(A) Multiple Choice Questions : Each question has 5 choices. Identify the letter of the choice that best completes the statement or answers the question. (70%, 1% each)

1. To understand information systems, one must understand:
(A). the problems they are designed to solve.
(B). their architectural and design elements.
(C). organizational processes.
(D). (A) and (B).
(E). (A), (B), and (C).

2. Information systems literacy requires:
(A). technical knowledge about computers.
(B). behavioral knowledge about organizations and individuals using information systems.
(C). financial and accounting skills.
(D). (A) and (B).
(E). (A), (B), and (C).

3. Today's information systems directly affect how managers:
(A). interact with IT personnel.
(B). decide when, where, how and what products will be produced.
(C). manage their employees.
(D). (B) and (C).
(E). (A), (B), and (C).

4. Networked information systems allow companies to:
(A). Do business with fewer employees.
(B). Cut management costs.
(C). Deal with financial information more securely.
(D). Maintain the security of proprietary information.
(E). Coordinate with other organizations across great distances.

5. At the management level, sales and marketing information systems support:
(A). market research.
(B). advertising campaigns.
(C). pricing decisions.
(D). promotional campaigns.
(E). All of the above.

6. CRM focuses on managing:
(A). customer relationships of all kinds.
(B). computer resource management.
(C). customer reports for marketing.
(D). consolidation of internal data about individual customers.
(E). All of the above.

7. Finance and accounting systems keep track of:
(A). manpower requirements for meeting long-term business plans.
(B). financial assets and fund flows.
(C). supply chain and computer resource management.
(D). financial information external to the firm.
(E). sales records.

8. An example of an operational-level system is:
(A). one to record the number of hours worked each day by employees on the factory floor.
(B). CAD.
(C). decisions about the design of future products.
(D). reports where sales fall below anticipated levels by territory.
(E). All of the above.

9. To maximize the advantages of information technology, there is a greater need to:
(A). train all employees in technology use.
(B). plan the organization's information architecture and the IT infrastructure.
(C). manage the information the technology provides.
(D). understand the future of electronic commerce.
(E). develop an Internet policy for every company.

10. Collaborative commerce is the art of:
(A). keeping everyone happy.
(B). creating and maintaining a set of digitally-enabled cooperative interactions between an enterprise and its business partners and customers.
(C). sharing internal information between companies.
(D). creating a better, more efficient product in a global environment.
(E). tracking and analyzing the movement of materials and products to ensure that materials and finished goods are delivered at the right time and place at the minimum cost.

11. Systems analysts are:
(A). highly trained technical specialists who write computer software instructions.
(B). specialists who translate business problems and requirements into information requirements and systems.
(C). leaders of the various teams connected with the information systems.
(D). responsible for the information systems function in the organization.
(E). senior managers who oversee the use of information technology in organizations.

12. Some research indicates that computerization decreases the need for large numbers of lower-level workers because:
(A). their work is reclaimed.
(B). more information is given to middle managers.
(C). it permits task forces to be formed.
(D). more highly-trained workers work faster.
(E). more training for such workers is required.

13. eBay is an example of:
(A). a click-and-mortar business.
(B). consumer-to-consumer electronic commerce.
(C). business-to-consumer electronic commerce.
(D). an on-line community.
(E). on-line syndication.

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14. Mintzberg defined the informational roles of a manager as those in which the manager:
(A). disseminates critical information and negotiates conflicts.
(B). acts as the nerve center of the organization, receiving and disseminating critical information.
(C). initiates activities, handles disturbances, allocates resources, and negotiates conflicts.
(D). acts as a figurehead and leader of the organization.
(E). initiates activities, allocates resources, and leads the organization.

15. Strategic transitions are often required when the company adopts strategic systems that demand changes in:
(A). The operational elements of the environment.
(B). The technology elements of the organization.
(C). The social and technical elements of the organization.
(D). The human resources elements of the organization.
(E). The elements of the organization.

16. In Simon's four stages of decision making, "implementation" is when:
(A). the individual selects among the possible alternative solutions to a problem.
(B). the individual conceives possible alternative solutions to a problem
(C). the individual collects information to identify problems.
(D). the individual puts the decision into effect and reports on the progress of the solution.
(E). the individual puts the decision into effect.

17. Companies can use information flows from the supply chain to:
(A). introduce new business partners.
(B). postpone business decisions until they know exactly what the customer wants.
(C). complete the master schedule forecasts based on better guesses.
(D). manage warehouse inventories more quickly.
(E). prevent customer dissatisfaction by creating better communications.

18. Business models built around the Internet are:
(A). apt to drop revenues at first, then succeed in later months.
(B). based on traditional business models.
(C). transforming the way business is conducted globally.
(D). new and largely unproven.
(E). politically insecure and uncertain.

19. Determining where and how to digitally enable the enterprise with Internet technology is:
(A). best left to the IT department.
(B). a decision in which all members of the management of the company must participate.
(C). difficult and expensive.
(D). essential to the survival of the business.
(E). a key management decision.

20. A content provider:
(A). provides product, pricing, and availability information to individuals and businesses.
(B). provides initial point of entry to the Web and specialized content and other services.
(C). provides on-line service for individuals and businesses.
(D). creates revenue by providing digital content over the Web.
(E). All of the above.

21. The basic concepts of ethics are:
(A). liability.
(B). responsibility.
(C). accountability.
(D). due process.
(E). All of the above.

22. The "do anything anywhere" computing environment can:
(A). make work environments much more pleasant.
(B). create economies of efficiency.
(C). centralize power at corporate headquarters.
(D). blur the traditional boundaries between work and family time.
(E). create privacy problems.

23. The strength of patent protection is that it:
(A). puts the strength of law behind copyright.
(B). allows protection from Internet theft of ideas put forth publicly.
(C). is easy to define.
(D). grants a monopoly on the underlying concepts and ideas.
(E). allows free transmission of information.

24. Computer abuse is:
(A). mostly a personal problem.
(B). sometimes legal but always unethical.
(C). illegal and unethical.
(D). most common in the business environment.
(E). the special province of hackers.

25. New information technologies are challenging existing:
(A). liability law and social practices for holding individuals and institutions accountable.
(B). standards of ethics.
(C). standards of computer literacy rights and computer activities.
(D). educational theories and practices.
(E). technology boundaries between societies.

26. Integrated software packages:
(A). are less expensive in the long run than single-purpose packages.
(B). generally do not have the same power and depth as single-purpose packages.
(C). cannot publish data on the Web.
(D). have more power and depth than single-purpose packages.
(E). require keying the same data into different programs.

27. Adding the transaction data to the master file:
(A). creates a secondary merge file.
(B). creates a new master file.
(C). creates an updated transaction file.
(D). initiates on-line processing.
(E). deletes the transaction file.

28. The process of tying together multiple applications to support the flow of information across multiple business units and systems is called:
(A). a network.
(B). the Internet.
(C). enterprise application integration.
(D). integrated programming.
(E). enterprise programming applications.

29. System software is the layer between:
(A). primary and secondary memory.
(B). the CPU and secondary storage.
(C). the hardware and the application software.
(D). the computer and the Internet.
(E). the application software and the storage medium.

30. An ASP allows users to
(A). download software programs to stand-alone computers.
(B). maintain updated software at no charge.
(C). rent the use of software over the Internet or a network.
(D). make their Web browsers their servers.
(E). All of the above.

31. An effective information system provides users with:
(A). inexpensive information.
(B). timely, accurate, and relevant information.
(C). everything they need to make decisions.
(D). many reports from different angles.
(E). an enterprise system.

32. In a traditional file environment, any change in data requires:
(A). a different entity description.
(B). a change in all programs that access the data.
(C). management approval.
(D). data redundancy.
(E). a different data dictionary.

33. Data warehousing uses data from:
(A). daily reports only.
(B). diverse applications and locations.
(C). diverse applications, but one location.
(D). many locations, but one application.
(E). primarily government locations.

34. Data mining:
(A). cannot predict likely future behavior.
(B). finds hidden patterns and relationships in large pools of data.
(C). is illegal.
(D). is not accurate for small companies.
(E). looks only at broad areas, not detail.

35. The conceptual design of a database is:
(A). more important than the physical design.
(B). an abstract model of the database from the business perspective.
(C). easier for a programmer to understand than the logical design.
(D). the actual arrangement of data on direct access storage devices.
(E). an easy-to-change data model.

36. A multiplexer is a:
(A). programmable telecommunications computer that collects and temporarily stores messages from terminals until enough messages are ready to be sent economically.
(B). specialized computer that supervises communications traffic between the CPU and peripheral devices.
(C). device that enables a single communications channel to carry data transmissions from several sources simultaneously.
(D). special purpose computer, attached to the host computer, dedicated to communications management.
(E). high-speed and inexpensive computer designed to carry multimedia signals.

37. A bus network:
(A). links a number of computers on a single circuit.
(B). is useful for applications where some processing must be centralized and some can be performed locally.
(C). consists of a central host computer connected to a number of smaller computers or terminals.
(D). passes data in one direction from one computer to another.
(E). (B) and (C).

38. LANs are recommended for applications:
(A). that do not need client/server networks.
(B). that do not require special operating systems.
(C). that transmit high volumes of data and other functions requiring high transmission speeds.
(D). that require a gateway to the Internet.
(E). All of the above.

39. A gateway is:
(A). used to send packets of data and to determine the next point in a network to which data should be sent.
(B). a communications processor that can connect dissimilar networks by translating from one set of protocols to another.
(C). part of the NOS.
(D). a computer that acts as a librarian, storing files and programs for network users.
(E). the telephone line that a person accesses from his or her terminal to transmit data to another computer.

40. Electronic conferencing is growing in popularity because:
(A). travel time and costs are saved.
(B). special software is not required.
(C). any T1 line can use it.
(D). employees can be monitored more closely.
(E). All of the above.

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41. "Co-location" means that:
(A). the subscribing firm owns the server, but the server is located at the physical facility of the hosting service.
(B). there is more than one server acting for the subscriber.
(C). the hosting service owns the server, but the server is located at the physical facility of the subscribing firm.
(D). personnel are assigned to work at both sites.
(E). more than one subscriber uses the server.

42. Systems linked to the Internet are especially vulnerable to security breaches because:
(A). they lack firewalls.
(B). they do not have secure physical facilities.
(C). security is beyond the expertise of most IT professionals.
(D). the Internet is designed to be an open environment.
(E). they are vulnerable during the night hours.

43. A company employing an extranet must be sure to put a(n) _____ in place.
(A). Web browser
(B). administrative computer
(C). firewall
(D). applications protocol
(E). very large secondary storage area

44. FTP is the capability to/for:
(A). person-to-person messaging and document sharing.
(B). transfer files from one computer to another.
(C). discussion groups using e-mail mailing list servers.
(D). interactive conversations.
(E). log onto one computer and work on another.

45. To join the Internet, an existing network needs to:
(A). pay a small registration fee.
(B). establish which computer on the network will forward messages for the OSI.
(C). agree to certain standards based on the TCP/IP reference model.
(D). (A) and (C).
(E). (A), (B) and (C).

46. A knowledge engineer:
(A). develops sets of rules for expert systems based on what he/she is told about the domain.
(B). keeps track of the information in an organization.
(C). develops uses for the information gained by an organization.
(D). is a specialist in CLUES programming.
(E). tests expert systems developed by others.

47. Replication is defined as:
(A). posting documents by multiple users along with a mechanism to track changes in the documents.
(B). organizing conversations by many users on different topics.
(C). storing information from various types of software in a database.
(D). preventing unauthorized access to data.
(E). maintaining and updating identical data on multiple PCs and servers.

48. The knowledge base of a firm may include:
(A). structured explicit internal knowledge.
(B). external knowledge of competitors, product, and market.
(C). informal internal knowledge.
(D). competitive intelligence.
(E). All of the above.

49. Businesses need knowledge management programs because:
(A). high-level executives do not have time to learn programming.
(B). knowledge increases geometrically.
(C). the Internet creates a different environment.
(D). knowledge is a central productive and strategic asset in today's economy.
(E). more and more records must be kept.

50. E-commerce **bots** are a form of:
(A). e-mail.
(B). intelligent agent.
(C). search engine capacity.
(D). rule based programming.
(E). genetic engineering.

51. DSS, GDSS, and ESS are part of a special category of information systems that are explicitly designed to:
(A). make decisions for managers.
(B). enhance Web performance.
(C). gather data and build data warehouses.
(D). enhance managerial decision-making.
(E). interpret data for management.

52. DSS assist management by combining _____ into a single powerful system to support unstructured decision-making.
(A). hardware and the Internet
(B). data, analytical models and tools, and user-friendly software
(C). analytical models and tools and data from the Internet
(D). group decision processes and electronics
(E). data and people

53. The term "forecasting" is associated with:
(A). Occurrences linked to a single event.
(B). Classifications when no groups have been defined.
(C). Pattern recognition describing the group to which an item belongs.
(D). A series of existing values used to predict other values.
(E). Events linked over time.

54. The most visible benefit(s) of ESS is/are:
(A). their ability to develop a "sense and define" strategy for an organization.
(B). their ability to analyze, compare, and highlight trends.
(C). their ability to make decisions.
(D). their swift access to data warehouses.
(E). All of the above.

55. DSS for customer relationship management use data mining to guide decisions about:
(A). pricing.
(B). customer retention.
(C). market share.
(D). new revenue streams.
(E). All of the above.

56. Major risks and uncertainties in systems development occur because:
(A). it is difficult to establish information requirements on all fronts.
(B). time and cost factors are difficult to analyze.
(C). managing organizational change is difficult.
(D). managerial change cannot always be planned or controlled.
(E). All of the above.

57. A reengineered business process always affects:
(A). jobs.
(B). skill requirements.
(C). work flows.
(D). reporting relationships.
(E). All of the above.

58. TQM focuses on:
(A). mid-level management.
(B). a series of continuous improvements.
(C). production employees.
(D). eliminating design errors.
(E). decreasing cycle times.

59. "Who needs what information, where, when, and how" describes the most basic description of:
(A). the feasibility study.
(B). TQM.
(C). information requirements.
(D). the systems development process.
(E). acceptance testing.

60. If an organization's requirements conflict with the software package chosen and the package cannot be customized, the organization will have to:
(A). write its own software.
(B). re-design the RFP.
(C). change the evaluation process.
(D). re-test the benchmarks.
(E). change its procedures.

61. There is a very high failure rate among information systems projects because:
(A). organizations have incorrectly assessed their business value.
(B). organizations fail to allow enough funds to succeed.
(C). firms have failed to manage the organizational change process surrounding the introduction of new technology.
(D). (A) and (C).
(E). (A), (B) and (C).

62. The life expectancy of information systems is _____ than for manufacturing systems.
(A). longer
(B). more difficult to predict
(C). about the same as
(D). less costly
(E). shorter

63. The intangible benefits of computers are difficult to measure and therefore are:
(A). not addressed in financial models except for new systems.
(B). not addressed by conventional productivity measures.
(C). not understood by management.
(D). (A) and (C).
(E). (A), (B) and (C).

64. The major hardware challenge in an international setting is:
(A). cost.
(B). standardizing the firm's computer hardware platform.
(C). training and education.
(D). finding user-friendly applications.
(E). accessing the Internet 24/7.

65. To provide international connectivity for global systems, firms can:
(A). Build their own international private network.
(B). Rely on a value-added network service.
(C). Use Internet technology.
(D). Use VPNs.
(E). All of the above.

66. The most common threats against computerized information systems are:
(A). fire, electrical, and telecommunications problems.
(B). user errors and program changes.
(C). hardware and software failure.
(D). terminal access penetration and theft.
(E). All of the above.

67. The vulnerability of automated data has created special concerns for IS personnel in three areas:
(A). policies, procedures, and technical measures.
(B). disaster, security, and administrative error.
(C). disaster, technical measures, and systems failure.
(D). technical measures, security, and systems failure.
(E). administrative error, procedures, and disaster.

68. Software controls:
(A). ensure that computer hardware is physically secure.
(B). ensure that programmed procedures are consistently and correctly applied to the storage and processing of data.
(C). ensure that data files are not subject to unauthorized access, change, or destruction while they are in use or in storage.
(D). use formal standards, rules, procedures and control disciplines to ensure the organization's controls are properly executed and enforced.
(E). perform overall control functions for the programs that directly process data and data files.

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69. Security refers to the policies and procedures used to prevent _____.
   (A). unauthorized access
   (B). alteration
   (C). theft
   (D). physical damage
   (E). All of the above.

70. The most expensive phase of the systems development process is:
   (A). maintenance.
   (B). design.
   (C). documentation.
   (D). the cost of personnel to run it.
   (E). testing.

(B) Essay Questions : (30%, 6% each)

1. List and briefly define the six major types of information systems.
2. Describe the two database models in use today, distinguishing between them.
3. List and briefly describe at least six of the major Internet services currently available.
4. What are the components of a DSS? Briefly describe each of the components.
5. Define the systems development model, listing the six steps to be taken using this model. Describe the activities engaged in at each step.