UNIVERSITY EXAMINATIONS

UNIVERSITEITSEKSAMENS

UNISA university of south africa

INF1059 (464083) October/November 2010

INTRODUCTION TO BUSINESS INFORMATION SYSTEMS (INFORMATION SY STEMS 105)

Duration 2 Hours 60 Marks

EXAMINERS

FIRST MS H ABDULLAH

SECOND MS B CHIMBO

This paper consists of 26 pages plus instructions for the completion of a mark reading sheet

This paper is the property of UNISA and may NOT be removed from the examination venue.

Please complete the attendance register on the back page, tear off and hand to the invigilator.

INSTRUCTIONS:

1 The paper consists of 60 multiple-choice questions

2 Each question comprises one mark The total out of 60 will be converted to give a final mark out of a 100.

3 The examination paper is to be answered on the computerized mark-reading sheet

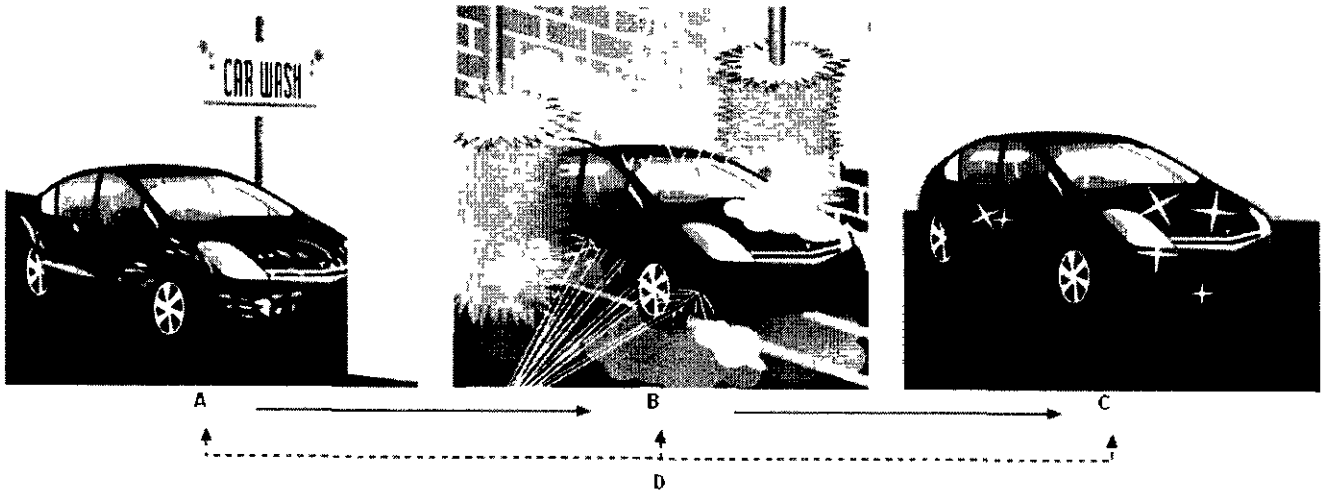
4 These mark-reading sheets will be marked by computer and should therefore be filled in carefully and correctly

Remember to.

- Use **ONLY** an HB pencil to fill in a mark-reading sheet
- Please **DO NOT** fold or damage your mark-reading sheets A mark-reading sheet that is filled in incorrectly, damaged or filled in with a pen cannot be marked
- For every question, there is only **ONE** possible correct option

Question 1

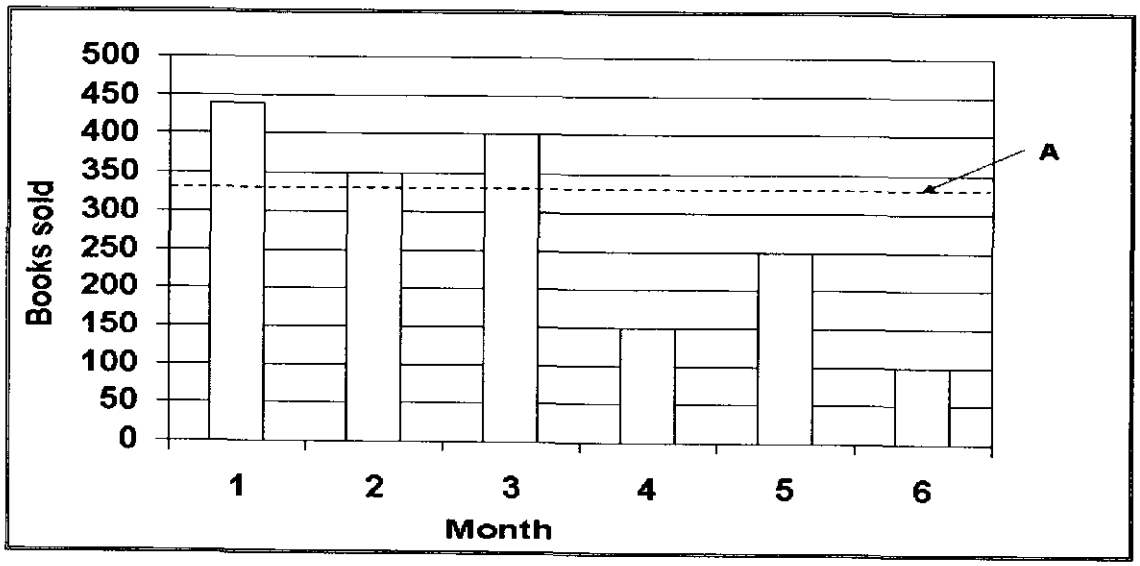
Study the following diagram depicting the components of a system What do the letters 'B' and 'D' respectively represent?



1 input, output
2 processing, feedback
3 input, feedback
4 processing, output

Question 2

The following is the graph depicting the system performance standard (represented by A) and the sales in the first 6 months of the year 2010 for a bookstore



What is the system performance standard for the book store?

1 To sell 300 books per month
2 To sell more than 100 books per month
3 To sell less than 350 books per month
4 To sell 335 books per month

Question 3

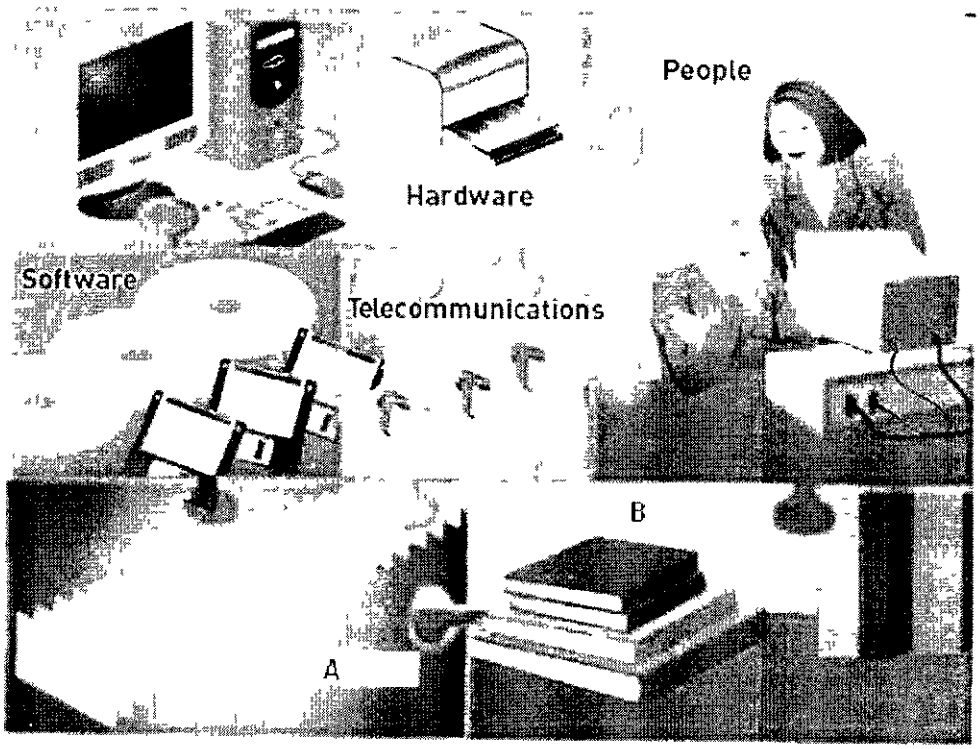
*From the list below, how many are **NOT** characteristics of a valuable information system?*

- *accuracy*
- *efficiency*
- *completeness*
- *complexity*
- *effectiveness*
- *value*

1 2
2 5
3 3
4 4

Question 4

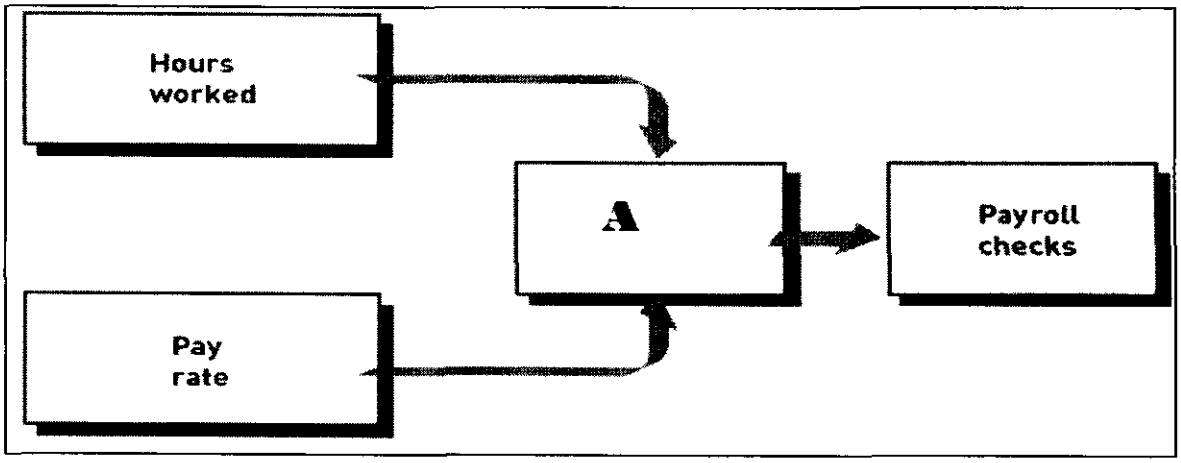
Study the following diagram Which components of a Computer-Based Information System (CBIS) are denoted by the letters 'A' and 'B' respectively?



1 CPU, books
2 Output device, user manual
3 Filing cabinet, procedures
4 Databases, procedures

Question 5

Which business information system is depicted by the letter 'A' in the following diagram?



1 A payroll transaction processing system.
2 A payroll decision support system.
3. A payroll management information system.
4 A payroll knowledge management system

Question 6

*Which of the following statements regarding the **DIFFERENCES** between a Management Information System (MIS) and a Decision Support System (DSS) are **CORRRECT**?*

a. A MIS is an organized collection of people, procedures, software, databases, and devices used to record completed business transactions
b A DSS is an organized collection of people, procedures, software, databases, and devices used to support problem-specific decision making.
c The focus of a DSS is primarily on operational efficiency.
d The focus of a MIS is on decision-making effectiveness.
e Whereas an MIS helps an organization "do things right", a DSS helps a manager "do the right thing".

1. only a and b
2 only c ,d and e
3 only b and e
4 a, b, c and d

Question 7

Which of the following are examples of a strategic alliance?

a Apple computer introduces an easy to use iMac computer that can be used to create and edit home movies
b MacDonalds offers new coffee flavours at premium prices
c Cosmetic companies add sunscreen to their product lines

1 only a and b
2 only b and c
3 a, b and c
4 neither a, b nor c

Question 8

_____ *parallel processors all execute the same instruction on many data values simultaneously*

1 Multicore
2 Single Instruction/Multiple Data (SIMD)
3 Multiple Instruction/Multiple Data (MIMD)
4 Massive

Question 9

*What are the **ADVANTAGES** of secondary storage compared to memory?*

a Greater speed
b Greater capacity
c Nonvolatility
d Greater economy

1 a, b and c
2 b, c and d
3 a and d
4 Neither a, b, c nor d

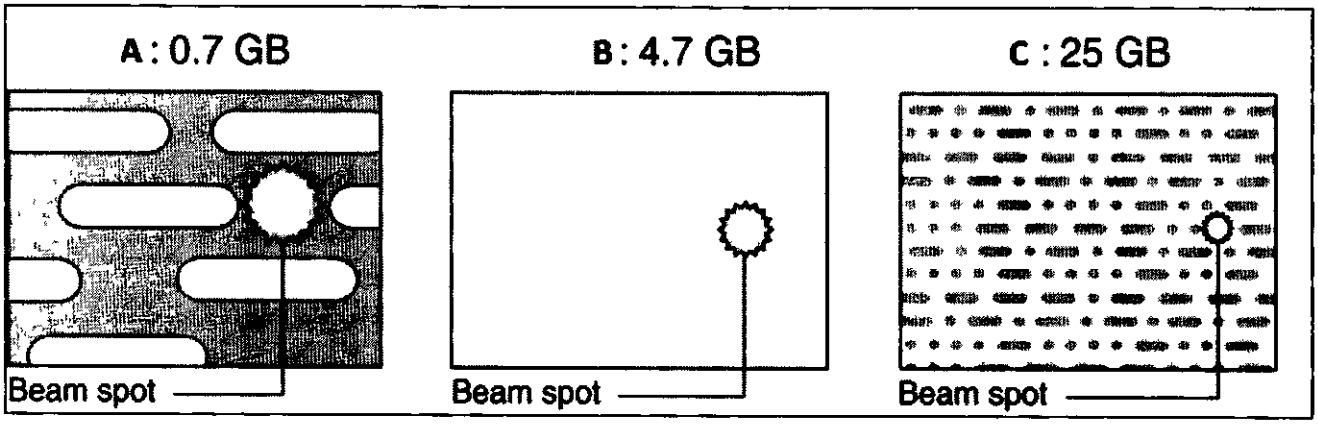
Question 10

When trying to retrieve a specific record in a sequentially organized file, the computer _____

1 can retrieve the desired record immediately, without processing any other record
2 must retrieve all the records to reach the desired record
3 must read and discard all the data up to the desired record
4 None of the above

Question 11

Which secondary storage devices are depicted by the letters 'A', 'B' and 'C' in the following diagram respectively?



1. Digital versatile disk (DVD); Compact disk (CD); Blu-Ray disk
2. Blu-Ray disk; DVD; CD
3. CD; DVD; Blu-Ray disk
4 HD-DVD; DVD; CD

Question 12

A character is a dot of color on a photo image or a point of light on a display screen.

1. True
2. False

Question 13

If a user uses MS DOS (Figure 1) to issue text commands then a_____is being used If the user uses Microsoft Windows (Figure 2), a _____is being used



Figure 1

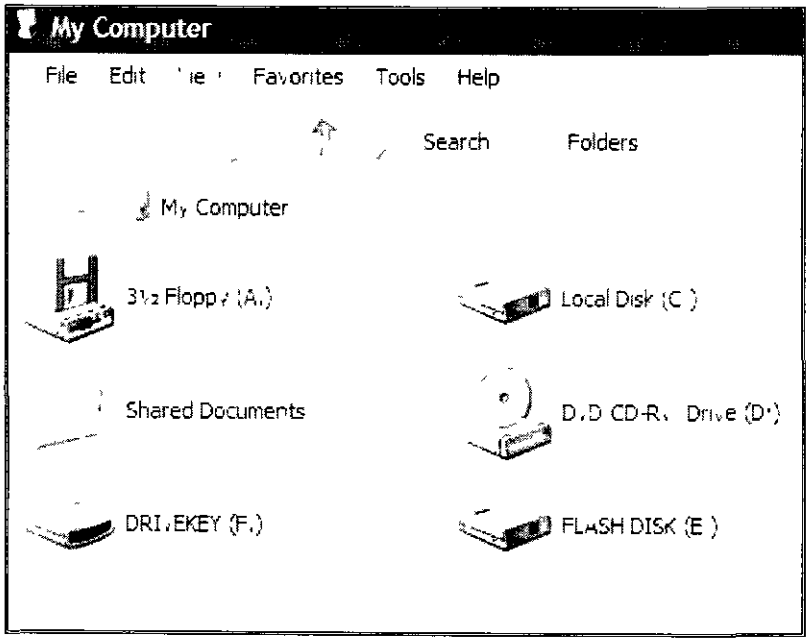


Figure 2

1 menu-driven user interface, graphical user interface
2 command-based user interface, graphical user interface
3 graphical user interface, text based interface
4 application program interface, icon driven interface

Question 14

When using virtual memory _____

a more programs can be processed in a given time span
b the physical size of memory increases
c the functional memory capacity of Random Access Memory (RAM) is supplemented

1 only a and b
2 only b and c
3 only a and c
4 a, b and c

Question 15

Windows Embedded
Netware
Z/OS

A representation of the above table would best be given by _____, _____ and computer operating systems.

1 mobile; workgroup, enterprise
2 enterprise; personal; workgroup
3 consumer, enterprise; personal
4 workgroup, consumer; personal

Question 16

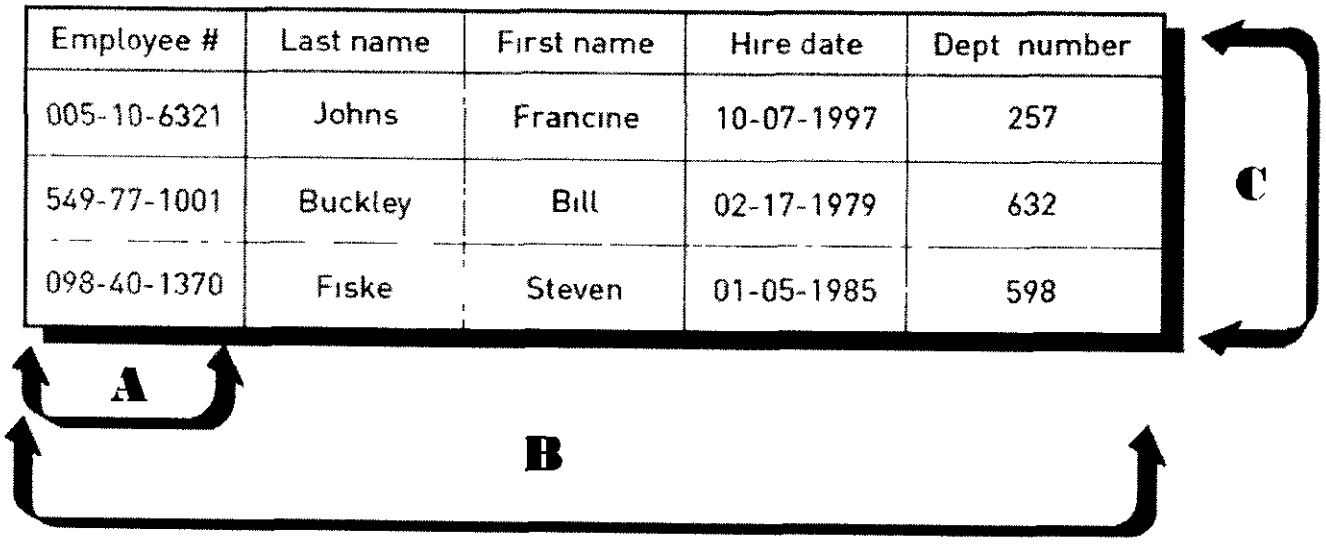
*Which of the following is (are) **ADVANTAGE(S)** of off-the-shelf software?*

a You get exactly what you want
b Lower initial costs
c Being involved in the development, you have better control over the results
d High quality package.

1 only c
2. a and c
3 b, c and d
4 only b and d

The following table represents a database Questions 17 and 18 are based on the following table.

Employee #	Last name	First name	Hire date	Dept number
005-10-6321	Johns	Francine	10-07-1997	257
549-77-1001	Buckley	Bill	02-17-1979	632
098-40-1370	Fiske	Steven	01-05-1985	598



Question 17

If Employee# is a unique number, then the area in the table above represented by label 'A' is a

1 secondary key
2 primary key
3 data item
4. a record

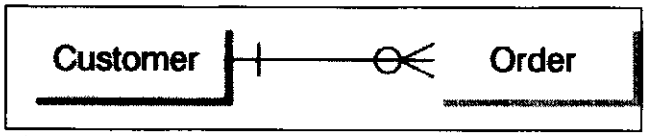
Question 18

Label 'B' represents _____.

1. the data items
2. the primary key
3. all entities (records)
4. all attributes (fields)

Question 19

Which binary relationship is depicted in the following diagram?



1 Many-to-many relationship.
2 One-to-many relationship, many side obligatory to one side.
3. One-to-one relationship, optional on one side.
4 One-to-many relationship, many side optional to one side.

Question 20

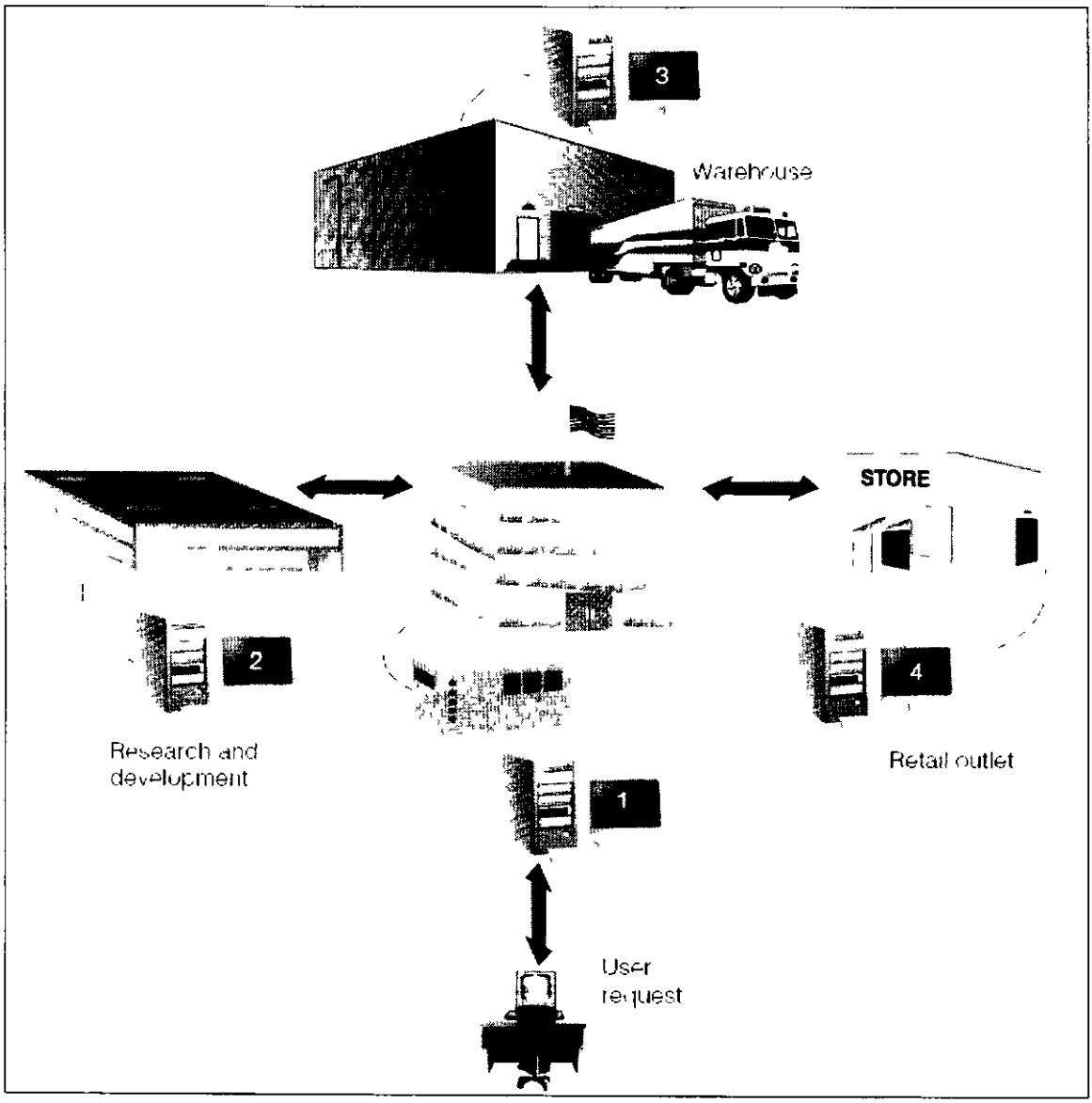
Which one of the following statements referring to the responsibilities of a Database Administrator (DBA) is ***FALSE****? A DBA* _____.

1. plans, designs, creates, operates, secures, monitors and maintain the database
2. must solely design and develop all applications that interface with the database environment
3 works with users to decide the content of the database
4 plays a crucial role in the development of effective information systems to benefit the organization, employees and managers

Question 21

*Which of the following statements regarding distributed databases are **CORRECT**?*
*Distributed databases*_____

a allow for greater flexibility in how databases are organized and used
b are databases in which the data is spread across several smaller databases connected via telecommunications devices
c are represented in the following diagram



d present challenges in maintaining data security, accuracy and timeliness

1 only a
2 only b
3 only b, c and d
4 a, b, c and d

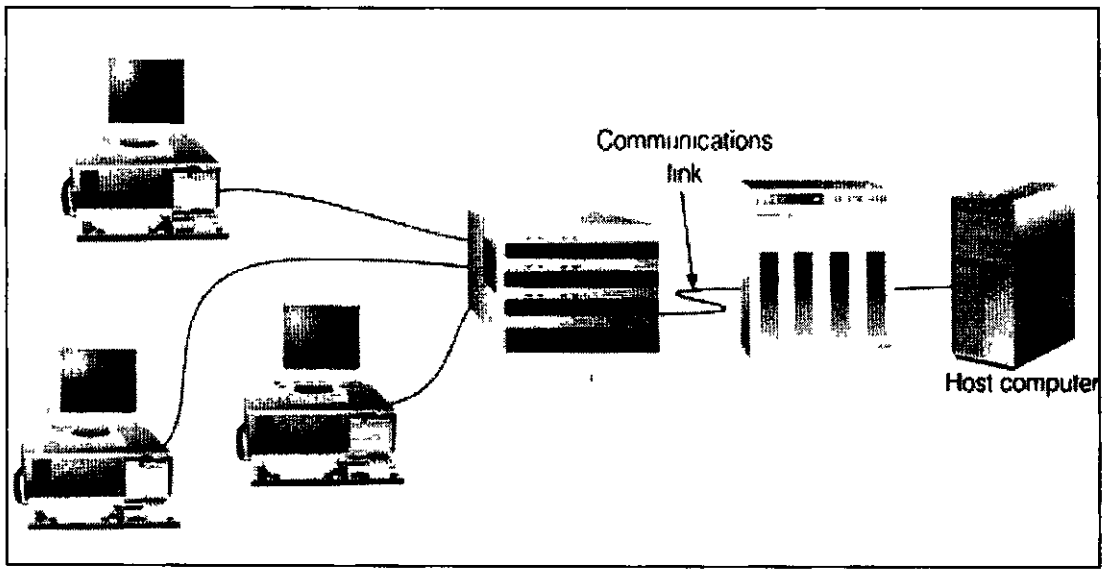
Question 22

Which of the following statements regarding Online Analytical Processing (OLAP) are ***CORRECT?***
OLAP _____.

a. supports top-down, query-driven data analysis.
b. supports bottom-up, discovery-driven data analysis.
c. supports data analysis and decision making.
d. identifies facts and conclusions based on patterns discovered.

1. only a and c
2. a, c and d
3. only b and d
4. b, c and d

Question 23



In the figure depicted above, "1" denotes a _____.

1. multiplexer
2. router
3. front-end processor
4. gateway

Question 24

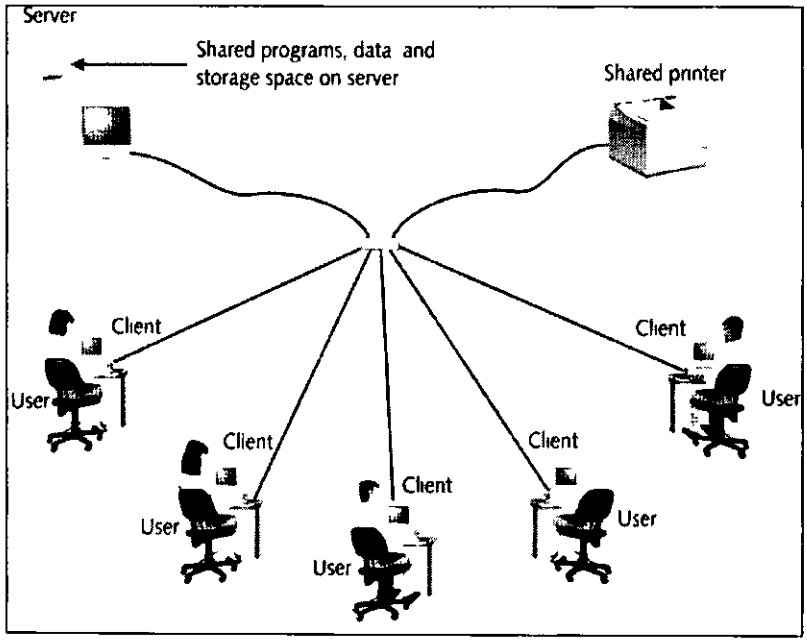
Identify the following network types.

DESCRIPTION
A network that connects computer systems and devices within a small area, such as an office, home, or several floors in a building is a_____
A_____ is a wireless network that connects information technology devices within a range of 3 metres or so
A _____ is a telecommunications network that connects users and their computers in a geographical area that spans a campus or city.
A _____ is a telecommunications network that connects large geographic regions

1 Local Area Network (LAN); Personal Area Network (PAN), Metropolitan Area Network (MAN); Wide Area Network (WAN)
2 LAN, PAN, WAN, MAN
3 PAN, LAN, WAN, MAN
4. LAN, PAN; MAN, International network

Question 25

*Which **ARCHITECTURE** is depicted in the following diagram?*



1 File-server connection
2 Client/server connection
3 Distributed processing
4. Decentralized processing

Question 26

Certain hardware devices switch messages from one network to another at high speeds. Complete the following table by providing the correct term for each of these hardware devices

A _____connects one LAN to another LAN that uses the same telecommunications protocol
A _____uses the physical device address in each incoming message on the network to determine to which output port it should forward the message to reach another device on the same network.
A _____ is a network device that serves as an entrance to another network.

1 gateway; router; hub
2. bridge; switch; gateway
3 router; switch; multiplexer
4. front-end processor; gateway; bridge

Question 27

*Which of the following statements regarding Internet Applications are **INCORRECT**?*

a. The World Wide Web was developed by Linus Torvalds at CERN, the European Organization for Nuclear Research in Geneva.
b. The Web is a menu-based system that uses the peer-to-peer network model.
c. The World Wide Web is a collection of tens of thousands of independently owned computers that work together as one in an Internet service.
d. The Extensible Markup Language (XML) is the standard page description language for web pages.

1. only b and c
2 only a, c and d
3. only a, b and d
4. a, b, c and d

Question 28

Meta tags are always shown on the Web page when it is displayed.
1. True
2. False

Question 29

*Which one of the following statements regarding File Transfer Protocol (FTP) is **INCORRECT**?*
1. FTP, also called remote logon enables you to log on to other computers on the Internet to gain access to their publicly available files.
2. Using FTP, users can copy files from one computer to another
3. One can use FTP to gain access to a wealth of free software on the Internet.
4. FTP can also be used to upload or download content to a website.

Question 30

Payroll transactions and billing are typically done via _____

1 integrated processing
2. batch processing
3. online transaction processing (OLTP)
4. offline transaction processing

Question 31

Data should be captured at its source, and it should be recorded accurately, in a timely fashion, with minimal manual effort, and in a form that can be directly entered into the computer rather than keying the data from some type of document. This approach to the process of _____ is called _____

1. data storage, animated sourcing
2 data collection; source data automation
3. data editing, on-line editing
4 data collection; source data animation

Question 32

The transaction processing system that supports the accounting business function includes.

a. Budget
b. Payroll
c. Inventory control
d Asset Management
e. Accounts payable

1. only b and e
2. only a, c and e
3. only a, b and d
4. a, b, c, d and e

Question 33

*eGovernment is the use of information and communications technology to simplify the sharing of information, speed formerly paper-based processes and improve the relationship between citizen and government. Which one of the following is **NOT** a form of eGovernment?*

1. Government-to-consumer (G2C)
2 Government-to-business (G2B)
3 Government-to-government (G2G)
4. Government-to-management (G2M)

Question 34

*Which one of the following statements regarding electronic and mobile commerce applications is **TRUE**?*

1 In the manufacturing arena, electronic retailing is the direct sale of products or services by businesses to consumers through electronic storefronts, which are typically designed around the familiar electronic catalog and shopping cart model.
2. In the marketing arena, an electronic exchange is an electronic forum where manufacturers, suppliers and competitors buy and sell goods, trade market information and run back-office applications.
3 In the investment and finance arena, electronic bill presentment is a method of billing whereby a vendor posts an image of your statement on the Internet and alerts you by e-mail that your bill has arrived.
4 In the manufacturing arena, technology-enabled relationship management occurs when a firm obtains detailed information about a customer's behaviour, preferences, needs and buying patterns and uses that information to set prices, negotiate terms, tailor promotions, add product features and otherwise customize its entire relationship with that customer.

Question 35

*Which of the following statements regarding Enterprise Resource Planning (ERP), Production and Customer Relationship Management (CRM) are **TRUE**?*

a ERP systems usually interface directly with production machines.
b CRM software automates and integrates the functions of sales, marketing, and service in an organization.
c In an ERP system, input to the general ledger occurs simultaneously with the input of a business transaction to a specific module.
d. When developing a production plan, retailed scheduling refines the production plan by determining the amount of weekly or daily production needed to meet the demand for individual products.

1. only a and d
2 only b and c
3 only a, c and d
4 a, b, c and d

Question 36

The manager of a seeds shop has implemented a process to print a sale summary report on every Friday afternoon. This report can be referred to as _____ report.

1 demand
2. scheduled
3 key-indicator
4 exception

Question 37

Which statement(s) regarding Marketing Management Information Systems (MIS) is (are) ***FALSE?***

a A marketing MIS supports managerial activities in product development, distribution, pricing decisions, promotional effectiveness and sales forecasting.
b Subsystems for the marketing MIS include marketing research, product development; promotion and advertising, product pricing, outplacement and process control.
c Marketing MIS subsystems and their outputs help marketing mangers and executives increase sales, increase marketing expenses and develop plans for future products and services to meet the changing needs of customers.

1 only a
2 b and c
3 only b
4 a and c

Question 38

DaimlerChrysler will be using its new _____ to build the 2010 Pacifica minivan on the same manufacturing line as other leading minivans. This approach will allow DaimlerChrysler to quickly and efficiently change its product specifications

1 Flexible Manufacturing System (FMS)
2 Computer-Integrated Manufacturing (CIM)
3 Computer Aided Manufacturing (CAD)
4. Material Requirements Planning (MRP)

Question 39

The Kory Road Company makes similar decisions about every three months. They need a (n)_____.

1. ad hoc DSS
2 ad hoc GDSS
3 institutional DSS
4. representational DSS

Question 40

At the tactical level, DSSs can help managers by providing analysis for long-term decisions requiring both internal and external information.

1 True
2 False

Question 41

An Executive Support System (ESS) is most likely to support _____

1. spreadsheet development
2 inventory reorder decisions
3 daily employee assignment choices
4 strategic planning

Question 42

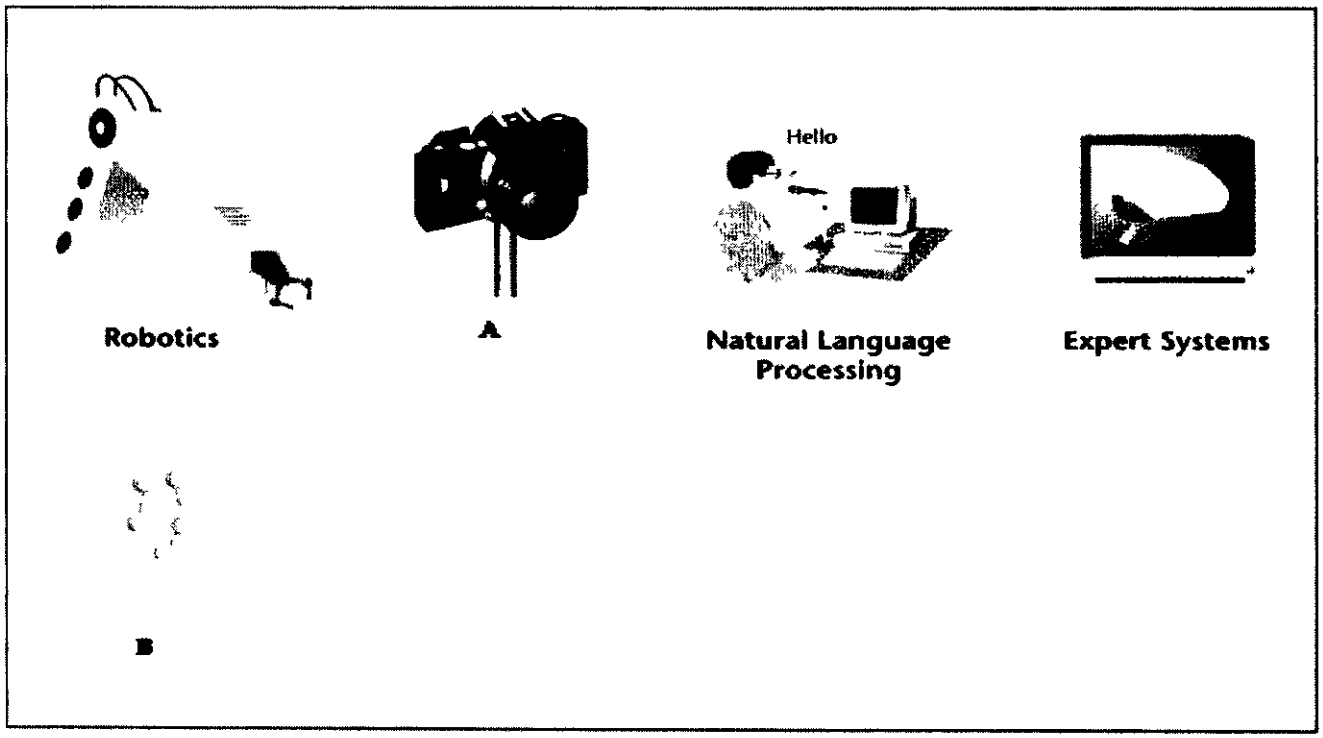
*Which of the following are **CHARACTERISTICS** of intelligent behaviour?*

a. Produce timely user response and reports
b. Handle complex situations.
c Solve problems when important information is missing.
d. React quickly and correctly to a new situation
e Support for problem solving phases.

1 only b, c and d
2. only a and e
3 only a, b, c and d
4 a, b, c, d and e

Question 43

Which specialty areas of Artificial Intelligence (AI) are denoted by the letters 'A' and 'B' in the following figure.



1. vision systems; fuzzy logic
2 focal systems; neural networks
3. vision systems; genetic algorithms
4 vision systems; neural networks

Question 44

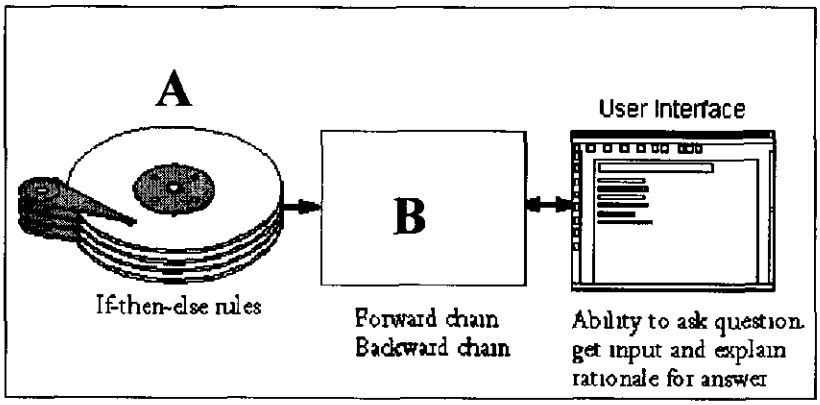
An expert system can use cases in developing a solution to a current problem or situation What does this process involve?

a Capturing knowledge and relationships that are not clear or precise according to the current problem or situation
b Using a conditional statement that links conditions to actions or outcomes related to the current problem or situation
c. Finding cases stored in the knowledge base that are similar to the current problem or situation
d Modifying the solutions to the cases to fit or accommodate the current problem or situation.

1 only a and b
2 only c and d
3 only a and d
4 a, b, c and d

Question 45

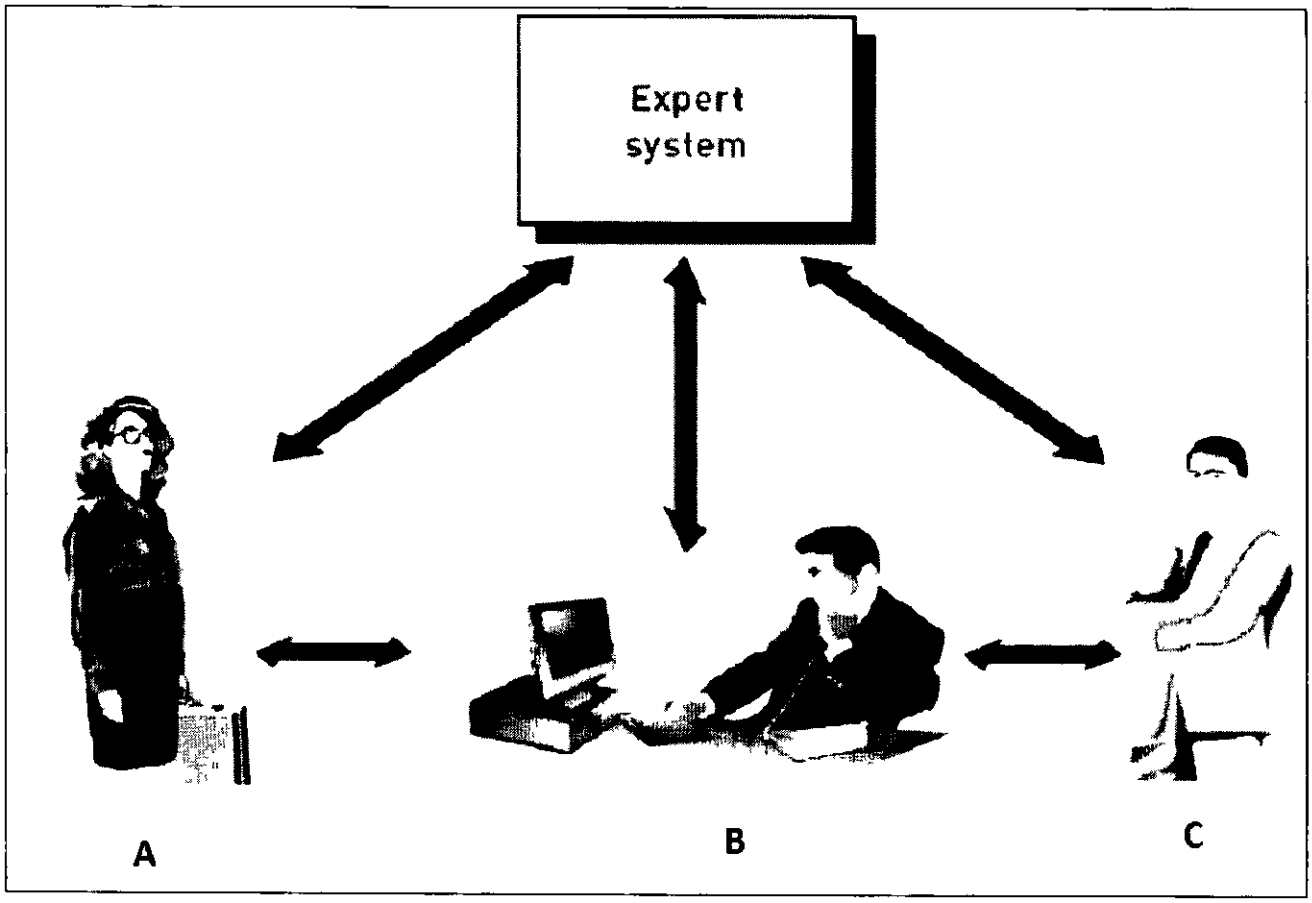
What do 'A' and 'B' represent in the following diagram respectively?



1	A=knowledge base	B=inference engine
2	A=explanation facility	B=inference engine
3	A=inference engine	B=explanation facility
4	A=rule	B=inference engine

Question 46

The figure depicted below represents the participants in developing and using expert systems Identify participants 'A', 'B' and 'C' respectively



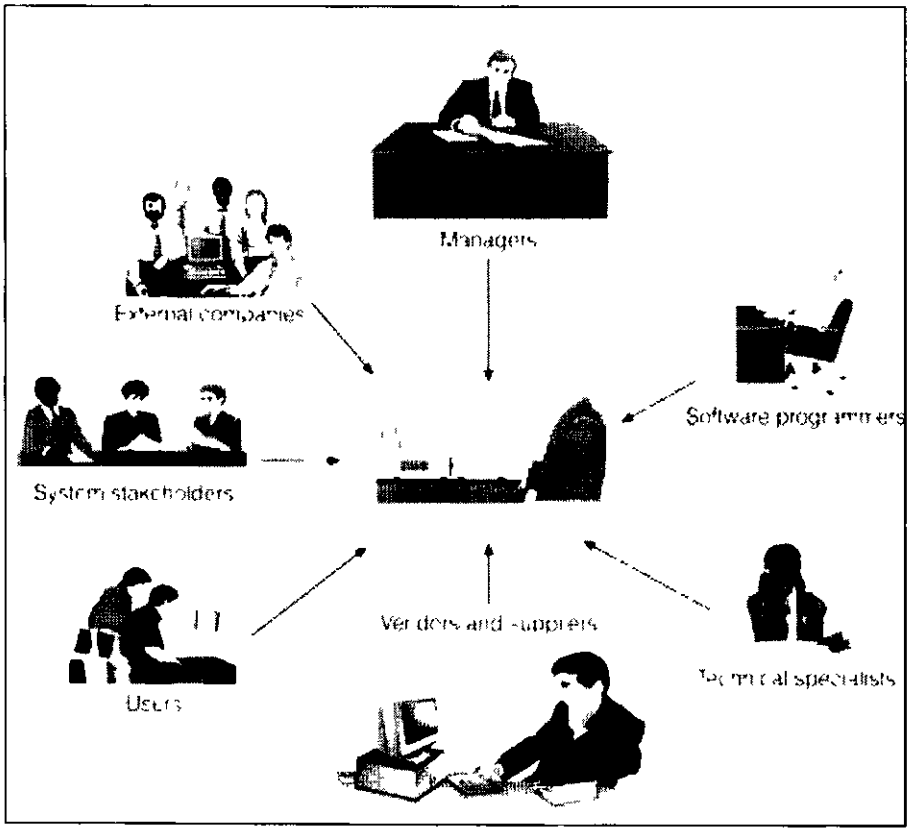
1 domain user; domain engineer, knowledge expert
2. knowledge expert, domain engineer, knowledge user
3 domain expert; knowledge engineer, knowledge user
4 domain user, knowledge user, domain engineer

Question 47

*An expert system shell*_____

1 is a group of people who design, develop and implement expert systems
2 is a collection of integrated components such as a knowledge base, a knowledge base acquisition facility and an explanation facility
3 is a collection of software packages and tools used to design, develop, implement and maintain expert systems
4 interacts with expert system components

Question 48

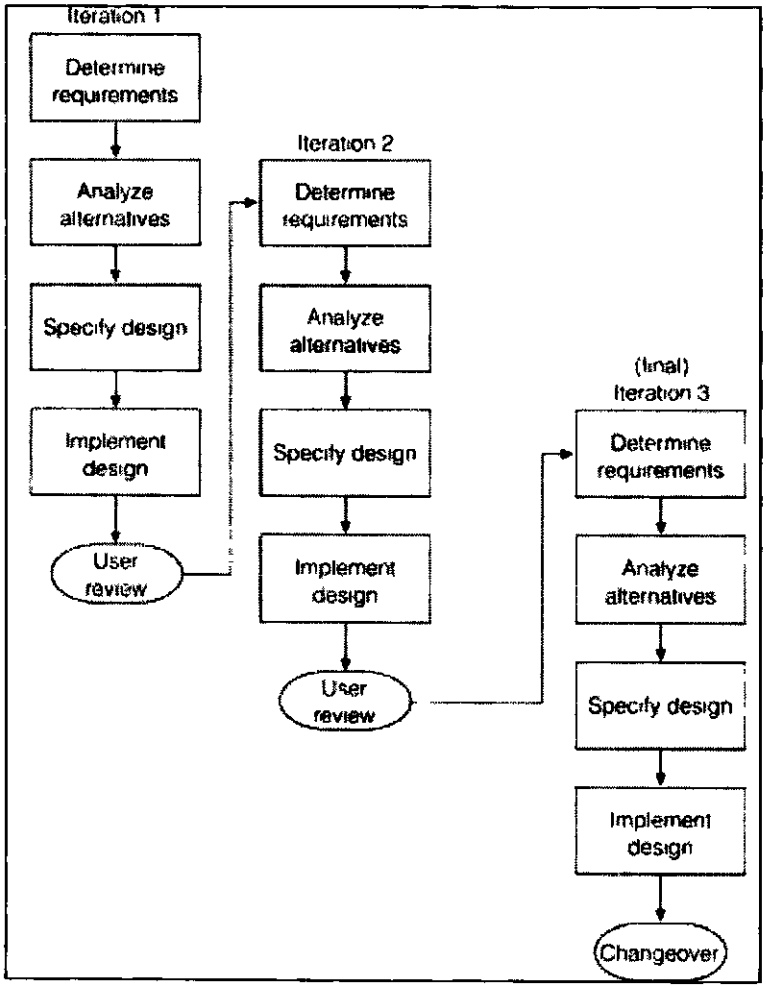


*In the figure above, the center person is a (n)*_____

1 project manager
2 team leader
3. systems analyst
4 Chief Information Officer

Question 49

What concept is illustrated in the diagram below?



1. prototyping
2. Rapid Application Development (RAD)
3 Traditional Systems Development Life Cycle (SDLC) development
4. Joint Application Development (JAD)

Question 50

The development team was pleased with _____ process. It reduced paper documentation, automatically generated program source code and facilitated user participation in design and development activities.

1. Joint Application Development (JAD)
2. end-user systems development
3. operational prototyping
4. Rapid Application Development (RAD)

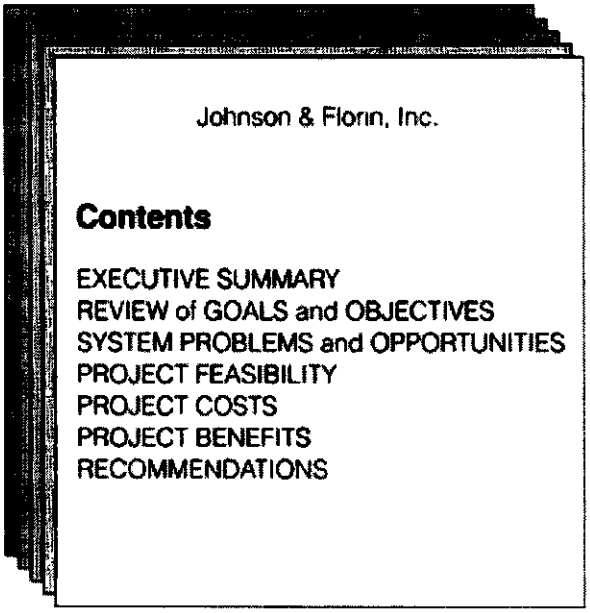
Question 51

(a) Due to the lack of sufficient technical IT staff in the hardware manufacturing company HWare Private Ltd, the management has decided to hire an offshore company to develop their inventory software system. This process can be referred to as _____.

(b) Though this process might cut costs for HWare Private Ltd, this can lead to _____.

1 outsourcing; inefficiency
2. outsourcing, compromise of data and trade secrets
3. downsizing, inadequacy
4 downsizing; high costs in the long run

Question 52



The table of contents for a _____ is illustrated in the figure above.

1 systems analysis report
2. systems design report
3 systems investigation report
4. Request For Proposal (RFP) document

Question 53

The system analysis group for John & Flo ra Private Limited, decided to gather data about the problems identified in the systems investigation report. They decided on the following data collection techniques.

(a) structured interview
(b) direct observation

Which one of the following options best explains these techniques?

1 A pilot study is conducted and the questions are fine-tuned; team members observe the structured interview.
2. Questions for the interview are prepared in advance; direct observation of the system in action.
3. Interview is structured for the ease of presentation; interview is observed by the management
4 None of the above.

Question 54

College X and College Y have merged into a single institution, which triggered a systems review. This type of systems review is called _____.

1 event-driven
2 time-driven
3. test-driven
4 error-driven

Question 55

At Athos Corporation, Ethan decided that both the old system and the new one should be run at the same time When the new system was proven reliable, the old one should be disabled Ethan chose to use a (n) _____ running, which is depicted in figure _____.

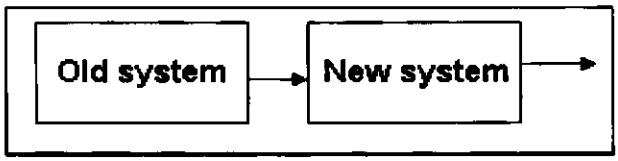


Figure A

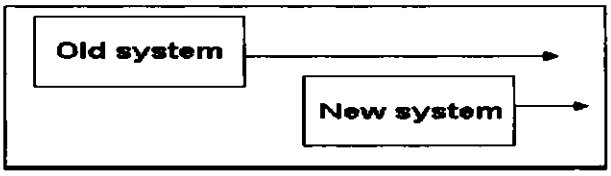


Figure B

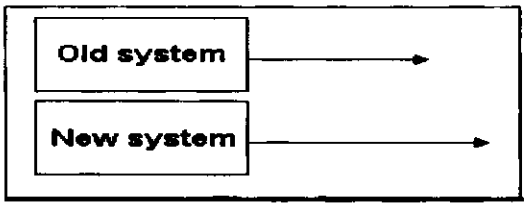


Figure C

1 pilot, A
2. direct; B
3 parallel, C
4 plunge, B

Question 56

Preventing computer waste begins with _____.

1. training programs
2 purchase of better software
3 establishing policies and procedures regarding efficient acquisition, use and disposal of systems and devices
4. redevelopment of user manuals

Question 57

*Which statement(s) regarding the **DIFFERENCES** between viruses, worms and Trojan horses is (are) **CORRECT**?*

a. A virus is a computer program file capable of attaching to disks or other files and replicating itself repeatedly, typically without the user's knowledge or permission
b. Worms are parasitic computer programs that replicate but, unlike viruses, do not infect other computer program files Worms can create copies on the same computer or can send the copies to other computers via a network.
c. A Trojan horse program is a malicious program that disguises itself as a useful application and purposefully does something the user does not expect. Trojans are not viruses, since they do not replicate, but they can be just as destructive.

1. only a
2. only b
3. only c
4 a, b and c

Question 58

*A script kiddie is a*_____

1. person who enjoys computer technology and spends time learning and using computer systems
2 computer savvy person who attempts to gain unauthorized or illegal access to computer systems
3 cracker with little technical savvy who downloads programs called scripts, which automate the job of breaking into computers
4 an employee who works solo or in concert with outsiders to compromise corporate systems

Question 59

Do people have a right to know about data stored about them and to decide what data is stored and used? These issues can be broken down into four issues as depicted in the following table Name these four issues.

FAIRNESS ISSUES	DATABASE STORAGE	DATABASE USAGE
The right to know	I	II
The ability to decide	III	IV

1. knowledge, notice; control, consent
2. notice, control; consent; knowledge
3 control; knowledge; consent, notice
4. consent; knowledge, notice; control

Question 60

The hazardous activities associated with unfavorable computer-related conditions are collectively referred to as

_____

1 work stressors
2. carpal tunnel syndrome
3 repetitive stress disorder
4. ergonomics

©
UNISA 2010

UNIVERSITY OF SOUTH AFRICA UNISA university of south africa UNIVERSITEIT VAN SUID-AFRIKA

EXAMINATION MARK READING SHEET EKSAMEN-MERKLEESBLAD

PART 1 (GENERAL/ALGEMEEN) DEEL 1

STUDY UNIT e.g PSY100-X
STUDIE-EENHEID bv PSY100-X

1

PAPER NUMBER
VRAESTELNOMMER

2

INITIALS AND SURNAME
VOORLETTERS EN VAN

3

DATE OF EXAMINATION
DATUM VAN EKSAMEN

4

EXAMINATION CENTRE (E.G PRETORIA)
EKSAMENSENTRUM (BV PRETORIA)

5

STUDENT NUMBER
STUDENTENOMMER

6

UNIQUE PAPER NO
UNIEKE VRAESTEL NR

8

7

9

For use by examination invigilator

Vir gebruik deur eksamenopsiener

IMPORTANT

1 USE ONLY AN HB PENCIL TO COMPLETE THIS SHEET
2 MARK LIKE THIS ●
3 CHECK THAT YOUR INITIALS AND SURNAME HAS BEEN FILLED IN CORRECTLY
4 ENTER YOUR STUDENT NUMBER FROM LEFT TO RIGHT
5 CHECK THAT YOUR STUDENT NUMBER HAS BEEN FILLED IN CORRECTLY
6 CHECK THAT THE UNIQUE NUMBER HAS BEEN FILLED IN CORRECTLY
7 CHECK THAT ONLY ONE ANSWER PER QUESTION HAS BEEN MARKED
8 DO NOT FOLD

BELANGRIK

1 GEBRUIK SLEGS N HB POTLOOD OM HIERDIE BLAD TE VOLTOOI
2 MERK AS VOLG ●
3 KONTROLEER DAT U VOORLETTERS EN VAN REG INGEVUL IS
4 VUL U STUDENTENOMMER VAN LINKS NA REGS IN
5 KONTROLEER DAT U DIE KORREKTE STUDENTENOMMER VERSTREK HET
6 KONTROLEER DAT DIE UNIEKE NOMMER REG INGEVUL IS
7 MAAK SEKER DAT NET EEN ALTERNATIEF PER VRAAG GEMERK IS
8 MOENIE VOU NIE

PART 2 (ANSWERS/ANTWOORDE) DEEL 2

10

1	c1 c2 c3 c4 c5	36	c1 c2 c3 c4 c5	71	c1 c2 c3 c4 c5	106	c1 c2 c3 c4 c5
2	c1 c2 c3 c4 c5	37	c1 c2 c3 c4 c5	72	c1 c2 c3 c4 c5	107	c1 c2 c3 c4 c5
3	c1 c2 c3 c4 c5	38	c1 c2 c3 c4 c5	73	c1 c2 c3 c4 c5	108	c1 c2 c3 c4 c5
4	c1 c2 c3 c4 c5	39	c1 c2 c3 c4 c5	74	c1 c2 c3 c4 c5	109	c1 c2 c3 c4 c5
5	c1 c2 c3 c4 c5	40	c1 c2 c3 c4 c5	75	c1 c2 c3 c4 c5	110	c1 c2 c3 c4 c5
6	c1 c2 c3 c4 c5	41	c1 c2 c3 c4 c5	76	c1 c2 c3 c4 c5	111	c1 c2 c3 c4 c5
7	c1 c2 c3 c4 c5	42	c1 c2 c3 c4 c5	77	c1 c2 c3 c4 c5	112	c1 c2 c3 c4 c5
8	c1 c2 c3 c4 c5	43	c1 c2 c3 c4 c5	78	c1 c2 c3 c4 c5	113	c1 c2 c3 c4 c5
9	c1 c2 c3 c4 c5	44	c1 c2 c3 c4 c5	79	c1 c2 c3 c4 c5	114	c1 c2 c3 c4 c5
10	c1 c2 c3 c4 c5	45	c1 c2 c3 c4 c5	80	c1 c2 c3 c4 c5	115	c1 c2 c3 c4 c5
11	c1 c2 c3 c4 c5	46	c1 c2 c3 c4 c5	81	c1 c2 c3 c4 c5	116	c1 c2 c3 c4 c5
12	c1 c2 c3 c4 c5	47	c1 c2 c3 c4 c5	82	c1 c2 c3 c4 c5	117	c1 c2 c3 c4 c5
13	c1 c2 c3 c4 c5	48	c1 c2 c3 c4 c5	83	c1 c2 c3 c4 c5	118	c1 c2 c3 c4 c5
14	c1 c2 c3 c4 c5	49	c1 c2 c3 c4 c5	84	c1 c2 c3 c4 c5	119	c1 c2 c3 c4 c5
15	c1 c2 c3 c4 c5	50	c1 c2 c3 c4 c5	85	c1 c2 c3 c4 c5	120	c1 c2 c3 c4 c5
16	c1 c2 c3 c4 c5	51	c1 c2 c3 c4 c5	86	c1 c2 c3 c4 c5	121	c1 c2 c3 c4 c5
17	c1 c2 c3 c4 c5	52	c1 c2 c3 c4 c5	87	c1 c2 c3 c4 c5	122	c1 c2 c3 c4 c5
18	c1 c2 c3 c4 c5	53	c1 c2 c3 c4 c5	88	c1 c2 c3 c4 c5	123	c1 c2 c3 c4 c5
19	c1 c2 c3 c4 c5	54	c1 c2 c3 c4 c5	89	c1 c2 c3 c4 c5	124	c1 c2 c3 c4 c5
20	c1 c2 c3 c4 c5	55	c1 c2 c3 c4 c5	90	c1 c2 c3 c4 c5	125	c1 c2 c3 c4 c5
21	c1 c2 c3 c4 c5	56	c1 c2 c3 c4 c5	91	c1 c2 c3 c4 c5	126	c1 c2 c3 c4 c5
22	c1 c2 c3 c4 c5	57	c1 c2 c3 c4 c5	92	c1 c2 c3 c4 c5	127	c1 c2 c3 c4 c5
23	c1 c2 c3 c4 c5	58	c1 c2 c3 c4 c5	93	c1 c2 c3 c4 c5	128	c1 c2 c3 c4 c5
24	c1 c2 c3 c4 c5	59	c1 c2 c3 c4 c5	94	c1 c2 c3 c4 c5	129	c1 c2 c3 c4 c5
25	c1 c2 c3 c4 c5	60	c1 c2 c3 c4 c5	95	c1 c2 c3 c4 c5	130	c1 c2 c3 c4 c5
26	c1 c2 c3 c4 c5	61	c1 c2 c3 c4 c5	96	c1 c2 c3 c4 c5	131	c1 c2 c3 c4 c5
27	c1 c2 c3 c4 c5	62	c1 c2 c3 c4 c5	97	c1 c2 c3 c4 c5	132	c1 c2 c3 c4 c5
28	c1 c2 c3 c4 c5	63	c1 c2 c3 c4 c5	98	c1 c2 c3 c4 c5	133	c1 c2 c3 c4 c5
29	c1 c2 c3 c4 c5	64	c1 c2 c3 c4 c5	99	c1 c2 c3 c4 c5	134	c1 c2 c3 c4 c5
30	c1 c2 c3 c4 c5	65	c1 c2 c3 c4 c5	100	c1 c2 c3 c4 c5	135	c1 c2 c3 c4 c5
31	c1 c2 c3 c4 c5	66	c1 c2 c3 c4 c5	101	c1 c2 c3 c4 c5	136	c1 c2 c3 c4 c5
32	c1 c2 c3 c4 c5	67	c1 c2 c3 c4 c5	102	c1 c2 c3 c4 c5	137	c1 c2 c3 c4 c5
33	c1 c2 c3 c4 c5	68	c1 c2 c3 c4 c5	103	c1 c2 c3 c4 c5	138	c1 c2 c3 c4 c5
34	c1 c2 c3 c4 c5	69	c1 c2 c3 c4 c5	104	c1 c2 c3 c4 c5	139	c1 c2 c3 c4 c5
35	c1 c2 c3 c4 c5	70	c1 c2 c3 c4 c5	105	c1 c2 c3 c4 c5	140	c1 c2 c3 c4 c5

Specimen only

MARK READING SHEET INSTRUCTIONS

Your mark reading sheet is marked by computer and should therefore be filled in thoroughly and correctly

USE ONLY AN HB PENCIL TO COMPLETE YOUR MARK READING SHEET

PLEASE DO NOT FOLD OR DAMAGE YOUR MARK READING SHEET

Consult the illustration of a mark reading sheet on the reverse of this page and follow the instructions step by step when working on your sheet

Instruction numbers ❶ to ⓾ refer to spaces on your mark reading sheet which you should fill in as follows

❶ Write your paper code in these eight squares, for instance

P	S	Y	1	0	0	-	X

❷ The paper number pertains only to first-level courses consisting of two papers

WRITE | 0 | 1 | for the first paper and | 0 | 2 | for the second If only one paper, then leave blank.

❸ Fill in your initials and surname

❹ Fill in the date of the examination

❺ Fill in the name of the examination centre

❻ WRITE the digits of your student number HORIZONTALLY (from left to right) Begin by filling in the first digit of your student number in the first square on the left, then fill in the other digits, each one in a separate square

❼ In each vertical column mark the digit that corresponds to the digit in your student number as follows [-]

❽ WRITE your unique paper number HORIZONTALLY

NB Your unique paper number appears at the top of your examination paper and consists only of digits (e g 403326)

❾ In each vertical column mark the digit that corresponds to the digit number in your unique paper number as follows. [-]

⓾ Question numbers 1 to 140 indicate corresponding question numbers in your examination paper The five spaces with digits 1 to 5 next to each question number indicate an alternative answer to each question The spaces of which the number correspond to the answer you have chosen for each question and should be marked as follows [-].

♦ For official use by the invigilator Do not fill in any information here