

Question Paper

Information Technology & Systems - I (MB1C3): October 2008

- Answer all 100 questions.
- Each question carries one mark.

1. Which of the following is/are the feature(s) that distinguish fifth generation computers from all previous generations of computers? [<Answer>](#)
 - I. Time sharing and batch processing.
 - II. Artificial intelligence and voice recognition.
 - III. Ability to form networks.
 - (a) Only (I) above
 - (b) Only (II) above
 - (c) Both (I) and (II) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

2. Which of the following scanning systems is predominantly used in the banking industry for processing checks and demand drafts? [<Answer>](#)
 - (a) Optical character recognition
 - (b) Magnetic ink character recognition
 - (c) Optical mark reader
 - (d) Bar code reader
 - (e) Touch screen.

3. Which of the following are special memory units in a processor that are used for temporary storage and for speeding up the movement of information between various sections of a computer system? [<Answer>](#)
 - (a) Disks
 - (b) Registers
 - (c) Indexes
 - (d) Drivers
 - (e) Segments.

4. Touchpad, touch screen, light pen, and joystick are examples of [<Answer>](#)
 - (a) Icons
 - (b) Pointers
 - (c) Output devices
 - (d) Pointing devices
 - (e) Menus.

5. Which of the following is the fastest memory in terms of accessibility? [<Answer>](#)
 - (a) Read only memory
 - (b) Cache memory
 - (c) Random access memory
 - (d) Dynamic random access memory
 - (e) Hard disk.

6. Which of the following is an automatic program loaded into the memory of the computer as soon as it is switched on? [<Answer>](#)
 - (a) Browser
 - (b) Word processor
 - (c) Bootstrap loader
 - (d) Spreadsheet software
 - (e) Compiler.

7. Which of the following will convert the binary code produced by the computer into a human-readable form? [<Answer>](#)
 - (a) Central processing unit
 - (b) Input unit
 - (c) Control unit
 - (d) Output interfaces
 - (e) Hard disk.

8. In RISC architecture, RISC stands for [<Answer>](#)

- (a) Reduced Instruction Set Computer
- (b) Reduced Information System Computer
- (c) Reduced Instruction System Computer
- (d) Reduced Information Set Computer
- (e) Reduced Iteration Set Computer.

9. Match the following:

[<Answer>](#)

i. Flat bed scanners	p. Use a roller mechanism
ii. Sheet fed scanners	q. Used for copying smaller originals, such as photographs
iii. Handheld scanners	r. Used for working on a single sheet of paper at a time

- (a) i/r, ii/p, iii/q
- (b) i/r, ii/q, iii/p
- (c) i/p, ii/r, iii/q
- (d) i/q, ii/r, iii/p
- (e) i/p, ii/q, iii/r.

10. Which of the following is **not** a/an application software?

[<Answer>](#)

- (a) Internet explorer
- (b) Word Processor
- (c) MS Excel
- (d) Java
- (e) McAfee.

11. Which of the following statements is/are **true** about the Daisy wheel printers?

[<Answer>](#)

- I. Daisy wheel printers are very noisy and they print very slowly.
- II. Daisy wheel printers can print graphics and have multi-font capabilities.
- III. Daisy wheel printers come under the category of impact printers.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

12. Which of the following statements is/are **true** about Drum plotters?

[<Answer>](#)

- I. Drum plotters print graphical images by moving both drum and the pen.
- II. Drum plotters are smaller than the flatbed plotters.
- III. The pictures are as accurate as those printed by flatbed plotters.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

13. Which of the following is the circuitry that allows all the hardware devices in the computer to talk to each other?

[<Answer>](#)

- (a) Processor
- (b) Hard disk
- (c) System bus
- (d) Operating system
- (e) Control unit.

14. Processor is a part of a computer which executes a set of instructions. The capabilities vary from one processor to another. Which of the following capabilities is defined as the rate at which a processor can complete processing cycles?

[<Answer>](#)

- (a) Hits per second
- (b) Baud rate
- (c) Response time
- (d) Clock speed
- (e) Processor band.

15. Which of the following is/are **not** example(s) of second generation computers?

[<Answer>](#)

- I. LARC.
- II. IBM 360.

III. IBM 401.

- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (III) above
- (e) Both (II) and (III) above.

16. Which of the following statements is/are **true** about subjective estimation? [<Answer>](#)

- I. Subjective estimation method is employed in situations where other data sources are available.
- II. Subjective estimation is a method of data collection in which the required data is collected from the entire population or at least from a sample representative of the larger population.
- III. Subjective estimation is used for conducting an analysis regarding issues that are difficult to be described in actual, objective or numeric terms.

- (a) Only (I) above
- (b) Only (III) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) All (I), (II) and (III) above.

17. When a sender sends a message to a receiver, some distortion or noise occurs in the process, reducing the efficiency of the communication medium. Which of the following methods increases the sending and receiving efficiency of the system? [<Answer>](#)

- I. Summarization.
- II. Message routing.
- III. Observation.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

18. In the communication process, modulator is used for [<Answer>](#)

- (a) Sending information from a sender to a receiver through a medium
- (b) Converting the original message into a signal
- (c) Converting the signal into the original message
- (d) Linking communicating parties – sender and receiver
- (e) Reducing the noise in the communication medium.

19. Which of the following parameters of quality refers to the information which is free from errors and bias? [<Answer>](#)

- (a) Age
- (b) Validity
- (c) Impartiality
- (d) Consistency
- (e) Reliability.

20. Errors are not always deliberate and therefore certain measures can be taken to minimize them. So which of the following measures are used to ascertain the credibility of the information? [<Answer>](#)

- I. Internal controls.
- II. Internal audit and external audit.
- III. Instructions pertaining to measurement and processing of information.
- IV. Additional parameters that state the level of confidence with regard to the accuracy of information.

- (a) Both (I) and (II) above
- (b) Both (I) and (III) above
- (c) Both (I) and (IV) above
- (d) Both (II) and (III) above
- (e) Both (III) and (IV) above.

21. Windows 98 offered features like Internet Explorer 5 browser software, Microsoft Windows NetMeeting® version 3.0 conferencing software, and Microsoft DirectX® API 6.1, which delivered a variety of Windows multimedia improvements, and offered home networking capabilities through ICS. ICS is an acronym for [<Answer>](#)

- (a) Internet Connectivity System
- (b) Information Connectivity System
- (c) Internet Connection Sharing
- (d) Information Connection Sharing
- (e) Internet Communication System.

22. Match the following:

[<Answer>](#)

i. Virtual memory	p. Enables the operating system to regain control if an application stops running and crashes
ii. Swapping	q. Signals to inform the operating system that some activity has taken place
iii. Interrupts	r. Users can work with more memory than what is installed on the motherboard of the computer
iv. Preemptive multitasking	s. Paging operations which slow down the speed of the computer

- (a) i/r, ii/s, iii/q, iv/p
- (b) i/r, ii/q, iii/s, iv/p
- (c) i/r, ii/q, iii/p, iv/s
- (d) i/r, ii/s, iii/p, iv/q
- (e) i/p, ii/s, iii/q, iv/r.

23. Match the following:

[<Answer>](#)

i. Swap file	p. Used to supply additional information that a program needs to perform a chosen action
ii. Shell	q. When the memory is full, the operating system starts storing copies of pages in this
iii. Dialog box	r. Predefined set of rules to be followed while interacting with the system
iv. Syntax	s. User interface that surrounds the core of the operating system

- (a) i/q, ii/p, iii/s, iv/r
- (b) i/q, ii/s, iii/p, iv/r
- (c) i/q, ii/s, iii/r, iv/p
- (d) i/q, ii/r, iii/p, iv/s
- (e) i/r, ii/s, iii/p, iv/q.

24. Which of the following statements is/are **true** about menu-driven user interface?

[<Answer>](#)

- I. The user does not need to memorize keywords and syntax with menu-driven user interface.
- II. Menu-driven interface provides the user with a list that contains a range of options from which they have to select the commands.
- III. Menu-driven user interface is commonly used for system administration task.

- (a) Only (I) above
- (b) Only (II) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) All (I), (II) and (III) above.

25. Which of the following statements is/are **true** about UNIX operating system?

[<Answer>](#)

- I. UNIX is one of the most popular multi-user, multi-tasking operating system that uses client/server technology.
- II. UNIX was developed only for mainframe computers.
- III. The main motive behind developing UNIX was to enable programmers to access the system and share resources simultaneously.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

26. Which of the following statements is/are **true** about Windows 3.0 operating system?

[<Answer>](#)

- I. Windows 3.0 was the first version of Windows that enabled users to take full advantage of Intel new 16-bit microprocessor, the 80286.

- II. The various versions of Microsoft Windows 3.0 (including Windows 3.1, 3.11 etc), released subsequently were collectively known as Microsoft Windows 3.x.
- III. The new features of Windows 3.0 were the program manager, file manager and the print manager.
 - (a) Only (II) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

27. Which of the following statements is/are **true** about Windows NT operating system? [<Answer>](#)

- I. Windows NT operating system was specifically designed for client/server systems.
- II. Windows NT was superior to all other existing operating systems in terms of security, operating system power, performance, desktop scalability and reliability.
- III. Windows NT operating system has advanced features like support of drivers for and gaming features compared to Win 95 and Win 98.
 - (a) Only (I) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

28. Which of the following statements is/are **true** about Linux operating system? [<Answer>](#)

- I. Linux is considered virus-free as compared to Windows.
- II. There are numerous application software's available for Linux compared to Windows.
- III. Linux can be shutdown without first logging out.
 - (a) Only (I) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

29. Which of the following statements is/are **true** about Windows operating system? [<Answer>](#)

- I. Majority of hardware devices support Windows.
- II. File names in Windows are case sensitive.
- III. Windows can support large clusters.
 - (a) Only (I) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

30. Which of the following versions of NetWare operating system is/are **not** WAN operating system(s)? [<Answer>](#)

- I. NetWare 3.11.
- II. NetWare 3.12.
- III. NetWare 4.11.
- IV. NetWare 5.1.
 - (a) Only (I) above
 - (b) Both (I) and (II) above
 - (c) Both (II) and (III) above
 - (d) Both (III) and (IV) above
 - (e) (I), (II) and (III) above.

31. Network resources in an organization include its communication media and network support. Network support includes support from [<Answer>](#)

- I. Data resources.
- II. People resources.
- III. Hardware and software resources.

- (a) Only (III) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

32. The information circulated in a company grapevine can be called

[<Answer>](#)

- (a) Knowledge information
- (b) Control information
- (c) Informal information
- (d) Sampled information
- (e) Planning information.

33. The information used as part of a feedback mechanism to compare actual with predetermined standards and take corrective action for deviations is called

[<Answer>](#)

- (a) Summarized information
- (b) Control information
- (c) Detailed information
- (d) Aggregate information
- (e) Planning information.

34. Information obtained in the form of payroll and accounting ledgers are outcomes of

[<Answer>](#)

- (a) Subjective estimation
- (b) Transaction processing
- (c) Data collection from secondary sources
- (d) Survey
- (e) Observation.

35. Based on nature, application, structure, form and usage, information can be classified into many types. Based on nature, information is classified into

[<Answer>](#)

- I. Qualitative information.
- II. Planning information.
- III. Knowledge information.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

36. Which of the following statements is/are **true** about vertical applications?

[<Answer>](#)

- I. Vertical applications are those that cater to the needs of a particular business function.
- II. Special programmers or operators are not required to carry out these applications.
- III. Examples of vertical applications are accounting software and bill generation software.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

37. Match the following:

[<Answer>](#)

i. Function	p. A symbol, name or key that represents a list of commands
ii. Macro	q. Used when it is necessary to apply a formula to values in more than one cell or a range of cells
iii. Replication	r. A special keyword which can be entered into a cell to process some data which is appended within brackets

- (a) i/q, ii/p, iii/r
- (b) i/r, ii/p, iii/q
- (c) i/q, ii/r, iii/p
- (d) i/r, ii/q, iii/p
- (e) i/p, ii/q, iii/r.

38. Which of the following signs should be used before a number for it to be considered as text in MS-Excel? [<Answer>](#)
- (a) Dollar
 - (b) Hash
 - (c) Parentheses
 - (d) Apostrophe
 - (e) Ampersand.
39. Which of the following parts of worksheet is used to switch from one sheet to another in a MS-Excel file? [<Answer>](#)
- (a) Scroll bar
 - (b) Window controls
 - (c) Sheet tab
 - (d) Scroll arrows
 - (e) Tool bar.
40. Which of the following will ensure that row headings in a worksheet appear all the time even when the worksheet is scrolled down? [<Answer>](#)
- (a) Macros
 - (b) Freeze panes
 - (c) Tabs
 - (d) Cell references
 - (e) Functions.
41. Which of the following terms in MS-Word indicates the position of the text in the document? [<Answer>](#)
- (a) Justification
 - (b) Indentation
 - (c) Emphasis
 - (d) Hyphenation
 - (e) Word wrapping.
42. In MS-Excel, Which of the following is **not** a Mathematical and Trigonometrical functions? [<Answer>](#)
- (a) ABS
 - (b) AVERAGE
 - (c) FACT
 - (d) SQRT
 - (e) TAN.
43. Which of the following statements is/are **true** about Lookup & Reference functions? [<Answer>](#)
- I. Lookup & Reference functions in MS-Excel enable the user to look up for a particular row or column or find a specific reference in the worksheet.
 - II. ADDRESS, HYPERLINK and TRANSPOSE are some examples of Lookup & Reference functions.
 - III. Lookup & Reference functions in MS-Excel help in summarizing, comparing and grouping data and finding out the relationships between two sets of data.
- (a) Only (I) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.
44. Which of the following is **not** an Information function? [<Answer>](#)
- (a) CELL
 - (b) INFO
 - (c) ISLOGICAL
 - (d) CLEAN
 - (e) ISTEXT.
45. In Excel sheet, the cells A1,A2,A3,A4,A5,A6,A7,A8,A9 contain 1,2,3,9,5,6,7,7,7 respectively; cells B1,B2,B3,B4,B5,B6,B7,B8,B9 contain 1,2,5,9,5,4,5,6,6 respectively; and cells C1,C2,C3,C4,C5,C6,C7, C8,C9 contain 2,3,4,5,6,7,4,3,2 respectively. When we apply the formula '=SUM(A1:B9 & B1:C9)' in the C10, the result will be [<Answer>](#)

- (a) 47
- (b) 126
- (c) 169
- (d) 43
- (e) #VALUE!.

46. In Excel sheet, the cells A1,A2,A3,A4,A5,A6,A7,A8,A9 contain 1,2,3,9,5,6,7,7,7 respectively; cells B1,B2,B3,B4,B5,B6,B7,B8,B9 contain 1,2,5,9,5,4,5,5,6,6 respectively; and cells C1,C2,C3,C4,C5,C6, C7,C8,C9 contain 2,3,4,5,6,7,4,3,2 respectively. When we apply the formula '=SUM(A1:B9:B1:C9)' in the C10, the result will be [<Answer>](#)

- (a) 47
- (b) 126
- (c) 169
- (d) 164
- (e) #VALUE!.

47. In MS Excel, the expression '=6^3*4&8^2*4/3^2*4^3*3' would give the result as [<Answer>](#)

- (a) 8640.1481
- (b) 8645461.333
- (c) 8645376
- (d) 8645321.333
- (e) 8645657.333.

48. In Excel sheet, the cells A1,A2,A3,A4,A5 contain 1,3,2,4,5 respectively; cells B1,B2,B3,B4,B5 contain 2,5,3,4,6 respectively and cells C1,C2,C3,C4,C5 contain 3,2,3,6,1 respectively. If we write the formula '=\$A\$2+B5+\$C\$2' in cell D1 and drag to subsequent cells, what will be the contents of D1, D2, D3, D4 and D5 respectively? [<Answer>](#)

- (a) 11, 5, 5, 5, 5
- (b) 11, 10, 8, 14,12
- (c) 11, 10, 8, 4, 5
- (d) 11, 5, 8, 14, 12
- (e) 11, 10, 5, 14, 12.

49. In presentation graphics software, which of the following view options displays thumbnails of each slide and enables the user to change their (i.e., slides) order? [<Answer>](#)

- (a) Slide view
- (b) Outline view
- (c) Slide sorter view
- (d) Notes view
- (e) Master view.

50. Which of the following shortcut keys the user can use in order to use Cells option in Format menu? [<Answer>](#)

- (a) CTRL+ALT+1
- (b) CTRL+1
- (c) CTRL+SHIFT+1
- (d) CTRL+9
- (e) CTRL+ALT+5.

51. Which among the following is **not** an example of a Desktop conferencing system? [<Answer>](#)

- (a) Livelink
- (b) Share Vision
- (c) VideumConf pro
- (d) CU-SeeMe
- (e) Proshare Video.

52. Which of the following statements is/are **true** about Post Office Protocol (POP)? [<Answer>](#)

- I. POP is used for retrieving emails from a mail server.
- II. POP2 and POP3 are the two versions of POP.
- III. POP2 does not require SMTP for sending messages while POP3 strictly requires SMTP.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

53. Which of the following statements is/are **true** about Intranet?

[<Answer>](#)

- I. The intranet is a private computer network which is designed for internal use within the organization.
- II. Intranets are similar to Internet in terms of hardware and software used.
- III. Compared to Intranets, Internet has high security features.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

54. Groupware is a type of

[<Answer>](#)

- (a) Hardware
- (b) Network
- (c) Software
- (d) Protocol
- (e) Language.

55. Which of the following are advantages of Extranets?

[<Answer>](#)

- I. Using Extranets, the company can develop strategic relationships with its customers and vendors.
- II. The information shared on the Extranet can be updated regularly and instantaneously.
- III. Extranets provide face-to-face contact with external business entities.
- IV. Extranets can be used for sharing news that might be of common interest among the business partners.

- (a) Both (I) and (II) above
- (b) Both (I) and (IV) above
- (c) (I), (II) and (IV) above
- (d) (I), (III) and (IV) above
- (e) All (I), (II), (III) and (IV) above.

56. Which of the following statements is/are **true** regarding middle level management?

[<Answer>](#)

- I. The decisions taken at this level are called as tactical decisions.
- II. Decisions at this level are likely to have a medium to long-term impact on the organization.
- III. The examples of decisions taken at this level are decisions pertaining to materials, facilities, personnel etc.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

57. Which of the following statements is/are **true** about Executive Information Systems (EIS)?

[<Answer>](#)

- I. EIS enable online access to relevant information (related to the external environment) to the top management in a comprehensible format.
- II. The basic purpose of an EIS is to help executives learn about the organization, its work processes, and its interaction with the external environment.
- III. EIS mostly help the top management in taking structured decisions.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

58. Which of the following information systems are also known as adaptive learning systems?

[<Answer>](#)

- (a) Transaction processing systems
- (b) Management information systems
- (c) Decision support systems
- (d) Executive information systems
- (e) Knowledge management systems.

59. Electronic Data Interchange (EDI) is an example of

- (a) Manual data entry
- (b) Semi-automated data entry
- (c) Fully automated data entry
- (d) Integrated data entry
- (e) Informal data entry.

[<Answer>](#)

60. Generation of information products like reports and other documents forms the report generation phase of transaction processing cycle. Which of the following provide details of each transaction occurring during a particular period?

- (a) Information documents
- (b) Action documents
- (c) Turnaround documents
- (d) Edit reports
- (e) Control listings.

[<Answer>](#)

61. "The system should be designed in such a way that there is perfect synchronization between hardware, software, data processing, information presentation and feedback."

Which of the following characteristics of Management Information System (MIS) relates to the above sentence?

- (a) Management oriented
- (b) Management directed
- (c) Integrated systems
- (d) Planning
- (e) Flexibility.

[<Answer>](#)

62. To arrive at a rational solution, a Decision Support System (DSS) may make use of inquiry, analysis, models or accounting systems. Which of the following systems are developed using simple data processing tools and business rules and rely on comparative analysis, application of formula, and use of algorithms?

- (a) Data analysis systems
- (b) Information analysis systems
- (c) Accounting systems
- (d) Status inquiry systems
- (e) Process control systems.

[<Answer>](#)

63. Which of the following statements is **false** about business improvement and Business Process Re-engineering (BPR)?

- (a) Business improvement refers to making improvements in the existing process
- (b) Business process re-engineering deals with the complete redesigning of the business processes
- (c) The risk of failure and level of disruption is very low in case of business process re-engineering while it is high in case of business improvement
- (d) Business improvement is usually carried out for any process
- (e) Business process re-engineering is carried out for strategic business processes only.

[<Answer>](#)

64. Which of the following statements is/are **false** about Artificial Intelligence (AI)?

- I. Artificial Intelligence is a software-based technique and is applied on data like symbols, statements, and patterns.
- II. Artificial Intelligence systems are exact substitutes for human beings.
- III. The methods used by an Artificial Intelligence system are symbolic processing, social reasoning, scientific reasoning, and conceptual modeling.

- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (II) above
- (e) Both (I) and (III) above.

[<Answer>](#)

65. Which of the following is/are associated with an agile competitor?

- I. Fostering entrepreneurial skills and empowering employees.

[<Answer>](#)

- II. Maintaining a flexible organizational structure.
- III. Pricing should be based on cost of production.

- (a) Only (II) above
- (b) Only (III) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) All (I), (II) and (III) above.

66. Mr. Sudhakar, working as an Economist in a MNC, is asked by the sales manager to provide him the details about how a repeated change in the price of the product affects sales and purchasing power of the customers. Which of the following types of analytical modeling will be helpful for Sudhakar in this case? [<Answer>](#)

- (a) Value analysis
- (b) Sensitivity analysis
- (c) Goal seeking analysis
- (d) Optimization analysis
- (e) Time-series analysis.

67. Which of the following is/are **true** regarding real-time processing? [<Answer>](#)

- I. Real-time processing enables transactions to be processed immediately after they are generated.
- II. Monthly payroll processing is an example of real-time processing.
- III. An airline reservation system uses real-time processing.

- (a) Only (I) above
- (b) Only (II) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) All (I), (II) and (III) above.

68. Which of the following characteristics of information system is/are **not** the most desirable for decision making at the strategic level? [<Answer>](#)

- I. Adaptability.
- II. Flexibility.
- III. Compatibility.
- IV. Insightfulness.

- (a) Only (III) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (I) and (IV) above
- (e) Both (III) and (IV) above.

69. Match the following management control decisions with their corresponding nature of decision making: [<Answer>](#)

i. Employee performance appraisal	p. Structured decision making
ii. Business process re-engineering	q. Semi-structured decision making
iii. Budget analysis	r. Unstructured decision making

- (a) i/p, ii/q, iii/r
- (b) i/p, ii/r, iii/q
- (c) i/q, ii/p, iii/r
- (d) i/q, ii/r, iii/p
- (e) i/r, ii/p, iii/q.

70. Online Analytical Processing (OLAP) is used to transform relational or non-relational data into highly explorable structures, which are commonly referred to as [<Answer>](#)

- (a) Classes
- (b) Keys
- (c) Schema
- (d) Cubes
- (e) Segments.

71. Computer languages can be classified into two broad categories called as low-level languages and high-level languages. Which of [<Answer>](#)

the following high-level languages is built around a proprietary database management system called ADABAS?

- (a) OPS5
- (b) LISP
- (c) Prolog
- (d) NATURAL
- (e) FOCUS.

72. Languages of higher generations are considered as high-level languages. Which of the following is an earliest high-level programming language? [<Answer>](#)

- (a) BASIC
- (b) Ada
- (c) C
- (d) COBOL
- (e) Foxpro.

73. Which of the following refers to the process of hiding the complexity and internal functionality of objects? [<Answer>](#)

- (a) Encapsulation
- (b) Inheritance
- (c) Abstraction
- (d) Class resolution
- (e) Polymorphism.

74. Which of the following statements is/are **true** regarding decision tables and flow charts? [<Answer>](#)

- I. Decision tables are easier to draw and edit compared to flow charts.
- II. Decision tables are better able to express total sequence of events needed to solve a problem than flow charts.
- III. Decision tables provide more compact documentation than flow charts.
- IV. Programmers, especially beginners, are more familiar with flow charts than with decision tables.

- (a) Only (III) above
- (b) Only (IV) above
- (c) Both (III) and (IV) above
- (d) (I), (III) and (IV) above
- (e) (II), (III) and (IV) above.

75. Match the following flow chart features with the corresponding symbols: [<Answer>](#)

i. Processing	p. Rhombus (Diamond)
ii. Off page connector	q. Square
iii. On page connector	r. Pentagon
iv. Decision	s. Circle

- (a) i/q, ii/r, iii/s, iv/p
- (b) i/r, ii/s, iii/q, iv/p
- (c) i/q, ii/s, iii/r, iv/p
- (d) i/s, ii/q, iii/r, iv/p
- (e) i/q, ii/p, iii/r, iv/s.

76. Language translators convert [<Answer>](#)

- (a) An object code into a source code
- (b) A source code into an object code
- (c) An interpreter into a compiler
- (d) A compiler into an interpreter
- (e) A source code into a compiler.

77. Which of the following statements is/are **true** about programs developed using machine language or assembly language, when compared to programs developed using high-level languages? [<Answer>](#)

- I. Development of these programs is a monotonous task.
- II. These programs are less prone to errors.
- III. It is difficult to make alterations to these programs.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

78. Which of the following languages will support object-oriented programming principles?

[<Answer>](#)

- I. Java.
- II. .NET.
- III. C.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

79. In machine language, _____ is used to tell the computer where to find or store the data that has to be manipulated.

[<Answer>](#)

- (a) OPERAND
- (b) OPCODE
- (c) MNEMONICS
- (d) ASSEMBLER
- (e) COMPILER.

80. Which of the following statements is/are **true** about looping structures?

[<Answer>](#)

- I. In the DO ... WHILE structure, the looping continues as long as the condition is not true.
- II. In the REPEAT ... UNTIL structure, the looping continues until the condition becomes true.
- III. The condition is tested at the bottom of the loop in the REPEAT UNTIL structure.

- (a) Only (III) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

81. Which of the following statements is the primary goal of Database Management System (DBMS)?

[<Answer>](#)

- (a) To provide convenient and efficient environment for storing and retrieving data
- (b) Ensuring system security
- (c) Preventing data loss due to system failure and unauthorized access
- (d) To enable frequent updation and maintenance of databases so that they reflect new business transactions
- (e) To provide inquiry and reporting capabilities to the end users.

82. Which of the following is the most basic element of data?

[<Answer>](#)

- (a) Database
- (b) Record
- (c) Character
- (d) File
- (e) Field.

83. Which of the following file organizations requires exhaustive search to access the records?

[<Answer>](#)

- (a) Pile
- (b) Indexed
- (c) Sequential
- (d) Indexed-sequential
- (e) Hashed.

84. Which of the following models provide flexibility in structuring and allow data constraints to be explicitly specified?

[<Answer>](#)

- I. Record-based logical models.
- II. Object-based logical models.
- III. Physical data models.

- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (II) above
- (e) All (I), (II) and (III) above.

85. Which of the following models **does not** fall under Record-based logical models?

[<Answer>](#)

- I. Relational.
- II. Hierarchical.
- III. E-R model.
- IV. Binary model.

- (a) Both (I) and (II) above
- (b) Both (I) and (III) above
- (c) Both (II) and (III) above
- (d) Both (II) and (IV) above
- (e) Both (III) and (IV) above.

86. Which of the following models is the oldest Database Management System (DBMS) model?

[<Answer>](#)

- (a) Hierarchical model
- (b) Network model
- (c) Relational model
- (d) E-R model
- (e) Object-oriented model.

87. Which of the following models provides ad hoc request flexibility?

[<Answer>](#)

- I. Hierarchical model.
- II. Network model.
- III. Relational model.

- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (II) above
- (e) Both (II) and (III) above.

88. Which of the following statements is/are **true** about Structured Query Language (SQL)?

[<Answer>](#)

- I. SQL is a procedural query language.
- II. SQL includes both data definition and data manipulation operations.
- III. A SQL query consists of a command keyword followed by additional information.

- (a) Only (II) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

89. Which of the following characteristics of a well-designed database system refers to the storage of data in such a way that it is not affected by any modification in the data structure?

[<Answer>](#)

- (a) Data integrity
- (b) Data independence
- (c) Data redundancy
- (d) Data sharing
- (e) Data security.

90. Which of the following types of databases is also called as multidimensional database?

[<Answer>](#)

- (a) Operational database
- (b) Data warehousing
- (c) Hypermedia databases
- (d) Distributed databases
- (e) Management database.

91. In which of the following phases of database development process, the Database Administrator (DBA) designs an enterprise model?

[<Answer>](#)

- (a) Database planning
- (b) Database modeling
- (c) Database design
- (d) Database implementation
- (e) Database maintenance.

92. Which of the following functions of data resource management involves the process of managing the collection, storage and dissemination of all data types in such a way that the data becomes a standardized resource that is available to all the end users in the organization? [<Answer>](#)

- I. Data planning.
- II. Data administration.
- III. Database administration.

- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (II) above
- (e) Both (II) and (III) above.

93. An entity consists of basic objects or concepts about which data is collected and stored. Which of the following statements is/are **true** regarding different entities? [<Answer>](#)

- I. Associative entities are also called as generic entities.
- II. Associative entities are used for associating or relating two or more entities.
- III. Subtype entities are also called as intersection entities.

- (a) Only (I) above
- (b) Only (II) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) Both (II) and (III) above.

94. Which of the following refers to the actual number of associated instances for each of the two entities? [<Answer>](#)

- (a) Cardinality
- (b) Connectivity
- (c) Interoperability
- (d) Aggregation
- (e) Generalization.

95. In which of the following designs, all the information is represented in the form of high level models? [<Answer>](#)

- (a) Conceptual design
- (b) Logical design
- (c) Physical design
- (d) Data design
- (e) Information design.

96. The relationship between DEPARTMENT and EMPLOYEE is a [<Answer>](#)

- (a) One-to-one relationship
- (b) One-to-many relationship
- (c) Many-to-many relationship
- (d) Many-to-one relationship
- (e) Symmetric relationship.

97. A table has four columns: Student ID, Course ID, Percentage Obtained, and Course Title. Student ID and Course ID together constitute the full primary key. Percentage Obtained depends on both Student ID and Course ID. Course Title depends only on Course ID. Which of the following statements is **true**? [<Answer>](#)

- (a) The table complies with the first normal form
- (b) The table complies with the second normal form
- (c) The table complies with the third normal form
- (d) The table complies with the fourth normal form
- (e) The table complies with the fifth normal form.

98. The sales manager of a company wants to know the details of sales achieved by James, a salesperson. Which of the following SQL statements can be used to find out the sales achieved by James? 'Salesdetails' is a table in which name, city, state, and quantity are the relevant fields. [<Answer>](#)
- (a) SELECT name, city, state, quantity FROM salesdetails WHERE name = 'James';
 - (b) SELECT name, city, state, quantity FROM salesdetails;
 - (c) SELECT name, city, state FROM salesdetails WHERE Name = 'James';
 - (d) SELECT name, city, state, quantity WHERE Name = 'James';
 - (e) SELECT name, state, quantity WHERE Name = 'James'.
99. A retail chain analyzed the buying patterns of 20-25 year old women. It discovered that the women belonging to this category shopped every fortnight for cosmetics and during this time they also tended to buy music and/or movie CDs. This information enabled the retail chain to move the music and movie CDs display closer to the cosmetics. Which of the following would have helped the management of the retail chain in gaining such information about the purchasing patterns of the consumers? [<Answer>](#)
- (a) Database definition
 - (b) Data mining
 - (c) Real-time processing
 - (d) Data dictionary
 - (e) Batch processing.
100. A table has three columns: EmployeeID, Department, and HoD. EmployeeID is the primary key. Each Department has a HoD (Head of the Department). Which of the following statements is **true**? [<Answer>](#)
- (a) The table complies with only first normal form
 - (b) The table complies with the second normal form
 - (c) The table complies with the third normal form
 - (d) The table complies with the fourth normal form
 - (e) The table complies with the fifth normal form.

END OF QUESTION PAPER

Suggested Answers

Information Technology & Systems - I (MB1C3): October 2008

Answer	Reason
1. B	Fifth generation computers are based on artificial intelligence and possess voice recognition capabilities. They use parallel processing of semiconductors for advanced computing. This generation of computers has the ability to respond to natural languages and is capable of learning and self-organization.
2. B	Magnetic Ink Character Recognition (MICR) is used predominantly in the banking industry for processing checks and demand drafts.
3. B	Registers are special memory units in the processor which are needed for speeding up the movement of information between various units of a computer system. They also used for temporary storage. speed up the rate of information transfer.
4. D	A pointing device is a computer hardware component used to enter data and instructions into the computer system. The various pointing devices are mouse, trackball, touchpad, touch screen, light pen, joystick, etc.
5. B	Cache is a high speed memory. This memory can be part of the main memory or a completely independent high speed storage medium. It increases the speed of processing by making current programs and data available to the CPU at a rapid rate.
6. C	When a computer is switched on, an automatic program called a bootstrap loader is loaded onto the computer's memory. This program guides the rest of the start-up process, which involves moving essential programs from the computer's hard disk to the memory.
7. D	The output unit of a computer system conveys the results of computation to users through a monitor on the screen or printer in the printed format. These units link the computer with the external environment. Output interfaces help convert the binary code produced by the computer into a human readable form.
8. A	In RISC architecture, RISC stands for Reduced Instruction Set Computer. It is a type of microprocessor that recognizes a relatively limited number of instructions.
9. A	Flat bed scanners work on a single sheet of paper at a time. Sheet fed scanners draw in the sheets using a roller mechanism. Handheld scanners can be used to scan smaller originals like photographs.
10. E	McAfee is an example of Antivirus Software which comes under the category of System Software called Utilities. Internet Explorer (Browser Tool), JAVA, MS office (Word Processor, MS Excel etc) are application softwares.
11. C	Impact printers are of 3 forms: dot-matrix, daisy-wheel and line printers. These printers cannot print graphics nor do they have multi-font capabilities. Daisy wheel printers are very noisy and they print very slowly.
12. A	Drum plotters print graphical images by moving both drum and the pen. Drum plotters are bigger than the flatbed plotters. The pictures are not as accurate as those printed by flatbed plotters.
13. C	System bus is the circuitry that allows all the hardware devices in the computer to talk to each other.
14. D	Clock speed is defined as the rate at which a processor can complete processing cycles.
15. B	LARC, IBM 401 are examples for second generation computers. Mainframes and IBM 360 are examples of third generation computers.
16. B	Subjective estimation is a method of collecting data from experts in a particular field. The subjective estimation method is employed in situations where no other data sources are available. It is used for conducting an analysis regarding issues that are difficult to be described in actual, objective, or numeric terms.

17. B There are two methods that increase the sending and receiving efficiency of the system. These are summarization and message routing. Observation is not a method that increases the sending and receiving efficiency of the system.
18. B Information is sent from a sender to a receiver through a medium called the communication medium or transmission channel. This channel is a link between the communicating parties – the sender and the receiver. A modulator is used for converting the original message into a signal that can be sent through the communication medium, while a demodulator is used for converting the signal back to the original message.
19. C Impartiality refers to the information which is free from errors and bias.
20. E Errors are not always deliberate and therefore certain measures can be taken to minimize them. Some of the measures to overcome errors are:

Internal controls.

Internal audit and external audit.

Additional parameters that state the level of confidence with regard to the accuracy of information.

Instructions pertaining to measurement and processing of information.

The first two measures can be used to reduce the uncertainty of information while the last two ascertain the credibility of the information.

21. C ICS stands for Internet Connection Sharing. This feature facilitates sharing of a single Internet connection on one computer with other computers located in the same LAN (local area network). This was one of the salient features in the second edition of Windows 98.
22. A Virtual memory allows users to work with more memory than what is installed on the motherboard of the computer. Swapping is a paging operation that slows down the speed of the computer. Interrupts are signals, which inform the operating system that some activity has taken place. Preemptive multi-tasking enables the operating system to regain control if an application stops running and crashes.
23. B A swap file is a hard disk file in which the OS starts storing copies of pages when the memory is full. Shell is a user interface surrounding the core of the OS. A dialog box is used to supply additional information that a program needs to perform a chosen action. Syntax is a predefined set of rules to be followed while interacting with the system.
24. C The user does not need to memorize keywords and syntax with menu-driven user interface. Microsoft word uses menu driven interface. Menu driven interface provide the users with a list that contains a range of options from which they have to select the commands. Command line user interface is used commonly for system administration.
25. C UNIX is one of the most popular multi-user, multi-tasking OS that uses client/server technology. UNIX was developed for medium sized minicomputers. The main motive behind developing UNIX was to enable programmers to access the system and share resources simultaneously.
26. D Windows 3.0 was the first version of Windows that enabled users to take full advantage of Intel new 32 bit microprocessor, the 80386. The various versions of Microsoft Windows 3.0 (including Windows 3.1, 3.11 etc), released subsequently were collectively known as Microsoft Windows 3.x. The new features of Windows 3.0 were the program manager, file manager and the print manager.
27. B Microsoft Windows NT is a 32 bit network OS released in 1993. It was specifically designed for client/server systems. Windows NT was superior to all other existing

operating systems in terms of security, OS power, performance, desktop scalability and reliability. However, it lacked certain features like support of drivers and gaming features compared to Win95 and Win98.

28. A Linux is considered virus-free as compared to Windows. There are very limited application softwares available for Linux compared to Windows. Linux cannot be shutdown without first logging out.
29. A Majority of hardware devices support Windows. File names in Windows are not case sensitive. Windows cannot support large clusters.
30. E The NetWare 5.x series of operating systems include the versions 5.0 and 5.1. The earlier versions of NetWare 3.x and NetWare 4.x are LAN operating systems. NetWare 5.x series of operating systems are WAN operating systems.
31. E The various network resources in an organization include its communication media and network support. Network support includes support from all other resources of an information system, namely, people, hardware, software, and data resources. All these resources provide direct support to the functioning of a communications network.
32. C Informal information is less formally presented than formal information. It is also less authoritative and reliable than formal information. Grapevine refers to the informal network among the company's employees, which circulates information that is often incorrect or exaggerated.
33. B Control information consists of information required to put in place a feedback mechanism. Such information is used to compare actual with predetermined standards and take corrective action for deviations.
34. B Transaction processing is a method of data collection. The data obtained is basic or primary and is generated from transactions. This data is raw in nature and needs to be processed and integrated. Information in ledgers, payrolls, and internal financial reports are all outcomes of transaction processing.
35. A Based on its nature, information is classified into quantitative information, qualitative information, formal information, and informal information. Based on structure, information can be classified into detailed information, summarized information, sampled information and aggregated information.
36. C Vertical applications are those that cater to the needs of a particular business function. Vertical applications cater only to a specific function in an organization. Special programmers or operators are required to carry out these applications. Examples of vertical applications are accounting software and bill generation software.
37. B Function is a special keyword that can be entered into a cell to process data that is appended within brackets. Macro is a symbol, name or key that represents a list of commands. Replication is used when it is necessary to apply a formula to values in more than one cell or range of cells.
38. D To allow Microsoft Excel to consider a number as text, an apostrophe (') should be typed before the number. This allows Microsoft Excel to consider the number as text and automatically align it to the left.
39. C Sheet tab allows the user to work on more than one sheet simultaneously. It is used to switch from one sheet to another.
40. B While working on a large worksheet with data in several rows and columns, row headings would disappear as the worksheet is scrolled down. Freeze panes are used to ensure that row headings appear all the time even when the worksheet is scrolled down.
41. A Formatting of text is related to the document appearance and is carried out at three levels: character, paragraph and section levels. Justification refers to aligning the position of text in the document i.e. aligning the beginning and end of lines. This is a paragraph formatting feature.
42. B Average is a statistical function. Remaining all are Mathematical & Trigonometrical

functions.

43. B Lookup & Reference functions in Excel enable the user to look up for a particular row or column or find a specific reference in the worksheet. ADDRESS, HYPERLINK and TRANSPOSE are some examples of Lookup & Reference functions. Statistical functions in Excel help in summarizing, comparing and grouping data and finding out the relationships between two sets of data.
44. D CLEAN is a text function. Remaining all are Information functions.
45. E '&' symbol cannot be used along with formula '&' symbol can be used for concatenation of a text or a word.
46. B It will add all the column numbers from A1 to C9. $1+2+3+9+5+6+7+7+7+1+2+5+9+5+4+5+6+6+2+3+4+5+6+7+4+3+2=126$.

47. B Operators and their Order of Priority

Order	Operator
1	%
2	^
3	* and /
4	+ and -
5	&

If the operators belong to the same order of priority, they will be evaluated in the formula from left to right. One can also change the order of evaluation within a formula. This can be done by using parentheses. The expression within the parentheses will be evaluated before all the arithmetic operators. From the above table, the expression evaluates as follows:

$$= 6^3*4&8^2*4/3^2*4^3*3$$

$$864 \&(64*4/9) *64*3$$

$$\text{i. e } 864 \& 5461.333$$

thereafter it will concatenates resulting to 8645461.333

48. A Since we have used mixed cell reference, the content in the D1, D2, D3, D4, D5 will be 11, 5, 5, 5, 5.
- D1=3 + 6 + 2 =11
- D2=3+0+2=5
- D3=3+0+2=5
- D4=3+0+2=5
- D5 = 3 + 0 + 2 = 5.
49. C
- (a) **Slide view:** In this view, the slides can be viewed one by one. Slides can be created and edited in this option.
 - (b) **Outline view:** This view shows an outline of the presentation's text. This view enables the user to build the presentation quickly, in an organized manner.
 - (c) **Slide sorter view:** This view displays thumbnails (small graphical images) of each slide and enables the user to change their order.
 - (d) **Notes view:** This view enables a person to add speaker notes to each slide.
 - (e) **Master view:** Like the master pages in a desktop publishing program, each presentation has a master slide that contains the basic slide layout.
50. B CTRL+1 is the shortcut key to use Cells option in Format menu.
51. A Livelink intranet groupware helps the user create a document management library at an intranet website. Remaining all are popular Desktop Conferencing Systems.
52. B POP is used for retrieving emails from a mail server. POP2 and POP3 are the two versions of POP. Pop2 requires SMTP for sending messages while POP3 can be used with or without SMTP.
53. B The intranet is a private computer network which is designed for internal use within the organization. Intranets are similar to Internet in terms of hardware and software used. Compared to Internet, Intranets are highly secure to ensure that external users

cannot access them.

54. C Groupware is software that enables groups of workers working at different geographical locations to communicate with each other. Also known as collaborative software, it is designed to enable all those involved in a common project or task to achieve goals.
55. C Using extranets, the company can develop strategic relationships with its customers and vendors. The information shared on the extranet can be updated regularly and instantaneously. Extranets can be used for sharing news that might be of common interest among the business partners. However, these networks do not provide face-to-face contact with the external business entities.
56. B The third statement is false because the examples of decisions taken at middle level management are budget analysis, vendor rating and staff promotion. Whereas, remaining statements are true regarding middle level management.
57. B Executive Information Systems (EIS) enable online access to relevant information (related to the external environment) to the top management in a comprehensible format. These systems provide timely, accurate, and relevant information to the management. The basic purpose of an EIS is to help executives learn about the organization, its work processes, and its interaction with the external environment. These systems mostly help the top management in taking unstructured decisions.
58. E Knowledge management systems promote learning within the organization and facilitate the creation of knowledge bases. For this reason, these systems are alternatively called 'adaptive learning systems'.
59. C Electronic data interchange (EDI) is an example of fully automated data entry. In **Fully automated data entry**, data is entered completely without any human intervention. In this method, two companies interact with each other through a computer network.
60. E
- (a) **Information documents** serve as confirmation or proof to their recipients that certain transactions have occurred.
 - (b) **Action documents** are documents that cause the recipients to initiate some actions.
 - (c) **Turnaround documents** are output documents generated by a computer, which become input documents again when additional data is entered into them.
 - (d) **Edit reports provide** details of errors that have been detected during processing.
 - (e) **Control listings** are detailed reports that provide details of each transaction occurring during a particular period.
61. D
- (a) **Management oriented:** MIS is developed to increase organizational efficiency. Therefore, it needs to focus on the requirements of the managers and the overall objectives of the organization.
 - (b) **Management directed:** MIS can be costly and time consuming. Hence it is important that the top management understand their importance in increasing organizational efficiency, which would lead to quicker implementation.
 - (c) **Integrated systems:** An MIS is a combination of subsystems. Hence, it is important that MIS be viewed as an integrated system that is a combination of functional and activities subsystems.
 - (d) **Planning:** The system should be designed in such a way that there is perfect synchronization between hardware, software, data processing, information presentation and feedback.
 - (e) **Flexibility:** MIS is flexible and can be modified easily. Moreover, computerization is also simple because of the structure and comprehensive nature of the system.
62. A **Data analysis systems** are developed using simple data processing tools and business rules and rely on comparative analysis, application of formula, and use of algorithms. In **Information analysis systems**, information available to the management needs to be analyzed to arrive at a result. **Accounting systems** can be

of great value in tracking business functions even though they do not contribute directly to decision making. **Status inquiry systems** can be taken easily if the current status is known. Whereas, **Process control systems** is one of the components of Manufacturing information systems.

63. C Statement (III) is false because the risk of failure and level of disruption is very high in case of BPR while it is low in case of business improvement.
64. B Artificial Intelligence (AI) is a software-based technique and is applied on numeric data like symbols, statements, and patterns. The methods used by an artificial intelligence system are symbolic processing, social reasoning, scientific reasoning, and conceptual modeling. Though these systems have the capability to think, they are not substitutes for human beings. They are only designed to help solve complex problems. The three basic categories of artificial intelligence are cognitive sciences, robotics, and natural interface applications.
65. C Agile competition is associated with pricing based on value to customer rather than on cost of production. Remaining statements are associated with an Agile competitor.
66. B
- (a) Value analysis is not relevant.
 - (b) Sensitivity analysis is used to observe how repeated changes in a single variable affect other variables.
 - (c) In Goal-seeking analysis, repeated changes are made to selected variables until a chosen variable reaches a target value.
 - (d) Optimization analysis is used for finding an optimum value for selected variables, given certain constraints.
 - (e) Time-series analysis is not related to analytical modeling.
67. D Real-time processing involves processing of transactions immediately after generation. This also enables error correction while entering data online. Real-time processing or online entry and processing gives instant results. They provide immediate output to end users. For instance, an airline reservation system would require a real-time processing of transactions. On the other hand, an employee payroll system would require a batch processing system based on the payroll frequency.
68. A Decisions at the strategic level are concerned with long-term business issues like diversification, expansion of capacity, strategic alliances, etc. The kind of information required to make these decisions is unstructured and uncertain. Therefore, they require adaptive, flexible, insightful, fast, and accurate systems.
69. D

Decision Making	Management Control
Structured	Budget analysis, Program control
Semi-Structured	Short term forecasts, Long term forecasts, Employee performance appraisal, Capital budgeting ,Program budgeting
Unstructured	Budget preparation, Business process reengineering ,Workgroup performance analysis

From the above table we can confirm that option (d) is the answer.

70. D The main task of an OLAP is to transform relational or non-relational data into a highly explorable structure, which means that data can be broken down into small units to derive meaningful information. These explorable structures are commonly called as cubes or Power Cubes.
71. D NATURAL is built around a proprietary database management system called ADABAS.
72. D COBOL was developed in 1959, this is one of the earliest high-level programming

languages. Ada was developed in 1970s, C was developed in 1972, BASIC was developed in 1963. These are all third generation languages. Whereas, Foxpro totally related to non-procedural languages which is used for accessing databases comes under fourth generation languages.

73. C Abstraction refers to the process of hiding the complexity and internal functionality of objects.
74. D Decision tables are easier to draw and edit compared to flow charts. They provide more compact documentation. A small table can replace several pages of charts. It is easier to follow a particular path down one column than through several flow chart pages. Flow charts are better able to express the total sequence of events needed to solve a problem than decision tables. Flow charts are mostly preferred by programmers, especially beginners.
75. A A square symbol is used to represent 'processing', that is, a group of program instructions that perform a processing function. A pentagon symbol is used to represent an 'off page connector'. It is used to designate entry to, or exit from a page. A circle symbol is used to represent 'on page connectors', i.e., an entry to or an exit from another part of the program flow chart. A rhombus (diamond) symbol is used to represent a 'decision', where the program logic may branch into different paths based on the condition.
76. B Language translators convert a source code into an object code (machine code). Interpreters and compilers are the two types of language translators.
77. C Statement (ii) is false, as the programs developed using machine language or assembly languages are more prone to errors. The other statements are true.
78. B Both Java, .NET will support object-oriented programming principles. C is a structured programming language.
79. A An instruction prepared in any machine language has a two-part format. The first part is the OPCODE (operation code), which tells the computer what function to perform. Every computer has an operation code or OPCODE for each of its functions. The second part of the instruction is the OPERAND, which tells the computer where to find or store the data that has to be manipulated.
80. A In the DO ... WHILE structure, the looping continues as long as the condition is true. In the REPEAT ... UNTIL structure, the looping continues until the condition becomes not true. The condition is tested at the bottom of the loop in the REPEAT UNTIL structure.
81. A Unless there is data in the database, one cannot ensure system security, prevent data loss due to system failure or from unauthorized access, perform any updations, maintain the data. So providing convenient and efficient environment for storing and retrieving data is the primary goal of DBMS.
82. C A **character** is the most basic element of data. And a field consists of group of characters. Related fields of data are grouped to form a **record** and group of records constitute a data **file**. Finally, **database** is a collection of logically related records and files.
83. A In Pile file organization there is no specified structure or format for the records to be saved. And different records may have different fields and it results in difficulty in retrieving data. So exhaustive search is required to access the records. Whereas in remaining file organizations, the records are identified by a unique address.
84. B Record-Based Logical Models (RBLMs) are used for describing data at the logical and view levels. Object-Based Logical Models (OBLMs) are also used for describing data at the logical and view levels and they provide flexibility in structuring and allow data constraints to be explicitly specified. Whereas, Physical data models are used to describe data at the physical or the lowest level, i.e., in the form of bytes and words.
85. E Relational, Network and Hierarchical models fall under Record-based logical models (RBLMs). Whereas, E-R model, object-oriented model, binary model, semantic data model, infological model and the functional data model come under

Object-Based Logical Models (OBLMs).

86. B The Network model is the oldest DBMS model.
87. C Relational model provides ad hoc flexibility. This ad hoc feature is not present in the other two models. In hierarchical model, the data is represented on the basis of values and in network model, data is represented by pointers or links. So, unless there exists complete data in the records, both network and hierarchical models cannot retrieve or display the data. Whereas, in Relational model, the data is present in the records will be shown violating the other details which are incomplete.
88. D SQL is a non-procedural query language. SQL includes both data definition and data manipulation operations. A SQL query consists of a command keyword followed by additional information.
89. B Data integrity is said to exist if the data is correct and has no inconsistencies. Data independence refers to the storage of data in such a way that it is not affected by any modification in the data structure. Prevention of data redundancy refers that there should not be any repeated elements or groups. Here elements refer to the records and groups refer to the fields in the particular tables in the database. Data sharing refers to permitting several users to share the data in the database and access the data at the same time. Data security refers to ensure safety. In order to ensure safety, data stored in the databases should be made accessible only to authorized users. [< TOP >](#)
90. E Analytical databases store information that is extracted from the operational and external databases. They contain information that is vital to the managers and the end users. And these databases are also called as **management databases or information databases**. They are also called multidimensional databases as they use multidimensional data structures for organizing data. [< TOP >](#)
91. A In the Database planning phase the DBA designs an enterprise model that defines the primary business processes in the organization. Both end users and executives are consulted during this phase. [< TOP >](#)
92. B Data administration involves the process of managing the collection, storage and dissemination of all data types in such a way that the data becomes a standardized resource that is available to all the end users in the organization. Data planning involves the development of data architecture for the data resources of the firm that works in conjunction with the strategic mission and plans of the firm.
Database administration is responsible for ensuring the proper and effective use of database management technology. It involves physical and logical design, developing and maintaining a data dictionary, monitoring and enhancing the performance of databases, and enforcing standards for database use and security. [< TOP >](#)
93. B Only second statement is true. Remaining (I) and (III) are false. Subtype entities represent a subset of the occurrences or instances of the parent entity, which is called a super type or generic entity. Associative entities are also called as intersection entities. [< TOP >](#)
94. A Cardinality refers to the actual number of associated instances for each of the two entities. [< TOP >](#)
95. A In Conceptual design, all the information is represented in the form of high level models. In Logical designing, the conceptual model is transformed into a data model. Physical design determines the data storage structures and access methods. Whereas, remaining two data and information designs does not come under design concept. [< TOP >](#)
96. B The relationship between DEPARTMENT and EMPLOYEE is a one-to-many relationship. [< TOP >](#)
97. A To be in the first normal form, every table must have a primary key, which is a column (or set of columns) that uniquely identifies each row. In this table, Student ID + Course ID is the primary key. So the table complies with the first normal form. To be in second normal form, the table should be in the first normal form and [< TOP >](#)

there should not be any partial dependency, i.e., all the non-key fields (fields that are not primary) should be functionally dependent on the full primary key. Here, the course title functionally depends only on the course ID (part of the primary key) rather than on the full primary key. Therefore, this is a situation of a partial dependency. So the table does not comply with the second or higher normal forms.

98. A In structured query language (SQL), the command SELECT is used to list the data items (fields) to be retrieved. The command FROM is used to list the tables from which the data will be retrieved. The command WHERE specifies the conditions and parameters which will limit the search. In the given situation, the sales manager wants to find out the sales details of the salesperson James. 'Salesdetails' is the table with fields: name, city, state, and quantity. Therefore, the statement to be used for finding out the quantity achieved by James is: SELECT name, city, state, quantity FROM salesdetails WHERE name = 'James'.

[< TOP >](#)

99. B Data mining refers to the process of analyzing data from different sources and perspectives and summarizing it into information. The aim is to look for patterns in the data which can be used to formulate a business strategy or to look for something unusual. This involves processing the data in a data warehouse to identify key factors, trends and historical patterns of business activity. In the given context, the management of the retail chain must have used data mining to make changes in its business operations to gain a competitive advantage in the market.

[< TOP >](#)

100.B To be in the first normal form, every table must have a primary key, which is a column (or set of columns) that uniquely identifies each row. In this table, EmployeeID is the primary key. So the table complies with the first normal form. Since there is only one key column, there is no possibility of a non-key field being dependent on a part of the primary key. So, the table is also in the second normal form.

[< TOP >](#)

To be in third normal form, the table should be in the second normal form and there should not be any transitivity, i.e., the non-primary key fields (fields that are not primary) should be dependent on the primary key alone. There should not be any sort of dependency among the non-keys. Here, the field HoD is dependent on the field Department. Therefore, this is a situation of transitivity. So, the table does not comply with the third normal form.

[< TOP OF THE DOCUMENT >](#)