Question Paper
Information Technology & Systems - I (MB231): July 2008

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

<Answer>

1. Which of the following statements is/are **true** about Mark 1 computer?

   I. Mark 1 computer is also called IBM Automatic Sequence Controlled Calculator (ASCC).
   II. Mark 1 computer was based on the techniques that had already been developed for the punched card machinery.
   III. The main advantage of Mark 1 computer is that it has simple design.

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

<Answer>

2. Which of the following computers is the first digital computer and the first computer to be commercially available in the marketplace?

   (a) ENIAC
   (b) UNIVAC
   (c) EDVAC
   (d) EDSAC
   (e) ASCC.

<Answer>

3. Which of the following is/are the example(s) of fourth generation computers?

   I. IBM 360.
   II. IBM 370.
   III. Macintosh.

   (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.

<Answer>

4. The registers are part of the processor which enables faster access and storage. There are several types of registers, each designed to perform a specific function. From the following statements, identify the function of instruction register.

   (a) It is used for storing the addresses of the active and specific memory location
   (b) It holds the address of the next instruction that is in line for execution
   (c) It is used for holding the instructions while they are being executed
   (d) It is used for holding collected results and the data that needs to be operated on
   (e) It is used for storing the data that is on its way to and from memory.

<Answer>

5. Which of the following statements is/are **false** about scanners?

   I. Sheet fed scanners are used to copy smaller originals, such as photographs.
   II. Handheld scanners are operated by hand and the image quality is good compared to Flatbed scanners.
   III. Desktop scanners work on a single sheet of paper at a time.

   (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.

<Answer>

6. Which of the following sequences is **true** with respect to access speed?

   (a) RAM>Hard disk>CD-ROM> Cache memory
   (b) RAM>Hard disk>Cache memory>CD-ROM
   (c) Cache memory>Hard disk>RAM>CD-ROM
   (d) Cache memory>RAM>Hard disk>CD-ROM

(e) Cache memory >CD-ROM>RAM>Hard disk.

7. What are the major components of a Central Processing Unit (CPU)?

(a) Control Unit, Registers, Arithmetic Logic Unit
(b) Control Unit, Main Memory, Arithmetic Logic Unit
(c) Main Memory, Arithmetic Logic Unit, Auxiliary Memory
(d) Registers, Control Unit, Main Memory
(e) Registers, Control Unit, Auxiliary Memory.

8. CRAY3, CRAYXMP, PARAM 9000 and PARAM 10000 are the examples of

(a) Servers
(b) Analog computers
(c) Supercomputers
(d) Minicomputers
(e) Microcomputers.

9. Based on utility, computers are classified into

(a) General purpose computers and special purpose computers
(b) Analog computers, digital computers and hybrid computers
(c) Supercomputers and mainframes
(d) Minicomputers and macrocomputers
(e) Supercomputers and special computers.

10. In virtual memory, program instructions and data are divided into units of fixed size called

(a) Frames
(b) Segments
(c) Blocks
(d) Cells
(e) Pages.

11. Which of the following computers is/are used in the fields of artificial intelligence and computer aided manufacturing?

I. Hybrid computers.
II. Digital computers.
III. Analog computers.

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

12. Which of the following computers allow multiple users to handle huge databases simultaneously and carry out complex mathematical calculations?

(a) Mainframes
(b) Supercomputers
(c) Minicomputers
(d) Portable computers
(e) Desktop computers.

13. Which of the following statements is/are **true** about optical mouse?

I. An optical mouse has the ability to work on any surface.
II. An optical mouse will have moving parts.
III. Dust cannot get inside the optical mouse and interfere with the tracking sensors.

(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.

14. Which of the following devices looks like a mouse and a roller on top and selection buttons on the side?

(a) Track ball
(b) Light pen
(c) Touch pad

2

(c) Touch pad
(d) Joystick
(e) Digitizer.

15. Which of the following input devices is most often used for playing computer games or controlling robots in the manufacturing industry?

(a) Track ball
(b) Light pen
(c) Digitizer
(d) Joystick
(e) Scanners.

16. Which of the following is a scanning device and most popularly used for conducting examinations?

(a) Bar code reader
(b) Magnetic-ink character recognition
(c) Optical mark reader
(d) Optical character recognition
(e) Touch screen.

17. Which of the following statements is/are **true** about line printers?

I.   Line printers are slower than dot-matrix printers and daisy-wheel printers.
II.   Line printers are very noisy and have limited multi-font capabilities.
III. Line printers produce low quality printouts.

(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.

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

I.   In flatbed plotters, the paper is set on a flat surface and the pens are moved for drawing the image.
II.   Drum plotters are smaller than flatbed plotters.
III. Inkjet plotters have high processing speeds and can generate color prints.

(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.

19. Which of the following is/are the example(s) for random access storage devices?

I.   Hard disks.
II.   Floppy disk.
III. Magnetic tape.
IV.   CD-ROMs.

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

20. Some computers use more than one processor for processing in order to reduce the load on a single processor. Support microprocessors in a support processor design are also called channels, which will

(a) Control the movement of data between the control unit and the memory unit
(b) Control the movement of data between the input devices and the output devices
(c) Control the movement of data between the CPU and the input/output devices
(d) Control the movement of data between the arithmetic/logic unit and the memory unit
(e) Control the movement of data between the arithmetic/logic unit and the control unit.

21. Which of the following are the examples of system software?

I.   Compilers.
II.   Word processing software.

III. File management utilities.
IV. Spreadsheets software.
V. Editors.
VI. Operating system.

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

22. Which of the following operating systems will support multithreaded applications?   <Answer>

I. Linux.
II. Mac OS 8.
III. Windows 98.
IV. Windows NT.

(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.

23. Which of the following is/are the function(s) of shell?   <Answer>

I. Shell is responsible for managing the resources of the system and for facilitating communication between the various software and hardware components of the system.
II. Shell will manage disks and files through activities like formatting new disks, displaying a list of files in a directory, creating new directories/files, renaming directories/files, deleting empty directories/files, and copying files from one directory or disk to another.
III. Shell will start the application programs.

(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.

24. The programs written for one computer can be run on another with little or no modifications. This <Answer> capability is called as

(a) Scalability
(b) Portability
(c) Modularity
(d) Flexibility
(e) Device independence.

25. In UNIX, which of the following commands is used to change the password?   <Answer>

(a) cpassword
(b) password
(c) passwd
(d) cpasswd
(e) cpasswrd.

26. In MS-DOS, which of the following files deal with the hardware and consists of device drivers to <Answer> handle console display and keyboard, printer, serial communication, clock and boot disk drive?

(a) COMMAND.COM
(b) IO.SYS
(c) MSDOS.SYS
(d) COMMAND.SYS
(e) CONFIG.SYS.

27. Which of the Disk Operating System (DOS) commands display or set the search path for data files?   <Answer>

(a) ASSIGN
(b) APPEND
(c) PATH
(d) REM

(d)   REM

(e)   VER.

28. Aqua interface in Mac OS X is built on 3 graphics technologies namely <Answer>

(a)   Quartz, OpenGL, QuickTime
(b)   Dock, Quartz, OpenGL
(c)   OpenGL, QuickTime, Dock
(d)   Quartz, Dock, Quick time
(e)   Dock, Quartz, Finder.

29. Which of the following statements is/are **true** about Windows 95 operating system? <Answer>

I.   Windows 95 does not have built-in Internet facilities, dial-up networking, and new plug and play features.
II.   Windows 95 does not support preemptive multi-tasking.
III.   Windows 95 offered enhanced graphical capabilities and support for mobile computing and integrated networks.

(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.

30. Which of the following is **not** a feature of Windows Me operating system? <Answer>

(a)   Windows DVD maker
(b)   Windows movie maker
(c)   Windows media player
(d)   Movie editor
(e)   Revert back feature.

31. Which of the following operating systems supported preemptive multi-tasking and was the first to <Answer> support both client/server architecture and high-end personal productivity software?

(a)   Windows 95
(b)   Windows 98
(c)   Windows XP
(d)   Windows NT
(e)   Windows CE.

32. NetWare 3.11 is an ideal platform for server applications as it is modular and expandable. Additional <Answer> core services, such as messaging services and communication services, can be installed by loading

(a)   NetWare Loadable Modules
(b)   NetWare Link Modules
(c)   Network Loadable Modules
(d)   Network Link Modules
(e)   Network Line Modules.

33. Which of the following is/are **not** the feature(s) of Netware 5.1 operating system? <Answer>

I.   Web-based single point administration.
II.   Centralized Web management.
III   Virtual Office application.

(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.

34. Which of the following statements is **false** about Linux operating system? <Answer>

(a)   Linux can be used for networking and software development
(b)   Linux can be run on hardware ranging from a 386 processor to sophisticated fifth generation computers
(c)   Linux is most inexpensive
(d)   Linux is a robust 16 bit multitasking operating system
(e)   Linux was developed as an extension of MINIX.

35. Which of the following statements is **true**?

(a) Installing Windows is difficult when compared to Linux
(b) Windows default file system is ext2
(c) Compared to Linux, Windows take less time to discover and fix the bugs
(d) Windows is based on TCP/IP
(e) Linux is costly compared to windows when it is used as a server.

36. In character formatting, emphasis includes

I. Underlining the text.
II. Changing the style of the font.
III. Setting the size of the font.

(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. In MS-Excel, the number of columns in each worksheet is

(a) 32
(b) 64
(c) 128
(d) 256
(e) 512.

38. In MS-Excel, expression '= 2 * 2 + 3 ^ 4 & 7 * 2 %' would give the result as

(a) 163.8
(b) 850.14
(c) 480.34
(d) 470.42
(e) Error.

39. In Excel sheet, the cells A1,A2,A3,A4,A5 contains data 1,3,2,4,5,cells B1,B2,B3,B4,B5 contains data 2,5,3,4,6 and cells C1,C2,C3,C4,C5 contains data 3,2,3,6,1 respectively. If we write the formula =A$4+B$2+C3 in cell D1 and drag to subsequent cells, what will be the contents of D1, D2, D3, D4 and D5?

(a) 12, 10, 11, 13, 7
(b) 12, 15, 10, 10, 10
(c) 12, 16, 6, 5, 5
(d) 12, 15, 10, 9, 9
(e) 12, 11, 7, 9, 3.

40. Which of the following provide shortcuts to menu commands and are generally located just below the menu bar?

(a) Title bar
(b) Column heading and row heading
(c) Window controls
(d) Scroll bars
(e) Toolbar.

41. Which of the following is/are **not** reference operator(s)?

I. Ampersand.
II. Colon.
III. Space.
IV. Comma.

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

42. In MS-Excel, which of the following operators is also called union operator?

(a) Ampersand
(b) Colon
(c) Space
(d) Comma
(e) Apostrophe.

43. Users have many options to format cells in a worksheet. To format cells, they have to first select the particular cell or cells that are required to be formatted. Then they have to click on the menu bar and select the Format option. A drop-down menu appears from which the option called Cells is to be selected. A Format Cells dialog box appears which has various tabs. Which of the following tabs allows the user to select data types?

(a) Text tab
(b) Alignment tab
(c) Number tab
(d) Sheet tab
(e) Pattern tab.

44. To sort data in a spreadsheet based on one column, the cells that need to be sorted should be selected or highlighted and we need to choose _____ menu and click on sort option.

(a) Tools
(b) Format
(c) Window
(d) Data
(e) Table.

45. Which of the wild card characters can be used for representing any single character in Custom AutoFilter of Microsoft Excel?

(a) *
(b) ?
(c) $
(d) &
(e) #.

46. Which of the following statements is/are **true** about Filters in MS-Excel?

I. Both Auto filter and Advanced filter are used to select unique records in a single column.
II. The filtering criteria in Advanced filter could include multiple conditions that can be applied to a single column as well as multiple columns.
III. In both Auto filter and Advanced filters, we can copy the filtered data into another location.

(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.

47. In MS-Excel, there are different categories of functions like Date & time function, Text function, Information function, Statistical function etc. Which of the following mentioned pairs is/are **correct**?

	Function	Category
I.	NOW	Date & Time
II.	FACT	Statistical
III.	ISLOGICAL	Information
IV.	NA	Text

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

48. Declining Balance (DB) is a financial function which calculates depreciation on an asset for a specified period using the fixed-declining balance method. Which of the following arguments is **not** present in the syntax of DB?

(a) Cost
(b) Rate

7

(b)   Rate
(c)   Salvage
(d)   Life
(e)   Period.

49. The Solver tool in MS Excel generates three reports, viz., Answer, Sensitivity and Limits reports. <u>**<Answer>**</u>
Which of the following mentioned values is a part of sensitivity report?

(a)   Original value
(b)   Final value
(c)   Value for the input
(d)   Implicit value
(e)   Values for the constraints.

50. Which of the following is **not** a view option in Microsoft PowerPoint? <u>**<Answer>**</u>

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

51. Data conferencing is an interactive way of sharing information among users located at different <u>**<Answer>**</u>
locations over a network of computers. Application sharing is a term used in data conferencing which

I.   Allows two or more participants to interact with each other by working on a single application that
       is loaded onto the computer system of one of the participants.
II.   Facilitates sharing the same computer screen by all participants.
III.   Has similarities with remote control 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.

52. Which of the following companies was instrumental in popularizing Internet telephony using the <u>**<Answer>**</u>
Voice over Internet Protocol (VoIP)?

(a)   Apple
(b)   Skype
(c)   Oracle
(d)   Adobe
(e)   Xerox.

53. Which of the following is/are **not** the example(s) of enterprise communication tool(s)? <u>**<Answer>**</u>

I.   CoolTalk.
II.   Usenet.
III.   Creative Labs.
IV.   Web publishing.

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

54. Which of the following is/are **not** the example(s) of project management groupware? <u>**<Answer>**</u>

I.   Lotus Notes.
II.   Lotus Organizer.
III.   Netscape Collabra.

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

55. Which of the following groupwares creates a knowledge warehouse at an intranet website to share documents and organize the project knowledge of a team?

   (a)   Microsoft Project
   (b)   VideumConf Pro
   (c)   AltaVista Forum
   (d)   ShareVision PC 3000
   (e)   Proshare Video.

56. Which of the following statements is/are **true**?

   I.   Objective information is based on what seems to be true and on personal views and judgment.
   II.   Subjective information defines all aspects of an issue and helps in identifying an object, a person, a place, a thing, etc.
   III. Concepts do not change based on perceptions.

   (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.

57. Quality is subjective in nature and hence its parameters should be clearly defined in order to judge the quality of information. Which of the following quality parameters refers to continuity in data collection?

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

58. Which of the following statements is/are **true** about Qualitative information?

   I.   Qualitative information refers to information which is gathered through personal and direct methods.
   II.   Methods like personal interviews, observation, focus groups, case studies, etc.,are used for gathering qualitative information.
   III. Qualitative information is used for understanding the perceptions and interpretations of individuals and situations.

   (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.

59. Based on structure, information can be classified into various categories. Which of the following types of information does **not** come under this classification?

   (a)   Detailed information
   (b)   Knowledge information
   (c)   Summarized information
   (d)   Sampled information
   (e)   Aggregated information.

60. Data can be collected in a variety of ways and from a variety of sources. Proper care should be taken while collecting data, as the quality of information depends on the method employed for collecting the data. Which of the following methods is employed in situations where no other data sources are available?

   (a)   Observation
   (b)   Survey
   (c)   Transaction processing
   (d)   Experiment
   (e)   Subjective estimation.

61. "Management Information Systems (MISs) can be costly and time consuming. Hence, it is important that the top management understands their importance in increasing organizational efficiency, which

would lead to quicker implementation."

Which of the following characteristics of MIS relate to the above sentence?

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

62. Decisions at the strategic level are concerned with business issues such as

<Answer>

I.   Diversification.
II.   Budget analysis.
III. Expansion of capacity.

(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.

63. Which of the following is/are the example(s) of real time processing system?

<Answer>

I.   Process control system.
II.   Flight simulator.
III. Processing of credit card bills.

(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.

64. Documents that are generated by the transaction processing systems are known as transaction documents. They can be divided into various categories. Which of the following documents are designed first to initiate some action and then are returned for further processing so as to complete the transaction?

<Answer>

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

65. Which of the following information systems are also known as operational information systems?

<Answer>

(a)   Marketing information systems
(b)   Accounting information systems
(c)   Financial information systems
(d)   Manufacturing information systems
(e)   Human resource information systems.

66. Computer Integrated Manufacturing (CIM) integrates CAD, CAM, CAPP, CAQ and ERP. CAPP stands for

<Answer>

(a)   Computer Application Process Planning
(b)   Computer Aided Process Planning
(c)   Computer Advanced Process Planning
(d)   Computer Advanced Program Planning
(e)   Computer Application Personal Planning.

67. Human Resources Information System (HRIS) supports different activities. Which of the following activities is/are **not** related to staffing activity?

<Answer>

I.   Analyzing range and distribution of employee compensation and comparing it with industry standards and other economic indicators.
II.   Forecasting of the number of personnel required for each job category.
III. Establishing a relationship between the employees.

(a)   Only (I) above
(b)   Only (II) above

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

68. Which of the following is/are the portfolio management software package(s) available in the market? <Answer>

I. Informix.
II. FinPoint stockHand.
III. Atlas.

(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.

69. MIS helps in generating a variety of reports that are useful to managers through the management <Answer> reporting systems. Which of the following reports are sent to the networked workstation of the manager?

(a) Periodic scheduled reports
(b) Exception reports
(c) Demand reports and responses
(d) Push reports
(e) Edit reports.

70. Which of the following types of analytical modeling is a complex extension of goal seek analysis? <Answer>

(a) Sensitivity analysis
(b) Optimization analysis
(c) Data analysis
(d) System analysis
(e) Query analysis.

71. In programming language, 'Switch' statement is used to <Answer>

(a) Transfer control on the basis of certain conditions
(b) Check the conditions within another condition
(c) Specify operations based on certain conditions
(d) Check for multiple values of variables
(e) Execute the loop at least once.

72. Which of the following statements is/are **true** regarding application generators? <Answer>

I. Application generators are higher level languages designed to facilitate development of a complete application.
II. Application generators are usually built around database management systems.
III. Application generators are difficult to use than other high-level programming languages such as C++.

(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.

73. Which of the following statements is/are **false** about pseudocode? <Answer>

I. In order to understand the pseudocode, it is required to have the knowledge of any particular programming language.
II. For a beginner, it is easy to follow the logic of or write a pseudocode, as compared to developing a flow chart.
III. Modifying the pseudocode to match changes in the program is easy.

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

74. Any mistake in the program is called as an error. Testing and debugging are undertaken to ensure that there are no obvious errors in the program. Which of the following statements is/are **false** regarding the errors that occur in the program?

I.   Even though, syntactical errors are eliminated, the output of the program may not be error free.
II.   Syntactical errors can be checked by the program testing tools while the program is being written.
III.   Logical errors are detected by language testing tools.

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

75. Object orientation has become a major standard for modern software development. Object-oriented programming handles complex problems better than the procedural approach. Which of the following terms in object-oriented programming refers to the process of hiding the complexity and internal functionality of objects?

(a)   Encapsulation
(b)   Inheritance
(c)   Abstraction
(d)   Normalization
(e)   Polymorphism.

76. Flow-chart symbols enable easy understanding of the program or the process and help in finding out any flaws in it. Which of the following statements is/are **true** regarding flow charts?

I.   It is very time-consuming and laborious to draw flow charts with proper symbols and spacing for complex programs.
II.   There are standards to be followed regarding the amount of detail that should be included in a flow chart.
III.   Flow charts can be used for analyzing problems in a more effective way.

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

77. The Program Development Life Cycle (PDLC) provides an organized plan for breaking down the task of program development into manageable units, each of which must be successfully completed before moving on to the next phase. These manageable units are called as

(a)   Programs
(b)   Entities
(c)   Modules
(d)   Nodes
(e)   Assignments.

78. BASIC, developed in 1963, is an easy-to-use high-level programming language. BASIC is an acronym for

(a)   Basic All-Purpose Syntax Instruction Code
(b)   Basic All-Purpose Symbolic Instruction Code
(c)   Beginner's All-Purpose Syntax Instruction Code
(d)   Beginner's All-Purpose Symbolic Instruction Code
(e)   Business All-Purpose Symbolic Instruction Code.

79. In which of the following languages, does the compiler automatically create an executable program that is capable of running on its own?

(a)   C
(b)   C++
(c)   Java
(d)   VB
(e)   COBOL.

80. "Write once, run anywhere" phenomenon is applicable to which of the following languages? <Answer>

   (a)   C
   (b)   C++
   (c)   Java
   (d)   VB
   (e)   VC++.

81. Which of the following **best** describes an RDBMS? <Answer>

   (a)   A database with an index on every field
   (b)   A database with an object-oriented structure
   (c)   A database where related tables are kept separately, but can be used together
   (d)   A database designed for high-speed transaction processing
   (e)   A database with a constraint on every field.

82. Application programs that are used to create and maintain the database to provide information to users is called as <Answer>

   (a)   File
   (b)   DBMS
   (c)   Database
   (d)   Data
   (e)   System file.

83. Which of the following statements are **true** regarding pile file organization? <Answer>

   I.   In pile file organization, data is collected in the order in which it arrives.
   II.   All records and the fields in a pile file are of same length.
   III. In pile file organization, data can be retrieved easily.
   IV.   Pile file organization is more suitable to be used as a temporary storage medium.

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

84. A table has three columns: Employee ID, Department ID and Location. The above table complies with <Answer>

   (a)   Second normal form
   (b)   Third normal form
   (c)   Fourth normal form
   (d)   Fifth normal form
   (e)   Sixth normal form.

85. Which of the following statements is/are **true** about different data models? <Answer>

   I.   Record-Based Logical Models (RBLMs) are used for describing data at the logical level and physical level.
   II.   The first network model that was developed was called the Integrated Data Store.
   III. The entity-relationship (E-R) model falls under Record-Based Logical Model (RBLM).

   (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.

86. One of the query languages used in database management packages is QBE. QBE stands for <Answer>

   (a)   Query By Example
   (b)   Query By Exercise
   (c)   Query By Entity
   (d)   Query By Enterprise
   (e)   Query By Entry.

87. There are various categories of databases based on their use in an organization. Which of the following databases is also known as subject area databases? <Answer>

   (a)   Hypermedia databases

13

(b)   Distributed databases
(c)   Discussion databases
(d)   Analytical databases
(e)   Operational databases.

88. URLs are paths through which one can access documents or data on the Internet, extranets, and <Answer> intranets. URL stands for

(a)   Uniform Record Locator
(b)   Unified Resource Locator
(c)   Use Resource Locator
(d)   Uniform Resource Locator
(e)   Unified Record Locator.

89. Database development process is divided into various phases. Which of the following phases involves <Answer> creation of actual data?

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

90. A relational database system will maintain data about tables and all other objects in the database. This <Answer> information is called

(a)   Data dictionary
(b)   Data definition
(c)   Data planning
(d)   Data mining
(e)   Data warehousing.

91. Which of the following is **not** a characteristic of a good database system? <Answer>

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

92. KPC Bank uses separate systems for the collection of data across the world. The bank is finding <Answer> difficulty in consolidating the data. Which of the following will help the bank in consolidating the data across disparate systems?

I.   Data warehousing.
II.   Data mining.
III.   Data dictionary.

(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.

93. An entity consists of basic objects or concepts about which data is collected and stored. Which of the <Answer> following types of entities is also called intersection entity?

(a)   Subtype entity
(b)   Associative entity
(c)   Independent entity
(d)   Dependent entity
(e)   Parent entity.

94. Which of the following are examples of relational database management systems? <Answer>

I.   Ingres.
II.   Vbase.
III.   SQLite.
IV.   Iris.

(a)   Both (I) and (II) above
(b)   Both (I) and (III) above

14

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

95. Query language is a specialized language used to request information from a database. Which of the <answer><Answer></answer> following are the examples of query languages?

I. MDX.
II. Datalog.
III. XPointer.
IV. O2.

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

96. The term 'Row' in the database is same as_____ in the E-R model. <answer><Answer></answer>

(a) Entity
(b) Attribute
(c) Identifier
(d) Entity instance
(e) Tuple.

97. Which of the following statements are **false** about relational databases? <answer><Answer></answer>

I. Reusability of structure is possible using a relational database.
II. In relational database, we can draw the data from a limited set of data types.
III. Oracle 8 is an example of relational database.
IV. In relational database, maintenance has to be done on a continuous basis.

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

98. A table has four columns: Part ID, Warehouse ID, Quantity and Warehouse address. The table complies <answer><Answer></answer> with

(a) First normal form
(b) Second normal form
(c) Third normal form
(d) Fourth normal form
(e) Fifth normal form.

99. Which of the following statements is/are **true** about hashed file organization? <answer><Answer></answer>

I. Hashed file organization is also called direct file organization.
II. Hashed file organization is used when fixed length records are used.
III. Hashed-access files are keyed files, i.e., they associate a record with a specific key value and a particular storage location.

(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.

100. The computers in a distributed system may vary in size and function, ranging from workstations to <answer><Answer></answer> mainframe systems. These computers are called

(a) Clusters
(b) Segments
(c) Blocks
(d) Nodes
(e) Frames.

Suggested Answers
Information Technology & Systems - I (MB231): July 2008

	Answer	Reason	
1.	C	In 1944, Howard H. Aiken of Harvard University collaborated with IBM to release the first fully automatic calculating machine named the Mark 1 computer. Also called as the IBM Automatic Sequence Controlled Calculator (ASCC), the computer was based on the techniques that had already been developed for the punched card machinery. The Mark 1 computer proved to be extremely reliable. However, it was huge and had a very complex design.	≤
2.	B	The Universal Automatic Computer (UNIVAC) was the first digital computer and the first computer to be commercially available in the marketplace.	≤
3.	D	Mainframes and IBM 360 are the examples of third generation computers. IBM 370, Apple II, Macintosh are the examples of fourth generation computers.	≤
4.	C	The instruction register is used for holding the instructions while they are being executed.	≤
5.	C	There are different types of scanners. Flatbed or desktop scanners work on a single sheet of paper at a time and are the most commonly used scanners in offices. Sheet fed scanners draw in the sheets by means of a roller mechanism. Handheld scanners are used to copy smaller originals, such as photographs. These scanners are operated by hand and are not used much as the image quality is not good as compared to the flatbed scanners.	≤
6.	D	Cache memory>RAM>Hard disk>CD-ROM. The access speed for cache is very fast, the access speed for RAM is fast, the access speed for hard disk is medium, and the access speed for CD-ROM is slow.	≤
7.	A	The major components of CPU are Control Unit, Register Set, and Arithmetic Logic Unit.	≤
8.	C	CRAY3, CRAYXMP, PARAM 9000 and PARAM 10000 are the examples of Super computers.	≤
9.	A	Based on utility, computers are classified into two categories - General Purpose Computers and Special Purpose Computers.	≤

10.	E	In virtual memory, program instructions and data are divided into units of fixed size called pages.	≤
11.	A	Hybrid computers are used in the fields of artificial intelligence and computer aided manufacturing.	≤
12.	A	Mainframes allow multiple users to handle huge databases simultaneously and carry out complex mathematical calculations.	≤
13.	C	An optical mouse has the ability to work on any surface. Compared to the regular mouse, an optical mouse does not have any moving parts. This results in less wear and tear, thus resulting in less chance of failure. Dust cannot get inside the optical mouse and interfere with the tracking sensors.	≤
14.	A	A trackball is a pointing device that looks like a mouse that is lying on its back. Trackballs have a roller on top and selection buttons on the side.	≤
15.	D	A joystick is a controlling device which is most often used for playing computer games or controlling robots in the manufacturing industry. It has a gearshift like lever which is used to move the pointer or cursor on the screen. Generally, joysticks are two-dimensional with two sides of movement.	≤
16.	C	The Optical Mark Reader (OMR) is a type of scanning device and is popularly used for conducting examinations.	≤
17.	D	Line printers are much faster than dot-matrix printers and daisy-wheel printers. They are very noisy and have limited multi-font capabilities. These printers produce low quality printouts.	≤
18.	C	In flatbed plotters, the paper is set on a flat surface and the pens are moved for drawing the image. Drum plotters print graphical images by moving both the drum and the pen. These plotters are bigger than the flatbed plotters. In inkjet plotters, the pens are replaced by inkjets. These plotters have high processing speeds and can generate color prints.	≤
19.	D	In case of a sequential storage device, such as a magnetic tape, the computer follows a fixed sequence in order to access the required file. These devices are very slow and inexpensive. On the other hand, a random access storage device can directly access the required file. These devices are faster. Hard disks, floppy disks, and CD-ROMs are random access storage devices.	≤

20.	C	Support microprocessors in a support processor design are also called channels, which will control the movement of data between the CPU and the input/output devices.	≤
21.	D	System software is a collection of programs written to service other programs. Examples of system software are compilers, editors, file management utilities and operating system. Application software consists of standalone programs that solve a specific business need. Spreadsheets and word processing are examples of application softwares.	≤
22.	E	Multi-threading extends the concept of multitasking by allowing individual programs to carry out several tasks simultaneously. Linux, Mac OS 8, Windows 98 and Windows NT support multi-threaded applications.	≤
23.	D	The kernel is the central component of the operating system. It is responsible for managing the resources of the system and for facilitating communication between the various software and hardware components of the system. The user interface is also called a shell, which indicates that it "surrounds" the kernel of the OS. Shell will manage disks and files through activities like formatting new disks, displaying a list of files in a directory, creating new directories/files, renaming directories/files, deleting empty directories/files, and copying files from one directory or disk to another. Shell will start the application programs.	≤
24.	B	The programs written for one computer can be run on another with little or no modification. This capability is called as portability.	≤
25.	C	passwd is the command used to change the password in UNIX.	≤
26.	C	MSDOS.SYS deals with the hardware and it consists of device drivers to handle console display and keyboard, printer, serial communication, clock, and boot disk drive. MSDOS.SYS handles application management tasks such as file and record management, memory management, access to real time clock, etc.	≤
27.	B	'APPEND' command displays or sets the search path for data files.	≤
28.	A	Aqua interface in Mac OS X is built on 3 graphics technologies namely: Quartz, OpenGL, QuickTime.	≤
29.	A	Win 95 had the capability to offer built-in Internet facilities, dial-up networking, and new plug and play features. These features made the installation of hardware and software easier for the user. Win 95 also supported a key feature of UNIX called preemptive multi-tasking, which enabled the OS to regain control if an application crashed. It offered enhanced graphical capabilities and support for	≤

mobile computing and integrated networks.

30.	A	Windows Me was an upgraded version of Win95 and Win98 and was a look-alike of Win98 with a few additional features. Various features in Windows Me included Internet Explorer, Windows Movie Maker, Windows Media Player, Movie Editor and Revert Back feature that enabled the user to get back an old backup in situations where the files are damaged or deleted, helped in protecting important system files, etc. Windows DVD maker is available in Windows Vista operating system.	≤
31.	D	Microsoft Windows NT is a 32-bit network OS released in 1993. It was specifically designed for client/server systems. This OS supported preemptive multi-tasking and was the first to support both client/server architecture and high-end personal productivity software.	≤
32.	A	NetWare 3.11 is an ideal platform for server applications as it is modular and expandable. Additional core services, such as messaging services and communication services, can be installed by loading NetWare Loadable Modules (NLM). These services include name space support, Internet, host connectivity, messaging services, communication services, etc.	≤
33.	D	NetWare 5.1 provides web-based single point administration, and fast and secure integration between business networks and the Internet. The most important feature of NetWare 5.1 is that it has the ability to convert any type of server into a Web server. Novell has added new features in NetWare 6.5 like centralized Web management, Virtual Office application, etc.	≤
34.	D	Except (d), all statements are true about Linux operating system. Linux is a robust 32 bit multitasking operating system that can be used in a range of organizations, large and small.	≤
35.	D	Compared to Linux, windows take a long time to discover and fix the bugs. Installing Windows is considered very easy. Windows is based on TCP/IP. Windows uses FAT12, FAT16, and FAT32 file systems. Linux's default file system is "ext2." Linux is cheap compared to Windows when it is used as a server. So, Except (d), all statements are false.	≤
36.	A	Character formatting emphasis includes marking the text bold, underlining the text and italicizing the text.	≤
37.	D	In MS Excel, each worksheet has 256 columns, 65,536 rows.	≤
38.	B	In MS-Excel, operators and their order of priority is as follows.	≤

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. From above table the expression evaluates as follows:

$= 2 * 2 + 3 \wedge 4 \ \& \ 7 * 2 \ \%$

$$= 2 * 2 + 3 \wedge 4 \ \& \ 7 * \ 0.02$$
$$= 4 \ + 81 \ \& \ 0.14$$
$$= 85 \ \& \ 0.14$$
$$= 850.14$$

39.	D	Since we have used mixed cell reference, the content in the D1, D2, D3, D4, D5 will be 12,15,10,9,9.	≤

D1 = 4 + 5 + 3 =12

D2 = 4 + 5 + 6 =15

D3 = 4 + 5 + 1 = 10

D4 =4 + 5 + 0 = 9

D5 = 4 + 5 + 0 = 9.

40.	E	Toolbars provide shortcuts to menu commands and are generally located just below the menu bar.	≤
41.	A	Ampersand is a text operator. Colon, Comma, Space are reference operators.	≤
42.	D	Comma operator is also called the union operator. It combines multiple cell references to form a single reference.	≤
43.	C	The number tab allows the user to select data types. The various data types that Excel provides are general, number, currency, accounting, date, time, percentage, fraction, scientific, text, special, and custom.	≤
44.	D	Sort option will be present in Data menu.	≤
45.	B	The wild card character '?' can be used for representing any single character in Custom AutoFilter of Microsoft Excel.	≤
46.	A	Only statement (II) is true. Remaining statements (I) and (III) are false. In advanced filter only, we can copy the filtered data into another location. We can select unique records in a single column using advanced filters only.	≤
47.	C	In the given sequence only pair (I) and (III) are correct. Remaining all are incorrect.	≤

  I. NOW is a date and time function.

  II. FACT is not statistical function; it is a mathematical and trigonometric function.

		III. ISLOGICAL is an information function.	
		IV. NA is not a text function; it is an information function.	
48.	B	The arguments present in the syntax of DB are cost, salvage, life, period, month. Rate is not a argument in the syntax of DB.	≤
49.	D	Implicit value or the cost of the constraints is part of the sensitivity report. Remaining all are the parts of the Answer report.	≤
50.	E	Master sorter view is not a view option in Microsoft PowerPoint.	≤
51.	E	Data conferencing is an interactive way of sharing information among users at different locations over a network of computers. Application sharing and application viewing are two terms used in data conferencing. Application sharing is similar to remote control software. It facilitates sharing of the same computer screen by all participants.	≤
52.	B	Skype popularized Internet telephony using the Voice over Internet Protocol (VoIP).	≤
53.	B	CoolTalk, NetMeeting, etc., are some of the popular internet telephony products which come under enterprise communication tools. Usenet, web publishing are also enterprise communication tools. Creative Labs comes under enterprise conferencing tool.	≤
54.	D	Project management groupware helps project teams work together and keep track of deadlines. Microsoft Project, Lotus Organizer and CA-Super Project are examples of project management groupware. These tools not only produce project schedules and program reports, but also send automatic reminders of due dates for project tasks. Netscape Collabra, Lotus Notes are groupware applications used for discussion forums.	≤
55.	C	AltaVista Forum groupware creates a knowledge warehouse at an intranet website to share documents and organize the project knowledge of a team.	≤
56.	A	Objective information, also known as facts, refers to information that is unique and true in nature. This type of information defines all aspects of an issue and helps in identifying an object, a person, a place, a thing, etc. Subjective information or opinions are based on the views of an individual or a group of individuals about a particular object, place, person, or a situation. This type of information is based on what seems to be true and on personal views and judgment. A concept is basically a feature or a characteristic that is common and/or shared among a group of items, ideas, or entities. Concepts do not change based on perceptions.	≤
57.	B	Quality is subjective in nature and hence its parameters should be clearly defined in order to judge the quality of information. The various parameters of quality are	≤

validity, consistency, reliability, impartiality, and age. These parameters are explained below:

Validity refers to the use of information and its suitability. That is, whether the information can be used for decision-making or analysis.

Consistency refers to uniformity or continuity in data collection.

Reliability refers to the credibility and accuracy of the sources of data collection and the methods of presenting the data.

Impartiality refers to the information which is free from errors and bias.

Age refers to the suitability or usefulness of the data for current times. Information should be regularly updated.

58.	E	Qualitative information refers to information which is gathered through personal and direct methods. Methods like personal interviews, observation, focus groups, case studies, etc., are used for gathering this kind of information. The quality of this information is enhanced when individual experiences are added to it. Qualitative information is used for understanding the perceptions and interpretations of individuals and situations. For instance, interviews can be conducted to understand how user-friendly particular software is.	≤
59.	B	Based on structure, information can be classified into detailed information, summarized information, sampled information, and aggregated information. Based on application, information can be divided into planning information, control information, and knowledge information.	≤
60.	E	Some of the most commonly used methods of data collection are observation, experiment, survey, subjective estimation, transaction processing and obtaining information from external sources such as publications and government agencies. 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.	≤

61.   B   (a)   **Management oriented:** MIS is developed to increase organizational effi ciency. Therefore, it needs to focus on the requirements of the managers and the overall objectives of the organization.   ≤

(b) **Management directed:** MISs can be costly and time consuming. Hence it is important that the top management understands 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.   C   The examples of decisions taken at the tactical level are budget analysis, vendor rating, staff promotion, etc. Decisions at the strategic level are concerned with long-term business issues such as diversification, expansion of capacity, and strategic alliances.   ≤

63.	B	In real time processing, the transactions that occur are processed immediately. As the transactions are processed as and when they are generated, the output is also provided immediately to the company and to the end users. In real time transaction processing, the entry of data is done online. The operator has access to a database, which is located online. Therefore, any errors that might arise during the process can be rectified immediately.	≤

Process control system: Input data received from sensors is processed immediately, analyzed and any necessary actions taken without any delay.

Flight simulator: As soon as the computer receives data that the rudder is moved, the "airplane" responds.

Processing of credit card bills: The customer does not receive a bill for separate credit card purchase, but one monthly bill for all of those monthly purchases. The bill is created through batch processing, where all of the data is collected and held until the bill is processed as a batch at the end of the billing cycle.

64.	C	Turnaround documents are output documents generated by a computer, which become input documents again when additional data is entered into them. These documents are designed first to initiate some action and then are returned for further processing so as to complete the transaction.	≤

65.	D	Manufacturing information system is also known as operational information system and it supports the production/operations function in an organization.	≤

66.	B	CIM integrates Computer Aided Design, Computer Aided Manufacturing, Computer Aided Process Planning (CAPP), Computer Aided Quality Assurance (CAQ), and Enterprise Resource Planning (ERP).	≤

67.	A	Except statement (I), all statements are related to staffing activity. Statement (I) is related to compensation analysis activity.	≤

68.	B	There are several portfolio management software packages available in the market like Cornerstone PowerBroker Asset Management Software, Broker's Ally, FinPoint StockHand, etc. Business organizations use GIS software such as MapInfo and Atlas. Where as Informix is an RDBMS software.	≤

69.	D	Periodic reports follow a predetermined format and are used for providing information to mangers on a regular basis.	≤

Exception reports are not generated on a regular basis but only in exceptional situations.

Demand reports and responses are alternatively termed as ad hoc reports. They are generated as and when the manger requires them. Managers use queries and report generators for such reporting.

Push reports are reports sent to the networked workstation of the manager.

Whereas, edit reports come under transaction processing systems.

70.	B	Optimization analysis is a complex extension of goal seeking. In optimization analysis, the target is not fixed. Rather, the target needs to be arrived at after taking into consideration the constraints involved in achieving the targets. In this analysis, one or more variables are changed after taking the constraints into account until the best alternative or the optimal value is found.	≤

71.	D	'Switch' statement is used to check for multiple values of variables.	≤
		'For loop is used to perform a task a specific number of times on the basis of the condition.	
		'Nested If' statements are used to check the conditions within another condition.	
		'If' statements are used to transfer control on the basis of certain conditions.	

| 72. | C | An application generator is a type of language designed to facilitate development of a complete application. It includes defining input transactions, editing transactions, creating a database, updating files, generating reports and processing queries. They drastically reduce the time required for programming and testing. Application generators are easy to use than other high-level programming languages such as C++. | ≤ |

| 73. | C | Modifying the pseudocode to match changes in the program is easy. It is easy to understand a pseudocode as it does not require the knowledge of any particular programming language to understand it. For a beginner, it is more difficult to follow the logic of or write a pseudocode, as compared to developing a flow chart. | ≤ |

| 74. | C | Both statements (I) and (II) are true. Whereas, statement (III) is false. Testing and debugging of programs is done to detect and eliminate syntactical and logical errors in the program code. Program testing tools can check for errors in the syntax while the program is being written. The program will be executable once the syntactical errors have been eliminated. However, the output may still not be error free, as the language-testing tool cannot detect logic errors. A logic error is a mistake that the programmer makes while developing the program. | ≤ |

| 75. | C | Abstraction refers to the process of hiding the complexity and internal functionality of objects. | ≤ |

| 76. | D | Only statement (II) is false. It is very time-consuming and laborious to draw flow charts with proper symbols and spacing, especially for large, complex programs. There are no standards to be followed regarding the amount of detail that should be included in a flow chart. A flow chart can be used for performing a detailed analysis by breaking down each component of the flow chart. Flow charts can be used for analyzing problems in a more effective way. | ≤ |

| 77. | C | The Program Development Life Cycle (PDLC) provides an organized plan for breaking down the task of program development into manageable units called modules, each of which must be successfully completed before moving on to the next phase. | ≤ |

| 78. | D | BASIC (Beginner's All-Purpose Symbolic Instruction Code), developed in 1963, is an easy-to-use high-level programming language. | ≤ |

| 79. | D | In VB, Visual Basic compiler automatically creates an executable program that is capable of running on its own. | ≤ |

| 80. | C | Java is the world's first truly *cross-platform programming language*, a language that makes possible the "write once, run anywhere" phenomenon. | ≤ |

81.   C   An RDBMS consists of a collection of tables, each of which is assigned a unique name. These tables consist of different fields which can be used together as and when necessary.   ≤

82.   B   DBMS is used to create and maintain the database.   ≤

83.   B   Pile is the simplest form of file organization. In this type of organization, data is collected in the order in which it arrives. The purpose of this type of organization is collecting the data whenever it arrives and saving it. There is no specified structure or format in which the records are saved. Different records may have different fields. Pile file organization suffers from some limitations. It is not easy to retrieve data. As a result, exhaustive search is required to access the record. Pile file organization is more suitable to be used as a temporary storage medium so that the data can be structured or organized later.   ≤

84.   A   The table is in second normal form. Since there is no partial dependencies. (Department ID and Location are functionally dependent on Employee ID. But the location of the department is dependent on Department ID (transitive dependency). So the table is in second normal form, not in third normal form. In order to convert the table into the third normal form, it should be split into as follows.   ≤

Employee ID	Department ID

Department ID	Location

85.   A   RBLMs are used for describing data at the logical and view levels. The network model is the oldest DBMS model. The first network model was developed by GE in the mid-1960s and was called the Integrated Data Store (IDS).The entity-relationship (E-R) model and the object-oriented model fall under Object-based Logical Models (OBLMs).   ≤

86.   A   One of the query languages used in database management packages is QBE. QBE stands for Query By Example.   ≤

87.   E   Operational databases store information about the day-to-day operations in an organization. These databases are also known as subject area databases, transaction databases, or production databases.   ≤

88.   D   Uniform Resource Locators (URLs) are paths through which one can access documents or data on the Internet, extranets, and intranets.   ≤

| 89. | B | In database implementation, the hardware, software, the file sizes, and their organization are decided upon. The actual data is also created in the database implementation phase. | < TOP > |

90. A   A relational database system will maintain data about tables and all other objects in the database. This information is called data dictionary. The important step in designing any relational database is the initial definition or data definition. Data planning is a corporate planning and analysis function that focuses on data resources management. Data warehousing involves gathering data stored in different locations, or in different operating systems and under different schemas, and storing them under a unified schema, at a single site. Data mining refers to finding relevant information or discovering knowledge.

< TOP >

91. E   The characteristics of a good database system are data integrity, data independence, data security, data maintenance and avoidance of data redundancy.

< TOP >

92. A   Data mining is a technique designed to detect patterns in the data (financial data). Data warehousing is used to consolidate the data across disparate systems. Data dictionary stores information about information that is essential to management as a business resource.

< TOP >

93. B   Associative entities or intersection entities are used for associating or relating two or more entities to form a many-to-many relationship.

< TOP >

94. B   Ingres and SQLite are examples for relational database management systems. Vbase and Iris are examples for object-oriented databases.

< TOP >

95. D   MDX, Datalog, Xpointer are examples of relational databases. O2 is an example for object-oriented database.

< TOP >

96. D   The term 'Row' in the database is same as entity instance in the E-R model.

< TOP >

97. B   Relational databases have the following limitations:

- Reusability of structure is not possible.
- A specific interface cannot be determined.
- Maintenance of the database has to be done on a continuous basis.
- Data is drawn from a limited set of data types.

Reusability of structure is not possible using a relational database. It is possible in Object Relational Database System (ORDBMS). In relational database, we can draw the data from a limited set of data types. The ORDBMS enables the software developers to incorporate their customized data types and methods into the database. These databases support both object and relational models, thus enabling the reusability of the structure. It also provides a well-defined interface for applications. Data modeling and querying also become easier as the ORDBMS uses complex data types. Oracle 8 is an example of ORDBMS. In relational database, maintenance has to be done on a continuous basis.

< TOP >

98. A   Part ID + Warehouse Id is the primary key on which the Quantity and Warehouse address are dependent. The Warehouse address functionally depends only on the warehouse Id (part of primary key) rather than on full primary key. Therefore this situation is of partial dependency. So the table is in only in the First normal form, not in the second normal form. In order to convert the table into the second normal form, it should be split into the following form.

< TOP >

Part ID	Warehouse ID	Quantity

Warehouse ID	Warehouse address
27	

99.   E   All statements are true about hashed file organization. Hashed file organization is also called direct file organization. Hashed file organization is used when fixed length records are used. Hashed access files are keyed files, i.e., they associate a record with a specific key value and a particular storage location.

100.   D   The computers in a distributed system communicate with one another through various communication media, such as high-speed networks and telephone lines. They do not share the main memory or disks. The computers in a distributed system may vary in size and function, ranging from workstations to mainframe systems. These computers are called sites or nodes.