - (b) timesharing
 - (c) operating environment
 - (d) multitasking
8. A public key encryption system
 - (a) allows anyone to decode the transmission
 - (b) allows only the correct receiver to decode the data
 - (c) allows only the correct sender to decode the data
 - (d) does not encode the data before transmitting it
9. What DOS program can you run to see which serial ports are detected?
 - (a) Comdiag
 - (b) SDET
 - (c) Command.com
 - (d) MSD

10. The Fdisk command in DOS _____.
(a) Fixes erroneous hard drive
(b) Formats data sectors on a hard drive
(c) Checks hard drive for lost clusters
(d) Partitions the hard drive for use
11. While working with MS-DOS, which command will you use to transfer a specific file from one disk to another?
(a) TIME (b) DISKCOPY
(c) COPY (d) RENAME
12. The UNIX file system stores a data in physical blocks of
(a) 1025 bytes (b) 2048 bytes
(c) 512 bytes (d) 256 bytes
13. What can be used to set up a firewall on a Linux system?
(a) netstat (b) route
(c) trace (d) ipchains
14. Frames from one LAN can be transmitted to another LAN via the device
(a) Router (b) Bridge
(c) Repeater (d) Modem
15. In OSI network architecture, the dialogue control and token management are responsibilities of
(a) network layer (b) session layer
(c) transport layer (d) data link layer
16. Which of the following transmission systems provides the highest data rate to an individual device
(a) computer bus (b) Voice band modem
(c) Telephone lines (d) leased lines
17. End-to-end connectivity is provided from host-to-host in:
(a) Transport layer (b) Network layer
(c) Session layer (d) Data link layer
18. A form of modulation in which the amplitude of a carrier wave is varied in accordance with some characteristic of the modulating signal, is known as
(a) Aloha (b) Angle modulation
(c) Amplitude modulation (d) modem
19. What protocol is used between E-Mail servers?
(a) SMTP (b) SNMP
(c) FTP (d) POP3
20. What is the name of the network topology in which there are bi-directional links between each possible node?
(a) Ring (b) Star
(c) Tree (d) Mesh
21. In heavily overloaded networks, crossbar switching offers better performance than cell-backplane switching
(a) True (b) False
22. An Ethernet switch works as the protocol layer
(a) True (b) False
23. A cut-through switch reads the entire packet before forwarding it to the destination segment
(a) True (b) False
- mp/smb
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24. Decision support programs are designed to help managers make:
 - (a) business decisions
 - (b) budget projections
 - (c) visual presentations
 - (d) vacation schedules
25. What is the term used for describing the judgmental or commonsense part of problem solving?
 - (a) Heuristic
 - (b) Value based
 - (c) Critical
 - (d) Analytical
26. A dumb terminal has
 - (a) an embedded microprocessor
 - (b) extensive memory
 - (c) independent processing capability
 - (d) a keyboard and screen
27. What is a brand?
 - (a) The name of companies that made computers
 - (b) The name of product a company gives to identify its product in market
 - (c) A name of class to indicate all similar products from different companies
 - (d) All of above
28. The difference between memory and storage is that memory is _____ and storage is ____
 - (a) Temporary, permanent
 - (b) Permanent, temporary
 - (c) Slow, fast
 - (d) All of above
29. What types of control pins are needed in a microprocessor to regulate traffic on the bus, in order to prevent two devices from trying to use it at the same time?
 - (a) Bus control
 - (b) Interrupts
 - (c) Bus arbitration
 - (d) Status
30. How many address lines are needed to address each machine location in a 2048 x 4 memory chip?
 - (a) 10
 - (b) 11
 - (c) 8
 - (d) 13
31. When was the world's first laptop computer introduced in the market and by whom?
 - (a) Hewlett-Packard, 1980
 - (b) Epson, 1981
 - (c) Laplink Traveling Software Inc, 1982
 - (d) Tandy Model-200, 1985
32. If in a computer, 16 bits are used to specify address in a RAM, the number of addresses will be
 - (a) 131072
 - (b) 32768
 - (c) 16
 - (d) 65536
33. Which of the following can be used for generation of laser pulse?
 - (a) Ruby laser
 - (b) Carbon dioxide laser
 - (c) Helium neon laser
 - (d) Nd- YAG laser
34. Which of the following is used in atomic clocks?
 - (a) Laser
 - (b) Quartz
 - (c) Maser
 - (d) Helium
35. When does a normal conductor become a superconductor?
 - (a) At normal temperature
 - (b) At Curie temperature
 - (c) At critical temperature
 - (d) Never
36. Which of the following is a weak magnet?
 - (a) Ferromagnetic material
 - (b) Antiferromagnetic
 - (c) Paramagnetic
 - (d) Diamagnetic
37. If there are 32 segments, each of size 1Kb, then the logical address should have :
 - (a) 13 bits
 - (b) 14 bits
 - (c) 15 bits
 - (d) 16 bits

38. file system fragmentation occurs when
 - (a) unused space or single file are not contiguous
 - (b) used space is not contiguous
 - (c) unused space is non-contiguous
 - (d) multiple files are non-contiguous
39. Which algorithm is used to solve a maximum flow problem?
 - (a) Prim's algorithm
 - (b) Kruskal's algorithm
 - (c) Dijkstra's algorithm
 - (d) Ford-Fulkerson algorithm
40. If there are n signal sources of same data rate than TDM link has _____ slots.
 - (a) n
 - (b) $n/2$
 - (c) $n*2$
 - (d) 2^n
41. If link transmits 4000frames per second, and each slot has 8 bits, the transmission rate of circuit this TDM is _____
 - (a) 32kbps
 - (b) 500bps
 - (c) 500kbps
 - (d) 32bps
42. In FTP protocol, client contacts server using _____ as the transport protocol.
 - (a)) datagram congestion control protocol
 - (b) user datagram protocol
 - (c) transmission control protocol
 - (d) stream control transmission protocol
43. PPP provides the _____ layer in the TCP/IP suite.
 - (a) Link
 - (b) Network
 - (c) Transport
 - (d) Application
44. Which of the following is / are the types of firewall?
 - (a) Packet Filtering Firewall
 - (b) Dual Homed Gateway Firewall
 - (c) Screen Host Firewall
 - (d) All of the mentioned
45. Which of the following is not a phase of virtual circuit network?
 - (a) Setup phase
 - (b) Data transfer phase
 - (c) Termination phase
 - (d) Teardown phase
46. In Network Management System, maps track each piece of hardware and its connection to the
 - (a) IP Server
 - (b) Domain
 - (c) Network
 - (d) Data
47. When a DNS server accepts and uses incorrect information from a host that has no authority giving that information, then it is called
 - (a) DNS lookup
 - (b) DNS hijacking
 - (c) DNS spoofing
 - (d) None of the mentioned
48. Which one of the following is a cryptographic protocol used to secure HTTP connection?
 - (a) stream control transmission protocol (SCTP)
 - (b) transport layer security (TSL)
 - (c) explicit congestion notification (ECN)
 - (d) resource reservation protocol
49. Find the addition of 110101101_2 , 111011101_2 , 000111111_2 , 100101101_2 , 111110111_2
50. What is an offset in operating system?

mpg/ps
7/5/04

Section B (50 Marks)
Mathematics (10), English (10), Hindi (15) and General Knowledge (15)

1. Find the value of $\log_4 5 \times \log_5 6 \times \log_6 7$.
2. Solve $2^2 \div (2^2)^3$
3. A rectangular garden has an area of 48 square metres and perimeter of 28 metres. What is the length of its diagonal?
4. $\sin^{-1}(1/2) + \tan^{-1}(1) = ?$
5. How many solutions are there to the equation $x^2 - 7 = 0$
6. The mean of a data set is equal to 10 and its standard deviation is equal to 1. If we add 5 to each data value, then the mean and standard deviation become
 - (a) Mean=15, standard deviation=6
 - (b) Mean=10, standard deviation=6
 - (c) Mean=15, standard deviation=1
 - (d) Mean=10, standard deviation=6
7. 30% of [130-15% of 200] is equal to
 - (a) 10
 - (b) 20
 - (c) 30
 - (d) 40
8. 8% of the voters in an election did not cast their votes. In this election, there were only two candidates. The winner by obtaining 48% of the total votes defeated his contestant by 1100 votes. What was the total number of voters in the election?
9. The ratio of the cost price and selling price of an article is 5:6. What is the percentage of profit?
10. If $m + 1/(m-2) = 4$, find the value of $(m-2)^2 + 1/(m-2)^2$
11. Choose the word which is nearest in meaning to the given word: *DETEST*
 - (a) Argue
 - (b) Hate
 - (c) Discover
 - (d) Reveal
12. Choose the word which is opposite in meaning to the given word: *SECRET*
 - (a) Friendly
 - (b) Covert
 - (c) Hidden
 - (d) Overt
13. Choose the one which best expresses the meaning of the given idiom/proverb.
To see red:
 - (a) to find fault with
 - (b) to criticise others
 - (c) to be very angry
 - (d) to victimise someone
14. Convert the following into passive voice.
Why do you waste time?
 - (a) Why is time wasted by you?
 - (b) Why has time been wasted by you?
 - (c) Why is time being wasted by you?
 - (d) Why is time been wasted by you?
15. The father was anxious _____ the safety of his daughter
 - (a) At
 - (b) with
 - (c) for
 - (d) about
16. In below question, select the alternative that is spelt wrong.
 - (a) Suicide
 - (b) Suiteable
 - (c) Summarize
 - (d) Superficial
17. I live -----the street. (about/across)
18. Dr Fahim Mohammad applied the plaster-----the cut. (in/to)
19. The national anthem-----after the performance.
 - (a) Is sung
 - (b) was sung
 - (c) would sung
 - (d) had sung
20. Combine the following sentence using not only.....but also.
The cow gives us milk. The goat gives us milk.

Impish
15/10

21. केंद्रीय हिंदी समिति का अध्यक्ष कौन होता है?
22. भारतीय संविधान के अनुसार राजभाषा हिंदी कब से लागू है?
23. राजभाषा नीति को लागू करने की दृष्टि से भारत को कितने क्षेत्रों में बांटा गया है?
24. हिंदी दिवस प्रतिवर्ष कब मनाया जाता है?
25. भारतीय संविधान में कितनी भाषाओं को राष्ट्रभाषा के रूप में मान्यता प्रदान की गयी है?
26. भारतीय संविधान के किस अनुसूची के किस-किस अनुच्छेद में भारतीय भाषाओं का उल्लेख किया गया है?
27. भारतीय संविधान के अनुसार सांविधिक नियमों, विनियमों और आदेशों का अनुवाद कौन करता है?
28. "शुद्ध वाक्य" का चयन कीजिये-
- (अ) वह दण्ड पाने योग्य है (ब) वह दण्ड लेने योग्य है
(स) वह दण्ड के योग्य है (द) वह दण्ड देने योग्य है
29. "उत्कर्ष" शब्द का विलोम शब्द है-
- (अ) विकर्ष (ब) निष्कर्ष
(स) अकर्ष (द) अपकर्ष
30. "गाला बजाना" मुहावरे के अर्थ के लिए सही विकल्प का चयन कीजिये-
- (अ) क्रोधित होना (ब) पिटाई करना
(स) डींग हांकना (द) गाली देना
31. "कस्तूरी" शब्द है-
- (अ) पुल्लिंग (ब) स्त्रीलिंग
(स) उभयलिंग (द) इनमें से कोई नहीं
32. "उल्लास" का संधि-विच्छेद है-
- (अ) उत् + लास (ब) उल् + लास
(स) उल + लास (द) उल्ल + आस
33. जो अच्छे कुल में पैदा हुआ हो, कहलाता है-
- (अ) संस्कारी (ब) बहुज
(स) सर्वज्ञ (द) कुलीन
34. सर्वनाम किसे कहते हैं?
35. वर्णों के समूह को क्या कहते हैं ?
- (अ) समूह शब्द (ब) संयुक्त शब्द
(स) वर्णमाला (द) इनमें से कोई नहीं
36. Permanent Secretariat to coordinate the implementation of SAARC programme is located at
- (a) Dhaka (b) New Delhi
(c) Colombo (d) Kathmandu

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37. Which of the following countries is not a member of SAARC?
 (a) Nepal (b) Bangladesh
 (c) Afghanistan (d) Myanmar
38. Which of the following places is famous for Chikankari work, which is a traditional art of embroidery?
 (a) Lucknow (b) Hyderabad
 (c) Jaipur (d) Mysore
39. What is the maximum age of joining the National Pension System (NPS)?
 (a) 65 years (b) 60 years
 (c) 55 years (d) 50 years
40. Where is the Headquarters of Association of South East Asian Nations (ASEAN) located?
 (a) China (b) Indonesia
 (c) Sri Lanka (d) Bangladesh
41. The 'Dronacharya Award' is given to...?
 (a) Sportsmen (b) Coaches
 (c) Umpires (d) Sports Editors
42. Who is present Chief Minister of Goa?
43. Which of these political parties is not recognised national party
 (a) BSP (b) SP
 (c) TMC (d) CPI
44. What is ratio between length and width of our National Flag?
45. Which is longest river in the world?
46. If President wants to resign, to whom he will submit his resignation?
47. Which state in India is known as "Bowl of Sugar"-
 (a) Uttar Pradesh (b) Maharashtra
 (c) Himachal Pradesh (d) Andhra Pradesh
48. Sardar Sarovar Dam is build on the river-
 (a) Tapi (b) Luni
 (c) Krishna (d) Narmada
49. On September 2017 the Prime Minister India has laid the foundation stone of Country's first bullet train project. This train will run between-
 (a) Mumbai-Ahmedabad (b) Ahmedabad-Delhi
 (c) Mumbai-Delhi (d) Ahmedabad-Bangalore
50. Who is current Chief justice of India?

*****The End*****

M. Singh
15/10/17