

Question Paper

Information Technology and Systems – I (MB231): January 2008

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

1. In 1944, Howard H. Aiken of Harvard University collaborated with IBM to release the first fully automatic calculating machine named as Mark 1 computer, also called as the IBM ASCC. ASCC stands for [<Answer>](#)
- (a) Automatic Storage Console Computer
 - (b) Automatic Serial Control Calculator
 - (c) Automatic Synchronous Controlled Computer
 - (d) Automatic Support Computing Calculator
 - (e) Automatic Sequence Controlled Calculator.
2. Which of the following storage media is/are used in the first generation computers? [<Answer>](#)
- (a) Magnetic drums
 - (b) Magnetic core
 - (c) Magnetic disks
 - (d) Both (a) and (b) above
 - (e) Both (a) and (c) above.
3. Some computers use more than one processor for processing in order to reduce the load on a single processor. In which of the following processor designs, the processors have built-in capabilities to provide backup facilities in case of a power failure? [<Answer>](#)
- I. Support processor design.
 - II. Control processor design.
 - III. Parallel processor design.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (I) and (II) above
 - (e) Both (II) and (III) above.
4. Computers can be classified on the basis of their size, operational speed, memory size, storage capacity and number of simultaneous users. Which of the following computers is **not** an example of mainframes? [<Answer>](#)
- (a) IBM 3090
 - (b) IBM 4381
 - (c) IBM 4300
 - (d) IBM AS/400
 - (e) IBM ES-9000.
5. Which of the following statement(s) is/are **true** regarding peripheral devices? [<Answer>](#)
- I. The computer will abort from work, when a peripheral device is disconnected.
 - II. These devices also act as a means of communication between the computer and the end user.
 - III. These devices are external to the processing unit even when they are connected to the computer.
- (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.
6. Which of the following computer(s) comes under first generation computers? [<Answer>](#)
- I. ENIAC.
 - II. EDVAC.
 - III. EAVAC.
 - IV. UNIVAC.

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

7. The instructions to start the computer are placed on a special chip known as

[<Answer>](#)

- (a) RAM BIOS chip
- (b) ROM BIOS chip
- (c) Flash BIOS chip
- (d) Cache BIOS chip
- (e) Register BIOS chip.

8. 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, identify the function of accumulator.

[<Answer>](#)

- (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 controls certain parts of the processor operation
- (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.

9. The bar code reader is the most familiar scanning device used in business. The bar code reader reads the UPC, which is a pattern of bars printed on the merchandize. UPC stands for

[<Answer>](#)

- (a) Universal Process Code
- (b) Universal Procurement Code
- (c) Universal Provision Count
- (d) Universal Provision Code
- (e) Universal Product Code.

10. Hard disks contain two or more vertically stacked platters, each with its own read/write head. All the read/write heads are connected together in such a way that they cannot move independently. Each platter consists of an equal number of tracks. The location at which all the tracks are situated across the platters is called as

[<Answer>](#)

- (a) Wedge
- (b) Sector
- (c) Cluster
- (d) Block
- (e) Cylinder.

11. Printers are devices that produce hard copies of information stored in computers on paper or on transparencies. Which of the following printer(s) is/are non-impact printer(s)?

[<Answer>](#)

- (a) Daisy-wheel printers
- (b) Line printers
- (c) Thermal printers
- (d) Both (a) and (b) above
- (e) Both (b) and (c) above.

12. Which of the following is the central component of an operating system?

[<Answer>](#)

- (a) Shell
- (b) Kernel
- (c) RAM
- (d) Processor
- (e) Hard disk.

13. In machine language, which of the following 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.

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

[<Answer>](#)

cycles?

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

15. The history of computer development can be understood in terms of five generations of computers. These generations are marked by various technological developments that have transformed the ways in which computers operate. Which of the following computers was the first computer to have the ability to store any program in its memory? [<Answer>](#)

- (a) ENIAC
- (b) EDVAC
- (c) UNIVAC
- (d) LARC
- (e) EAVAC.

16. Which of the following statement(s) is/are **false** regarding the UNIX operating system? [<Answer>](#)

- I. It is compatible with different versions.
 - II. It provides cryptic commands that are difficult to learn.
 - III. It provides user-friendliness.
- (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.

17. Which of the following UNIX commands is used to rename directory x1 as x2? [<Answer>](#)

- (a) ren x1 x2
- (b) move x1 x2
- (c) ren x1, x2
- (d) rename x1 x2
- (e) mv x1 x2.

18. CASE is one of the applications of object-oriented data models. Expand CASE. [<Answer>](#)

- (a) Computer Aided Software Engineering
- (b) Computer Aided Systems Engineering
- (c) Computer Aided Software Evaluation
- (d) Computer Aided Systems Evaluation
- (e) Computer Aided Structure Engineering.

19. MS-DOS uses a command-line interface to interact with the user and it allows only one user to perform a single task at a time. Which of the following DOS commands redirects disk drive requests to a different drive? [<Answer>](#)

- (a) APPEND
- (b) ASSIGN
- (c) ARCHIVE
- (d) REPLACE
- (e) RESTORE.

20. Apart from the Simple Mail Transfer Protocol (SMTP), other protocols used in the Internet are POP and IMAP. Expand POP. [<Answer>](#)

- (a) Post Office Protocol
- (b) Phone Office Protocol
- (c) Private Office Protocol
- (d) Public Office Protocol
- (e) Process Office Protocol.

21. The NetWare 4.x series of operating systems include the versions 4.0, 4.10, 4.11, IntraNetWare and 4.2. Which of the following statement(s) is/are **true** regarding NetWare 4.x series of operating systems? [<Answer>](#)

- I. NetWare 4.0 was an upgrade of the NetWare 3.12 version and was available for a wide range of platforms like DOS, MAC OS/2 and some versions of UNIX.

- II. NetWare 4.x series of operating systems are compatible with Windows-based servers such as SQL server 2000, Windows Exchange server etc.
 - III. NetWare 4.x series of operating systems also provides browser-based interface, making the synchronization of various business processes easier.
- (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.

22. Which of the following operating systems is specially designed for client/server systems? <Answer>

- (a) Windows 3.1
- (b) Windows NT
- (c) Windows 98
- (d) Windows CE
- (e) Windows Me.

23. Which of the following features of NetWare operating system provide both users and network administrators with a single integrated view of network? <Answer>

- (a) NCP
- (b) NLM
- (c) NDS
- (d) NIC
- (e) GroupWise.

24. Linux was developed by Linus Torvalds at the University of Helsinki in Finland. Linux can be used for networking, software development and also as an end-user platform. Which of the following statements are **false** regarding the Linux operating system? <Answer>

- I. Installing Linux is considered to be difficult.
- II. When compared to Windows, Linux is supported by a majority of hardware devices.
- III. Compared to Windows, Linux takes long time to discover and fix the bugs.
- IV. Linux is cheap compared to windows when it is used as a server.

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

25. Which of the following series of Windows 3.x offered additional features like peer-to-peer workgroup and domain networking support? <Answer>

- (a) Windows 3.00
- (b) Windows 3.01
- (c) Windows 3.11
- (d) Windows 3.02
- (e) Windows 3.10.

26. 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? <Answer>

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

27. Information can be classified based on its nature, usage, creation, application, structure and form. Which of the following statement(s) is/are **true** regarding information based on structure? <Answer>

- I. Sampled information provides the details about all the entities in a group.
- II. Summarized information comprises an outline of the total information.
- III. Aggregated information provides details of only a particular entity in a group.

- (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.
28. Information helps in ensuring proper management control. Which of the following statement(s) is/are **true** regarding different types of management controls? [<Answer>](#)
- I. Preliminary controls ensure that the information is put to use in the right way.
II. Screening controls ensure that the right information is collected.
III. Post action control ensures that the gathered information reaches the right audience.
- (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.
29. 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 the credibility and accuracy of the sources of data collection and the methods of presenting the data? [<Answer>](#)
- (a) Reliability
(b) Consistency
(c) Validity
(d) Impartiality
(e) Age.
30. The nature of decisions and information requirements differ from one level to another. Which of the following statement(s) is/are **true** regarding information at various organizational levels? [<Answer>](#)
- I. The decisions made at tactical level are taken in situations that are marked with a great deal of uncertainty.
II. Operational level requires information in the form of consolidated reports pertaining to the performance of the various business units of the organization.
III. At tactical level, the plans are compared with the actual performance and remedial measures are taken in case of any deviations.
- (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.
31. Information can be classified based on its nature, usage, creation, application, structure and form. Which of the following information provides factual unbiased data? [<Answer>](#)
- (a) Quantitative information
(b) Informal information
(c) Summarized information
(d) Control information
(e) Aggregated information.
32. Which of the following items belong to the information classification-‘principles’, that are used for predicting an outcome to a situation? [<Answer>](#)
- I. Rules.
II. Criteria.
III. Facts.
IV. Heuristics.
- (a) Both (I) and (III) above
(b) (I), (II) and (IV) above
(c) (I), (III) and (IV) above
(d) (II), (III) and (IV) above
(e) All (I), (II), (III) and (IV) above.
33. In spreadsheet software, which of the following operators combine multiple cell references to form a single reference? [<Answer>](#)

- (a) Space operator
- (b) Semi colon operator
- (c) Exponentiation operator
- (d) Ampersand operator
- (e) Comma operator.

34. Which of the following symbols is a text operator in MS Excel?

[<Answer>](#)

- (a) ^
- (b) ||
- (c) #
- (d) \$
- (e) &.

35. Operators specify the type of calculation that the user wants to execute on the elements of a formula. In MS Excel, which of the following operators is given the highest priority?

[<Answer>](#)

- (a) Subtraction
- (b) Addition
- (c) Exponentiation
- (d) Percentage
- (e) Ampersand.

36. Financial functions in Excel help in conducting simple and complex financial calculations. FV is the financial function which calculates the future value of an investment. From the following, choose the **correct** syntax of FV?

[<Answer>](#)

- (a) FV (rate, per, cost, pv, type)
- (b) FV (rate, cost, nper, pv, type)
- (c) FV (rate, nper, pv, amount, type)
- (d) FV (rate, nper, pmt, pv, type)
- (e) FV (rate, per, price, value, type).

37. The Date and Time functions pertain to the date and time values and operations in Excel. Some of these functions can be used for displaying the system date, system time, etc., while the others can be used for changing or manipulating the date and time values that are already stored in the database. Which of the following date and time functions **does not** take arguments?

[<Answer>](#)

- (a) DATE
- (b) DAYS360
- (c) HOUR
- (d) NOW
- (e) TIME.

38. In MS Excel, which of the following tasks will **not** be performed by statistical functions?

[<Answer>](#)

- (a) Summarizing data
- (b) Modifying data
- (c) Comparing data
- (d) Grouping data
- (e) Finding relationships between two sets of data.

39. A logical function is used to evaluate an expression. The results are displayed in the form of logical operators like TRUE, FALSE, etc. These functions are usually used for making a comparison between two values. Which of the following functions verifies whether the given arguments are true and gives the result as TRUE if all the arguments are true?

[<Answer>](#)

- (a) NOT
- (b) TRUE
- (c) OR
- (d) AND
- (e) ISLOGICAL.

40. Financial functions in Excel helps in conducting simple and complex financial calculations. Which of the following is **not** an argument in RATE financial function?

[<Answer>](#)

- (a) nper
- (b) pmt
- (c) cost
- (d) type
- (e) fv.

(e) fv.

41. In MS Excel, which of the following menu options contains the 'Data analysis' option? [<Answer>](#)

- (a) Insert
- (b) Format
- (c) Windows
- (d) Data
- (e) Tools.

42. What-if analysis can be performed with the help of various tools like scenarios, solvers, data tables and goal seek analysis. The solver tool helps in finding an optimal value to a cell called the target cell in a worksheet. Which of the following statement(s) is/are **true** about limits report in MS Excel? [<Answer>](#)

- I. It gives all the values for the input variables and the constraints.
 - II. It gives original and final values for the problem in a new worksheet.
 - III. It gives the implicit value or the cost of the constraints.
 - IV. It gives the optimal solution of all the input variables along with the upper and lower values within which the particular variable could change.
- (a) Only (IV) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) (II), (III) and (IV) above.

43. Which of the following is/are feature(s) of knowledge management systems? [<Answer>](#)

- I. Knowledge management systems identify and enhance the knowledge resources.
 - II. Knowledge management systems eliminate duplication of tasks.
 - III. Knowledge management systems increases costs and reduce access.
 - IV. Knowledge management systems unlock the potential of the unique knowledge resources and helps harness their power.
- (a) Only (I) above
 - (b) Both (I) and (IV) above
 - (c) (I), (II) and (III) above
 - (d) (I), (II) and (IV) above
 - (e) All (I), (II), (III) and (IV) above.

44. MS Excel provides a set of security options that helps the users to protect their data in the worksheets. In which of the following security options the user has to select the protection tab? [<Answer>](#)

- (a) Worksheet level protection
- (b) Cell protection
- (c) Workbook level protection
- (d) Both (a) and (b) above
- (e) Both (a) and (c) above.

45. 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.

46. In MS Excel, the formula= $3*2^4*3/2+4^3*(4^3/2)$ would give the result as [<Answer>](#)

- (a) 80765
- (b) 645684
- (c) 722048
- (d) 26215684
- (e) Displays an error message.

47. Formatting of text is related to the appearance of the document. Apart from the content, it is also important for any document to be presented in a neat and clear format. Document formatting can be done at [<Answer>](#)

- (a) Character level only
- (b) Character level and paragraph level only

- (b) Character level and paragraph level only
- (c) Character level, paragraph level and section level
- (d) Paragraph level and section level only
- (e) Section level only.

48. Intranets that are connected to the external networks are usually equipped with certain interfaces. Which of the following interfaces screen incoming data and allow only selected members to access internal data? [<Answer>](#)

- (a) Middleware
- (b) Groupware
- (c) Firewall
- (d) Gateway
- (e) Multiplexer.

49. Intranets are very useful in business organizations. Which of the following statements is **false** regarding intranets? [<Answer>](#)

- (a) They facilitate cooperation and collaboration among employees on projects
- (b) They also help in providing a reliable and secure sharing of the organizations information resources
- (c) They enhance the information management ability of organizations
- (d) They facilitate information sharing and communication of messages in a secure manner to employees inside the organization
- (e) They can be used for collaborating with other organizations on research and development activities.

50. In which of the following type(s) of network, access to the information is private and restricted? [<Answer>](#)

- I. Internet.
- II. Intranet.
- III. Extranet.

- (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.

51. Which of the following is/are the example(s) of enterprise communicating tool(s)? [<Answer>](#)

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

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

52. Which of the following groupware tools is also called as buddy list software? [<Answer>](#)

- (a) Internet fax
- (b) Discussion forums
- (c) Electronic meeting systems
- (d) Internet telephony
- (e) Internet paging.

53. Which of the following groupware tools enables a person to access the files of team members and keep track of their work schedules? [<Answer>](#)

- (a) Task and project management software
- (b) Discussion forums
- (c) Electronic meeting systems
- (d) Workflow systems
- (e) Document sharing.

54. Which of the following is/are the example(s) of discussion forum Groupware? [<Answer>](#)

- (a) Lotus organizer
- (b) Netscape Collabra
- (c) NetMeeting

- (c) NetMeeting
(d) Both (a) and (b) above
(e) Both (a) and (c) 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? [<Answer>](#)
- (a) Microsoft Project
(b) VideumConf Pro
(c) AltaVista Forum
(d) ShareVision PC 3000
(e) Proshare Video.
56. Which of the following components of data warehousing enables companies to make an analysis of the impact of changes to database tables, tracking the owners of individual data elements, and is also required to build the warehouse? [<Answer>](#)
- (a) Data cleansing
(b) Data application
(c) Business intelligence
(d) Metadata management
(e) Normalization.
57. Information systems that process data generated from business transactions are called transaction processing systems. Which of the following objectives of transaction processing systems is **incorrect**? [<Answer>](#)
- (a) To carry out the day-to-day transactions of the organization on a regular basis
(b) To collect, process, edit, update, store the data and generate the required reports or documents
(c) To supply the necessary information to the organization, which would enable proper functioning of the business
(d) To analyze the various possibilities and derive an appropriate strategy for each situation
(e) To provide reports and documents which would help in making timely decisions.
58. Transaction processing is one of the fundamental activities of every organization. Which of the following types of transaction processing involves accumulation of transactions until a certain set of criteria are satisfied? [<Answer>](#)
- (a) Real time processing
(b) Online analytical processing
(c) Batch processing
(d) Symmetric multi-processing
(e) Parallel processing.
59. 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? [<Answer>](#)
- (a) Information documents
(b) Action documents
(c) Turnaround documents
(d) Edit reports
(e) Control listings.
60. Financial information systems assist managers in taking financial decisions. These include providing finance to the business, allocating and controlling the financial resources within the organization, etc. Which of the following statement(s) is/are **false** regarding the cash management financial information system? [<Answer>](#)
- I. It involves collection of information on all cash receipts and payments within a company on either real time or periodic basis.
II. In cash management, daily, weekly or monthly forecasts of cash receipts and payments are generated in order to predict the future cash deficits or surpluses.
III. It is a professional way of managing securities and other financial assets of the organization.
- (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.
61. In transaction processing system, sales order confirmations and customer invoices are examples of [<Answer>](#)
- (a) Information documents
(b) Action documents

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

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

[<Answer>](#)

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

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

63. Management reporting systems are information systems that provide support to the management of the organization by providing them with various types of reports. Which of the following reports are alternatively termed as ad hoc reports?

[<Answer>](#)

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

64. Decision support systems are useful in analytical modeling. In which of the following types of analytical modeling, the effect of a repeated change in a single variable is examined?

[<Answer>](#)

- (a) System analysis
- (b) Goal seek analysis
- (c) Sensitivity analysis
- (d) Optimization analysis
- (e) Requirement analysis.

65. Which of the following packages is generally used for conducting goal seek analysis?

[<Answer>](#)

- (a) MS Word
- (b) MS Excel
- (c) MS Publisher
- (d) MS Access
- (e) MS InfoPath.

66. An Executive Information System (EIS) is a computerized information system which is designed to meet the informational requirements of the top executives of the organization. Which of the following statement(s) is/are **not true** regarding Executive Information Systems (EISs)?

[<Answer>](#)

- I. These systems provide internal as well as external information that are significantly important for making decisions in order to meet the strategic objectives of the organization.
- II. These systems were aimed at supporting managerial learning about the organization, its work process and the impact of external environment.
- III. In these systems, information is mostly presented in an algorithmic form so that a user can understand it quickly.
- IV. These systems can be used to generate reports which are simple and user-friendly.

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

67. Online analytical processing designates a category of applications and technologies that allow collection, storage and reproduction of multidimensional data. It also entails certain functions. Which of the following functions of online analytical processing refers to the process of changing the dimension of analysis to suit the analysts' requirements?

[<Answer>](#)

- (a) Data cleansing
- (b) Data mining
- (c) Drilling
- (d) Slicing and dicing
- (e) Change displays.

- (e) Change displays.
68. Redesigning the business process will enable improvements in terms of costs, quality of goods and services, speed of delivery and the service being provided. Which of the following statement(s) is/are **true** regarding Business Process Re-engineering (BPR)? [<Answer>](#)
- I. Business process re-engineering refers to making improvements in the existing process.
 - II. The risk of failure and level of disruption is moderate in case of business process re-engineering while it is high in case of business improvement.
 - III. Business process re-engineering is carried out for strategic business processes only.
- (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.
69. Information systems can be used by businesses to achieve a strategic advantage by improving production methods and by developing new products and services. There are many advantages that a company can gain through the use of information systems. So, which of the following is based on the alertness to thrive on change and uncertainty? [<Answer>](#)
- (a) Business improvement
 - (b) Business process re-engineering
 - (c) Business continuity plan
 - (d) Agile competition
 - (e) Knowledge management.
70. Decision support systems are interactive systems and subsystems that provide assistance to the decision-making group of the organization to effectively use organizational knowledge and various technologies to make decisions. Which of the following decision support systems are developed using simple data processing tools and generally used for conducting cash flow analysis and funds flow analysis? [<Answer>](#)
- (a) Data analysis systems
 - (b) Information analysis systems
 - (c) Accounting systems
 - (d) Status inquiry systems
 - (e) Process control systems.
71. The Program Development Life Cycle (PDLC) provides an organized plan for breaking down the task of program development into manageable units and each of which must be successfully completed before moving on to the next phase. These manageable units are called as [<Answer>](#)
- (a) Programs
 - (b) Entities
 - (c) Modules
 - (d) Blocks
 - (e) Assignments.
72. Pseudocode is also called [<Answer>](#)
- (a) Program defining language
 - (b) Program testing language
 - (c) Program maintenance language
 - (d) Program design language
 - (e) Program coding language.
73. 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 statement(s) is/are **true** regarding the errors that occur in the program? [<Answer>](#)
- 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) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

74. Which of the following option(s) is/are provide an overview of the program's functionality, tutorials for new users, in-depth explanations of major program features, reference documentation of all program commands and a detailed description of the error messages generated by the program? [<Answer>](#)
- I. Specification document.
 - II. Algorithms.
 - III. Manuals.
 - IV. Reports.
- (a) Only (III) above
 - (b) Both (II) and (III) above
 - (c) Both (I) and (IV) above
 - (d) Both (III) and (IV) above
 - (e) (I), (III) and (IV) above.
75. Assume that there are two flow charts drawn A and B in the same page. Flow chart A is designed for accepting and displaying the list of students details based on their courses. Flow chart B is designed for calculating the total marks and displaying their grades based on their total. Which of the following flow chart symbols are used for accepting marks, calculating marks and linking the flow charts respectively? [<Answer>](#)
- (a) Parallelogram-shaped symbol, Annotation symbol and Off page connector symbol
 - (b) Parallelogram-shaped symbol, Rectangular-shaped symbol and On page connector symbol
 - (c) Parallelogram-shaped symbol, Rectangular-shaped symbol and Off page connector symbol
 - (d) Rectangular-shaped symbol, Parallelogram-shaped symbol and On page connector symbol
 - (e) Rectangular-shaped symbol, Parallelogram-shaped symbol and Off page connector symbol.
76. In SQL statement, which of the following states the conditions for row selection? [<Answer>](#)
- (a) SELECT
 - (b) FROM
 - (c) ORDER BY
 - (d) GROUP BY
 - (e) WHERE.
77. 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 statement(s) is/are **false** regarding flow charts? [<Answer>](#)
- 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 (II) above
 - (e) Both (II) and (III) above.
78. In which of the following control structures, the conditional expression is evaluated at the end and looping will continue as long as the condition is not true? [<Answer>](#)
- (a) For
 - (b) Nested If
 - (c) While
 - (d) Do While
 - (e) Repeat Until.
79. Computer languages can be classified into two broad categories called as low-level languages and high-level languages. Which of the following language(s) is/are fourth generation language(s) that have capability to create and manipulate databases? [<Answer>](#)
- (a) OPS5
 - (b) Mercury
 - (c) Prolog
 - (d) NATURAL
 - (e) Both (c) and (d) above.
80. 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 [<Answer>](#)

programming refers to the process of hiding the complexity and internal functionality of objects?

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

81. 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.

82. A functional dependency between two or more non-key attributes is called [<Answer>](#)

- (a) Partial functional dependency
- (b) Partial non-key dependency
- (c) Transitive dependency
- (d) Partial transitive dependency
- (e) Trivial dependency.

83. A _____ is an attribute in a relation of a database that serves as the primary key of another relation in the same database. [<Answer>](#)

- (a) Composite Key
- (b) Foreign Key
- (c) Primary Key
- (d) Super Key
- (e) Candidate Key.

84. Data models comprise a set of conceptual tools that describe the data. These models are mainly used to specify the overall logical structure of a database and to provide a higher-level description of the implementation. Which of the following data model(s) is/are used for describing the data at logical and view level? [<Answer>](#)

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

- (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.

85. Data models are mainly used to specify the overall logical structure of a database and to provide a higher-level description of the implementation. In which of the following data model(s), records in the database are organized as collection of arbitrary graphs? [<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.

86. Data models comprise a set of conceptual tools that describe data. Which of the following statement(s) is/are true about Record-Based Logical Models (RBLMs)? [<Answer>](#)

- I. Relational model does not provide ad hoc request flexibility.
- II. Network model provides ad hoc request flexibility.
- III. Hierarchical model is designed to handle large transaction-based applications.

- (a) Only (II) above
- (b) Only (III) above

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

87. Which of the following database designs represents entire information in the form of high level models? [<Answer>](#)

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

88. Data resource management also called as data management or enterprise data management, constitutes all the processes that are related to managing data as a valuable resource. Which of the following function(s) is/are involved in data resource management? [<Answer>](#)

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

- (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.

89. Which of the following statements is **false** regarding database administration? [<Answer>](#)

- (a) It is a function that is responsible for ensuring the proper and effective use of database management technology
- (b) It involves establishing and enforcing policies and procedures for data management
- (c) It involves physical and logical design of the database
- (d) It involves enforcing standards for database use and security
- (e) It involves monitoring and enhancing the performance of databases.

90. The main objective of a database management system is to provide the users with an abstract view of the database system. The system hides certain details from the users as to how the data is created, stored, and maintained. Which of the following statements is **false** regarding levels of data abstraction? [<Answer>](#)

- (a) At physical level, complex low-level data structures are described in detail
- (b) The lowest level of abstraction describes the manner in which the data is actually stored
- (c) The logical level of abstraction describes the type of data stored in the database
- (d) The logical level is the highest level of abstraction
- (e) At view level, the users see a set of application programs that hide the details of the data types.

91. An entity consists of basic objects or concepts about which data is collected and stored. Which of the following statement(s) is/are **false** regarding entity types? [<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 called as super type entities.
- IV. Subtype entities represent a subset of the occurrences or instances of the parent entity.

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

92. 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. The above table complies with [<Answer>](#)

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

93. A relationship represents the association between two or more entities. It can be defined as the way in which data is shared between these entities. A tree structure is a series of [<Answer>](#)
- (a) 1:1 relationships
 - (b) 1: N relationships
 - (c) M: N relationships
 - (d) Recursive relationships
 - (e) Ternary relationships.
94. Which of the following is **not** an example of relational database management systems? [<Answer>](#)
- (a) Sybase
 - (b) Informix
 - (c) Ingres
 - (d) Vbase
 - (e) SQLite.
95. Query language is a specialized language used to request information from a database. Which of the following is **not** an example of a query language? [<Answer>](#)
- (a) SMARTS
 - (b) MDX
 - (c) Datalog
 - (d) Xpath
 - (e) ONTOS.
96. Which of the following techniques will validate and correct the data before inserting it into the warehouse? [<Answer>](#)
- (a) Data mining
 - (b) Data cleansing
 - (c) Metadata management
 - (d) Artificial Intelligence
 - (e) Normalization.
97. Which of the following statement(s) is/are **true** regarding distributed database? [<Answer>](#)
- I. It is a single logical database that is physically distributed across computers on a network.
 - II. The only disadvantage of distributed databases is if one site fails, the remaining sites will not operate.
 - III. It can be regarded as a partnership among individual database management systems at different sites to enable the user to have clear access to the data anywhere in the network.
- (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.
98. SQL statements are used for both creation of database objects and manipulation of data within the database. The SQL statements that are used to manipulate data within these objects are called [<Answer>](#)
- (a) DDL
 - (b) DCL
 - (c) URL
 - (d) PDL
 - (e) DML.
99. Malcolm Atkinson and his fellow associates defined Object-Oriented Database Management System (OODBMS) in the following manner, “An OODBMS must satisfy two criteria: Firstly, it should be a DBMS. Secondly, it should be an object-oriented system. Which of the following features **do not** come under the first criteria of OODBMS? [<Answer>](#)
- (a) Secondary storage management
 - (b) Ad hoc query facility
 - (c) Recovery
 - (d) Extensibility
 - (e) Persistence.
100. Which of the following statement(s) is /are **true** about Relational database? [<Answer>](#)
- I. Reusability of structure is possible using 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) Only (III) above
(b) Both (II) and (III) above
(c) Both (II) and (IV) above
(d) (II),(III) and (IV) above
(e) All (I), (II), (III) and (IV) above.

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Suggested Answers

Information Technology and Systems – I (MB231): January 2008

ANSWER	REASON	
1. E	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. So option (e) is the answer.	<TOP>
2. A	The storage media used in the first generation computers are magnetic drums. Whereas, magnetic core and magnetic disks are used as storage devices in second and third generation computers respectively. So option (a) is the answer.	<TOP>
3. B	In a control processor design, multiple microprocessors execute more than one instruction at a time. The processors have built-in capabilities to provide backup facilities in case of a power failure. So option (b) is the answer.	<TOP>
4. D	Examples of mainframes are IBM 3090, IBM 4381, IBM 4300, and IBM ES-9000. Whereas, IBM AS/400 is an example of minicomputer. So option (d) is the answer.	<TOP>
5. D	Statement (II) and statement (III) are true. Whereas, statement (I) is false because the computer will continue to work even when a peripheral device is disconnected. So option (d) is the answer.	<TOP>
6. B	ENIAC, EDVAC and UNIVAC come under first generation computers. So option (b) is the answer.	<TOP>
7. B	The instructions to start the computer are placed on a special chip known as ROM BIOS chip. So option (b) is the answer.	<TOP>
8. D	Accumulators are used for arithmetic, logic, and other similar operations. These registers are used for holding accumulated (or collected) results and the data that needs to be operated on. So option (d) is the answer.	<TOP>
9. E	The bar code reader is the most familiar scanning device used in business. It is used in many retail and grocery stores to determine the item being sold and to retrieve the price of the item from a computer system. The bar code reader reads the Universal Product Code (UPC) , which is a pattern of bars printed on the merchandise. So option (e) is the answer.	<TOP>
10. E	Hard disks contain two or more vertically stacked platters, each with its own read/write head. All the read/write heads are connected together in such a way that they cannot move independently. Each platter consists of an equal number of tracks. The location at which all the tracks are situated across the platters is called a cylinder. So option (e) is the answer.	<TOP>
11. C	Thermal printer is a non-impact printer. Daisy-wheel and line printers are impact printers. So option (c) is the answer.	<TOP>
12. B	The kernel is the central component of an operating system. It is responsible for managing system resources and to facilitate communication between various software and hardware components of the system. The kernel is also referred to as the nucleus or the core of the operating system. So option (b) is answer.	<TOP>
13. 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. So option (a) is answer.	<TOP>
14. D	Clock speed is defined as the rate at which a processor can complete processing cycles. So option (d) is the answer.	<TOP>
15. B	Electronic Numerical Integrator and Calculator (ENIAC) was introduced in 1946 and was developed for use by the military. But it had the capacity to store and manipulate only a very little amount of information and it had a very complex architecture. Due to these shortcomings, it was difficult to detect errors and change the programs. Another device similar to ENIAC, called the Electronic Discrete Variable Automatic Computer (EDVAC) was designed on the stored program concept. EDVAC was the first computer to have the ability to store any program in its memory. It was a multipurpose computer and used binary digits (0 and 1, where, 0 = off and 1 = on). The Universal Automatic Computer (UNIVAC) was the first digital computer and the first	<TOP>

computer to be commercially available in the marketplace and was first installed at the US Census Bureau in 1951. Whereas, **LARC**, **IBM 401** are second generation computers and EAVAC is not relevant. So option (b) is the answer.

16. D Though UNIX is the most widely used among the operating systems, it suffers from certain drawbacks like lack of compatibility with different versions, cryptic commands that are difficult to learn and lack of user-friendliness. So option (d) is the answer. [<TOP>](#)
17. E In UNIX 'mv x1 x2' command is used to rename directory x1 as x2. So option (e) is answer. [<TOP>](#)
18. A CASE stands for Computer Aided Software Engineering. So option (a) is answer. [<TOP>](#)
19. B "ASSIGN" DOS command redirects disk drive requests to a different drive. So option (b) is the answer. [<TOP>](#)
20. A POP is an acronym for Post Office Protocol. It is used to retrieve e-mail from a mail server. POP2 and POP3 are two versions of POP. So option (a) is answer. [<TOP>](#)
21. A Only statement (I) is true. Whereas, remaining statements (II) and (III) are false. NetWare 4.0 was an upgrade of the NetWare 3.12 version and was available for a wide range of platforms like DOS, MAC OS/2 and some versions of UNIX. Novell developed higher versions of NetWare (i.e., 5.x, 6.x) which were compatible with SQL servers and other servers. NetWare 4.x series of operating systems are not compatible with Windows-based servers such as SQL server 2000, Windows Exchange server etc. NetWare 6.5 is an open source system and provides a browser-based interface making the synchronization of various business processes easier. So option (a) is the answer. [<TOP>](#)
22. B Windows NT operating system is specially designed for client/server systems So option (b) is the answer. [<TOP>](#)
23. C The most significant feature of NetWare 4.x was the NetWare Directory Services (NDS), which provides both users and network administrators with a single, integrated view of a network, and the servers connected to it. NDS supports a network of servers where users can log in once and access the resources of any server depending on their access rights. So option (c) is the answer. [<TOP>](#)
24. A Statements (II) and (III) are false regarding Linux operating system. Whereas, statements (I) and (IV) are true. Installing Linux is considered to be difficult, as different Linux distributions have different installation programs. When compared to Windows, there are very limited hardware devices for Linux. Compared to Linux ,Windows takes long time to discover and fix the bugs. Linux is cheap compared to Windows when it is used as a server. So option (a) is the answer. [<TOP>](#)
25. C Windows 3.11 offered additional features like peer-to-peer workgroup and domain networking support. So option (c) is the answer. [<TOP>](#)
26. 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. So option (e) is the answer. [<TOP>](#)
27. B Statements (I) and (III) are false. Whereas, statement (II) is true. Sampled information is a type of information which is obtained by examining a set of items that are randomly selected. Aggregated information provides details about all the entities in a group. Summarized information draws conclusions about a single entity in the group and it also provides an outline of the entire information. So option (b) is the answer. [<TOP>](#)
28. C Except statement (III), remaining two statements (I) and (II) are false. Information helps in ensuring proper management control. There are three types of control that exist in an organization. These are preliminary controls, screening controls, and post action control. Preliminary controls ensure that the right information is collected. Screening control ensures that the information is put to use in the right way. Post action control ensures that the gathered information reaches the right audience. So option (c) is the answer. [<TOP>](#)
29. A Reliability refers to the credibility and accuracy of the sources of data collection and the methods of presenting the data. So option (a) is the answer. [<TOP>](#)
30. B Only statement (III) is true. Whereas, statements (I) and (II) are false regarding information at various organizational levels. At tactical level, the plans are compared with the actual performance and remedial measures are taken in case of any deviations. Tactical level requires information in the form of consolidated reports pertaining to the performance of the various [<TOP>](#)

business units of the organization. The decisions made at strategic level are taken in situations that are marked with a great deal of uncertainty. So option (b) is the answer.

31. A Quantitative information refers to information like numbers, statistics, scores, etc. which is quantitative in nature. This information provides factual unbiased data. It is not biased or interpreted in light of personal opinions or experiences as it is quantifiable and can be measured. So option (a) is the answer. [<TOP>](#)

32. B Principles are information about the guidelines, rules, criteria and heuristics that are used for predicting an outcome to a situation. Where as Facts is an objective information. So option (b) is the answer. [<TOP>](#)

33. E **Comma** (,) operator is also called as union operator. It combines multiple cell references to form a single reference. Example: SUM (A2:A9, B2:A9). So option (e) is the answer. [<TOP>](#)

34. E The text operator ‘Ampersand’ (i.e., &) operator concatenates text values in two or more cells to generate a single value. So option (e) is the answer. [<TOP>](#)

35. D Operators and their Order of Priority [<TOP>](#)

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

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. So option (d) is the answer.

36. D FV is one of the financial functions which calculates the future value of an investment on the basis of periodic and stable payments and a rate of interest. Syntax: FV (rate, nper, pmt, pv, type). Where rate = interest rate per period [<TOP>](#)

- Nper=Total number of payment periods in an annuity
- Pmt= payment made each period
- Pv=present value
- Type= number 0 or 1 and indicates when payments are due.

So option (d) is the answer.

37. D Except for NOW function remaining all have the arguments. [<TOP>](#)

- Syntaxes:
- (a) DATE (year, month, day).
 - (b) DAYS360 (start_date, end_date, method).
 - (c) HOUR (serial_number).
 - (d) NOW ().
 - (e) TIME (hour, minute, second).

So option (d) is the answer.

38. B Statistical functions in Excel help in summarizing, comparing, grouping data and finding out the relationships between two sets of data. Text functions can be used for making modifications to the existing text. So option (b) is the answer. [<TOP>](#)

39. D **AND** function verifies whether the given arguments are true and gives the result as TRUE if all the arguments are true. Whereas, **TRUE** function gives the logical value TRUE. **NOT** converts TRUE to FALSE (or) FALSE to TRUE. **OR** verifies whether any of the given arguments are true and gives TRUE or FALSE. If all the arguments are false, it gives FALSE. **ISLOGICAL** verifies whether the given value is a logical value, i.e TRUE or FALSE and gives TRUE or FALSE. So option (d) is the answer. [<TOP>](#)

40. C Cost is not an argument in RATE function. Syntax of RATE financial function is: [<TOP>](#)
RATE (nper, pmt, pv, fv, type, guess). So option (c) is the answer.

41. E Microsoft Excel provides a set of data analysis tools called analysis toolpak. This is available as an add-in feature. These tools help the users to conduct complex statistical analyses within a short time. To install the add-ins, the users have to go to the menu bar and click on the **Tools** menu. A drop-down menu appears from which the option ‘**Data Analysis**’ has to be selected. Then, a [<TOP>](#)

dialog box appears with a set of statistical analysis tools. So option (e) is the answer.

42. A Three different types of reports can be generated by Excel. These reports are answer report, sensitivity report and limits report. Answer report gives the original values as well as the final values for the problem in a new worksheet. It also gives all the values for the input variables and the constraints. The sensitivity report gives the implicit value or the cost of the constraints. The limits report gives the optimal solution of all the input variables along with the upper and lower values within which the particular variable could change. So option (a) is the answer. [<TOP>](#)

43. D A knowledge management system is a collaborative work management tool that identifies and enhances the knowledge resources. It improves communication, enhances access, reduces costs, and helps in gaining competitive advantage. It eliminates the duplication of tasks and unlocks the potential of the unique knowledge resources and helps harness their power. So option (d) is answer. [<TOP>](#)

44. B Cells in a worksheet can be protected only when the entire worksheet is protected. Excel locks all the cells by default. However, in order to enter data, these cells need to be unlocked. Following are the steps the user has to take for unlocking the cells: Select the range of cells in which data is to be entered. Go to the menu bar and click on the Format option. A drop-down menu appears from which the option called Cells has to be selected. A dialog box gets displayed called Format Cells with tabs. Select the Protection tab. Alternatively, the user can also press CTRL+1. So option (b) is the answer. [<TOP>](#)

45. 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.

So option (c) is the answer.

46. C Operators and their Order of Priority [<TOP>](#)

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:

$$\begin{aligned}
 &3*2^4*3/2&4^3*(4^3/2) \\
 &=3*2^4*3/2&4^3*32 \\
 &=3*16*3/2&64*32 \\
 &=72&2048 \\
 &=722048.
 \end{aligned}$$

So option (c) is the answer.

47. C Document formatting can be done at three levels: character, paragraph and section levels. **Character formatting** allows the user to modify the character size. **Paragraph formatting** includes justification, that is, the position of the text in the document, and line spacing, that is, the space between the lines and indentation. **Section level formatting** refers to formatting or changing the sections in a document. Formatting the sections would refer to formatting the entire document. So option (c) is the answer. [<TOP>](#)

48. C Intranets that are connected to the external networks are usually equipped with firewalls, which screen incoming data and allow only selected members to access internal data. So option (c) is the [<TOP>](#)

answer.

49. E The last statement is false because extranets can be used for collaborating with other organizations on research and development activities. Whereas, intranets are used for internal purposes of the organization but not with other organizations. Remaining statements are true regarding intranets. So option (e) is the answer. [<TOP>](#)
50. D Both in intranet and extranet, the access to the information is private and restricted. Whereas, in internet the access to the information is public and not restricted. So option (d) is the answer. [<TOP>](#)
51. D CoolTalk, NetMeeting, etc., are some of the popular internet telephony products which comes under enterprise communication tools. Usenet, web publishing are also enterprise communication tools. Creative Labs comes under enterprise conferencing tool. So option (d) is the answer. [<TOP>](#)
52. E Internet paging is a communication tool that enables sending of messages over the internet through web paging. These messages are received by a cell phone or a pager. Internet paging is also known as the buddy list software. So option (e) is the answer. [<TOP>](#)
53. E Document sharing is a collaborative work management tool that enables a person to access the files of team members and keep track of their work schedules. So option (e) is the answer. [<TOP>](#)
54. B Examples of discussion forum groupware are Lotus Notes and Netscape Collabra. Lotus organizer is an example of project management groupware. NetMeeting is an internet telephony product. So option (b) is the answer. [<TOP>](#)
55. C AltaVista Forum groupware creates a knowledge warehouse at an intranet website to share documents and organize the project knowledge of a team. So option (c) is the answer. [<TOP>](#)
56. D Metadata management takes place during the entire process of identifying, acquiring, and querying the data. Metadata is referred to as 'data about data'. It helps companies to make an analysis of the impact of changes to database tables, tracking the owners of individual data elements, and is also required to build the warehouse. So option (d) is answer. [<TOP>](#)
57. D The fourth statement is false because supporting decision making activities do not undergo in transaction processing systems. DSS is used to analyze the various possibilities and derive an appropriate strategy for each situation So option (d) is the answer. [<TOP>](#)
58. C There are two ways in which the transaction processing systems process data. They are real time processing and batch processing. **Real time processing** is also known as **Online transaction processing (OLTP)**. In real time processing, the transactions that occur are processed immediately. In **Batch processing**, the information that is gathered is stored but is not processed instantly. This type of transaction processing involves accumulation of transactions until a certain set of criteria are satisfied-such as time period (say monthly, quarterly) or quantity (based on the volume of transactions). Whereas, options (d) and (e) are not relevant to the context of transaction processing. So option (c) is the answer. [<TOP>](#)
59. E (a) **Information documents** serve as confirmation or proof to their recipients that certain transactions have occurred. [<TOP>](#)
(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.
So option (e) is the answer.
60. B The statement (III) is false because it refers to investment management financial information system. Whereas, statements (I) and (II) are true regarding cash management financial information system. So option (b) is the answer. [<TOP>](#)
61. A Information documents serve as confirmation or proof to their recipients that certain transactions have occurred. Sales order confirmations, customer invoices, etc. are examples of information documents. So option (a) is the answer. [<TOP>](#)
62. 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. [<TOP>](#)
(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.

So option (d) is the answer.

63. C **Periodic scheduled reports** follow a predetermined format and are used for providing information to managers 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 manager 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. So option (c) is the answer. [<TOP>](#)
64. C In **Goal seek** analysis, the target is fixed and changes are made to the related variable so that the target is achieved. In **Sensitivity** analysis, the effect of a repeated change in a single variable is examined. In **Optimization** analysis, one or more variables are changed after taking the constraints into account until the best alternative or the optimal value is found. Whereas, requirement analysis and system analysis do not come under the concept of decision support systems. So option (c) is the answer. [<TOP>](#)
65. B MS Excel is generally used for conducting goal seek analysis. So option (b) is the answer. [<TOP>](#)
66. A The statement (III) is not true regarding EIS because information is mostly presented in a graphical or diagrammatic form so that a user can understand it quickly. Whereas, remaining statements are true regarding Executive Information Systems (EIS). So option (a) is the answer. [<TOP>](#)
67. D **Drilling** essentially is breaking up data into smaller dimensions to facilitate analysis. It involves representing the data in detailed form. **Slicing** and **dicing** refer to the process of changing the dimension of analysis to suit the analysts' requirements. It involves examining the database from different standpoints. In **Changing displays** information may be available in tabular form but it can be transformed into charts and graphs if required for users to get a better understanding. Whereas, cleansing (or data cleansing) and data mining are the techniques of online analytical processing. So option (d) is the answer. [<TOP>](#)
68. A Only statement (III) is true. Business Process Re-engineering (BPR) deals with complete redesigning of the business processes, business improvement is used for making improvements in the existing processes. Business improvement is usually carried out for any process while only the strategic business processes are reengineered. Also, the risk of failure and level of disruption is very high in case of BPR while it is low in case of business improvement. So statements (I) and (II) are false regarding Business Process Re-engineering (BPR). So option (a) is the answer. [<TOP>](#)
69. D
- (a) **Business improvement** refers to making improvements in the existing process. [<TOP>](#)
 - (b) **Business process re-engineering** deals with the complete redesigning of the business processes.
 - (c) **Business continuity plan** is defined as the ability of the organization to carry out its business operations with negligible disruption or down time during a natural or manmade disaster.
 - (d) **Agile competition** in an organization point of view means adapting to the rapidly changing business environment. And it is based on the alertness to thrive on change and uncertainty.
 - (e) **Knowledge management systems** collect, edit, evaluate and disseminate information within the organization using various technologies.
- So option (d) is the answer.
70. A **Data analysis systems** are developed using simple data processing tools and business rules and these are generally used for conducting cash flow analysis and funds flow analysis. 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 [<TOP>](#)

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 component of manufacturing information systems. So option (a) is the answer.

71. C The Program Development Life Cycle (PDL) 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. So option (c) is the answer. [<TOP>](#)
72. D Pseudocode is also called Program design language. So option (d) is the answer. [<TOP>](#)
73. B 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. So option (b) is the answer. [<TOP>](#)
74. A Manuals provide an overview of the program's functionality, tutorials for new users, in-depth explanations of major program features, reference documentation of all program commands and a detailed description of the error messages generated by the program. So option (a) is the answer. [<TOP>](#)
75. B The input or output actions in a flow chart are depicted by parallelogram-shaped input/output symbols. Processing refers to any action performed on the input data. For instance, arithmetic computation is shown by the rectangular processing symbol in the flow chart. The on-page connector symbol is a small round symbol which is used to indicate the an entry or an exit from another part of the program flow chart. So option (b) is the answer. [<TOP>](#)
76. E In SQL statement WHERE clause states the conditions for row selection. So option (e) is answer. [<TOP>](#)
77. B 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. So option (b) is the answer. [<TOP>](#)
78. E In Repeat Until, the execution of the instructions within the loop is repeated as long as the condition is not true. So option (e) is the answer. [<TOP>](#)
79. D FOCUS and NATURAL are two popular fourth generation languages that have capability to create and manipulate databases. So option (d) is the answer. [<TOP>](#)
80. C Abstraction refers to the process of hiding the complexity and internal functionality of objects. So option (c) is the answer. [<TOP>](#)
81. 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. **Data redundancy** refers to the storage of data in more than one location. **Data sharing** refers to permitting several users to share the data in the database and enables access to 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. So option (b) is the answer. [<TOP>](#)
82. C A functional dependency between two or more non-key attributes is called transitive dependency. So option (c) is answer. [<TOP>](#)
83. B Foreign keys are primary keys of one table which can be included in another table for relating or joining the data. So option (b) is the answer. [<TOP>](#)
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 lowest level, i.e., in the form of bytes and words. So option (b) is the answer. [<TOP>](#)
85. B In **relational model**, a two-dimensional table is generally used for representing data and relationships. In **network model**, records in the database are organized as collections of arbitrary graphs. In **hierarchical model**, records are organized as a collection of trees rather than as arbitrary graphs. So option (b) is the answer. [<TOP>](#)

86. B Relational model provides ad hoc request flexibility. Network databases support many-to-many relationships. They may be suitable for handling voluminous transactions but not for handling ad hoc request. Hierarchical model is designed to handle large transaction-based applications. So option (b) is the answer. [<TOP>](#)
87. A In conceptual design, all the information is represented in the form of high-level models. Logical designing transforms the conceptual model into a data model. The physical design determines the data storage structures and access methods. Whereas, data design and information design are not relevant to this context. So option (a) is the answer. [<TOP>](#)
88. E The various functions involved in data resource management are data administration, data planning and database administration. So option (e) is the answer. [<TOP>](#)
89. B The second statement is false because data administration is a function that involves establishing and enforcing policies and procedures for data management. Whereas, remaining statements are true regarding database administration. So option (b) is the answer. [<TOP>](#)
90. D The fourth statement is false because view level is the highest level of abstraction where users see a set of application programs that hide the details of the data types. Whereas, the remaining statements are true regarding different levels of abstraction. So option (d) is the answer. [<TOP>](#)
91. A Only statement (I) is false because associative entities are also called as intersection entities. Subtype entities are also called as super type or generic entities. Whereas, remaining three statements (II) (III) and (IV) are true regarding entity types. So option (a) is the answer. [<TOP>](#)
92. 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 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. So option (a) is answer. [<TOP>](#)
93. B A tree structure is a series of 1: N relationships because in this structure, each node has only one parent node and each parent node has zero, one or many child nodes. So option (b) is the answer. [<TOP>](#)
94. D Vbase does not belong to relational database management systems because it is one of the examples of object-oriented databases. Whereas, remaining examples belongs to relational database management systems. So option (d) is the answer. [<TOP>](#)
95. E ONTOS does not belong to query languages because it is one of the examples of object-oriented databases. Whereas, remaining examples belongs to query languages. So option (e) is the answer. [<TOP>](#)
96. B **Data cleansing** refers to validating and correcting the data before inserting it into the warehouse. **Data mining** refers to extracting and analyzing the data from different sources and summarizing it into useful information. **Metadata management** helps companies to make an analysis of the impact of changes to database tables and track the owners of individual data elements. It also helps in building the data warehouse. **Normalization** refers to the optimization of tables to remove any redundancy and scalability issues that might arise when the amount of data is increased. Whereas, **artificial Intelligence** is not a technique of data warehousing. It focuses on the capacity of computers to perform operations analogous to learning and decision-making in human beings. So option (b) is the answer. [<TOP>](#)
97. C Only second statement is false because in a distributed system, if one site fails, the remaining sites can continue to operate. It is advantage of distributed database. Whereas, remaining statements are true regarding distributed databases. So option (c) is the answer. [<TOP>](#)
98. E In addition to the creation of data manipulation objects, the actual manipulation of data within these objects is done using SQL. The SQL sentences that are used to create these objects are called DDL (Data Definition Language). The SQL sentences used to manipulate data within these objects are called DML (Data Manipulation Language). The SQL sentences, which are used to control the behavior of these objects are called DCL (Data Control language). URL is an acronym for Uniform Resource Locator and PDL is an acronym for Program Design Language (pseudocode). So option (e) is answer. [<TOP>](#)
99. D Extensibility comes under second criteria of OODBMS. Whereas, remaining features belong to first criteria. So option (d) is the answer. [<TOP>](#)

100.

C

Relational databases have the following limitations:

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- 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 relational database. It is possible in object relational database system. 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 object relational database system. In relational database, maintenance has to be done on a continuous basis. So option (c) is the answer.

[< TOP OF THE DOCUMENT >](#)