UNIVERSITY EXAMINATIONS

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INF1505 (477234) October/November 2011
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INTRODUCTION TO BUSINESS INFORMATION SYSTEMS (INFORMATION SY STEMS)

Duration 2 Hours 60 Marks

EXAMINATION PANEL AS APPOINTED BY THE DEPARTMENT.

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

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

INSTRUCTIONS:

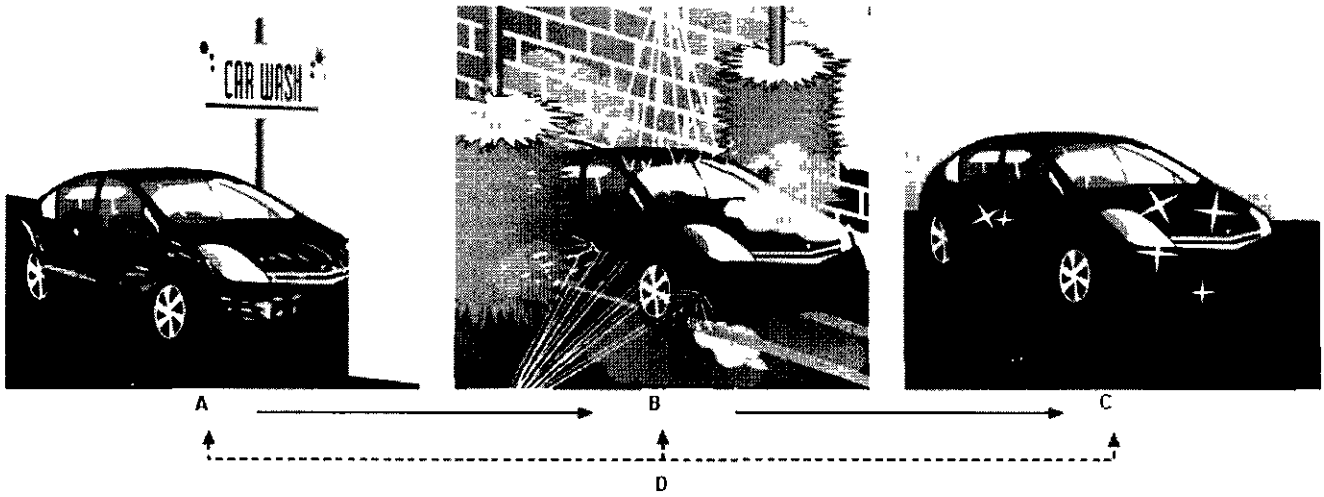
1 The paper consists of 60 multiple-choice questions
2 Each question comprises one mark The total out of 60 will be converted to a final mark out of a 100
3 The examination paper is to be answered on the computerised mark-reading sheet
4 Mark-reading sheets will be marked by computer and should therefore be filled in carefully and correctly

Remember

- Use **ONLY** an HB pencil to fill in the mark-reading sheet
- Please **DO NOT** fold or damage your mark-reading sheet 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** correct option

Question 1

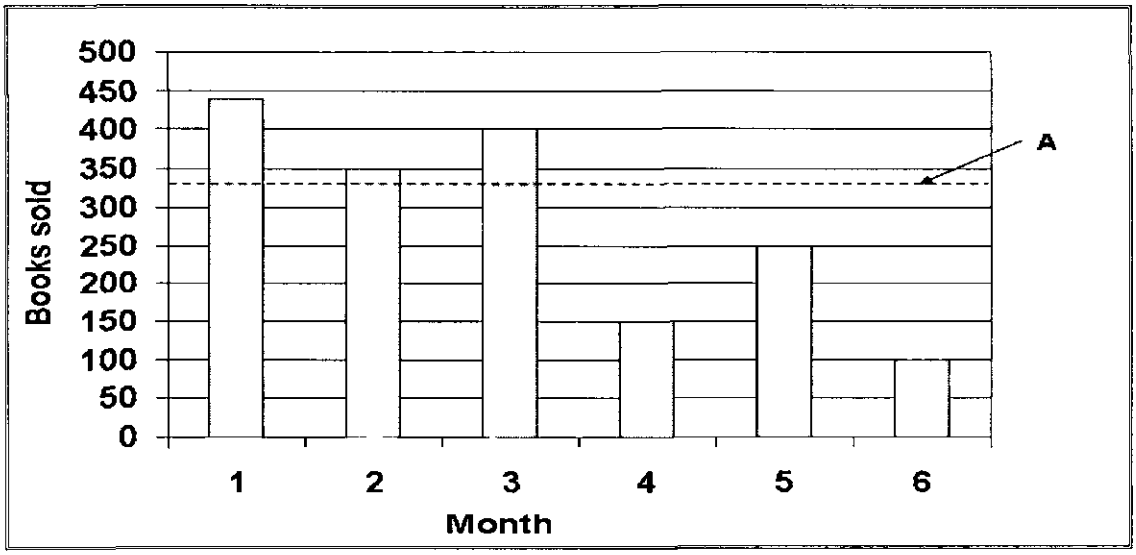
Study the following diagram depicting the components of a system What do the letters 'B' and 'D' respectively represent?



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 2009 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

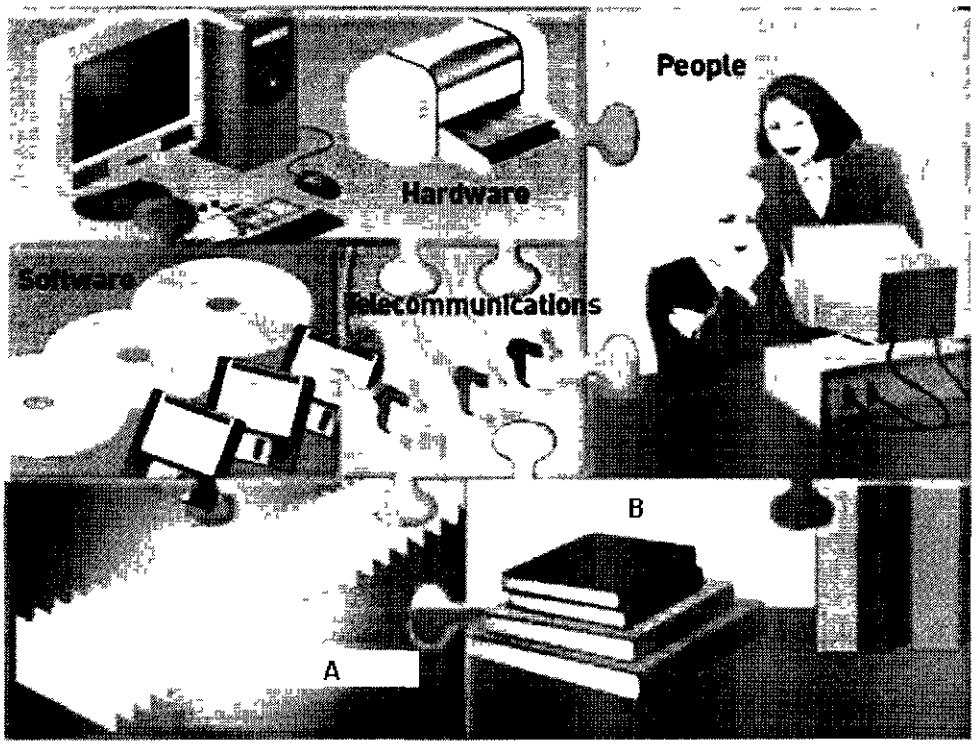
Question 3

If a savings account was viewed from a systems perspective, which of the following would be considered an input?

1 A withdrawal
2 A deposit
3 A monthly statement
4 A calculation on the monthly statement

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 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 organised collection of people, procedures, software, databases and devices used to record completed business transactions
b A DSS is an organised collection of people, procedures, software, databases and devices used to support problem-specific decision making
c A DSS focuses primarily on operational efficiency.
d. A MIS focuses on decision-making effectiveness
e Whereas an MIS helps an organisation "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 6

*Which one of the following is **NOT** a means of measuring the value of an Information System (IS)?*

1 earnings growth
2 market share
3 customer awareness and satisfaction
4 productivity

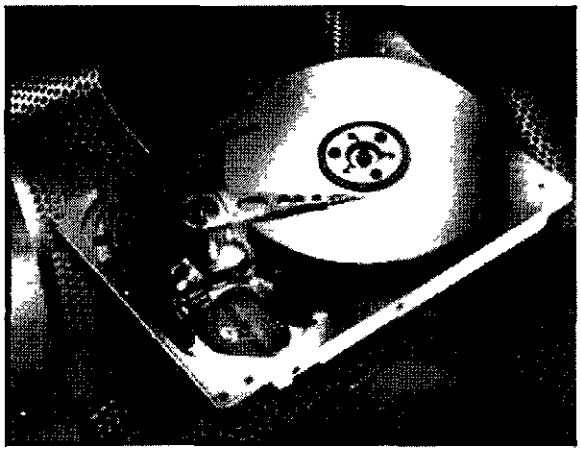
Question 7

Clock speed is measured in Microcode Instructions per Second (MIPs)

1 True
2 False

Question 8

Which form of secondary storage is depicted in the diagram below?



1 magnetic tape
2 magnetic disk
3 Redundant array of independent/inexpensive disks (RAID)
4 Digital versatile Disk (DVD)-technology

Question 9

Which input devices do the following statements respectively refer to?

STATEMENT
By touching the screen with a_____, it is possible to activate a command or cause the computer to perform a task, enter handwritten notes and draw objects and figures
The development of the_____was as a result of banks becoming swamped with paper checks, loan applications, bank statements, etc
One application of _____ is to place a microchip on retail items and install in store readers that track the inventory on the shelves to determine when shelves should be restocked

1 light pen, magnetic ink character recognition (MICR), point of sale (POS)
2 bar-code scanner, magnetic stripe card, optical character recognition (OCR)
3 pen input device, MICR, radio-frequency identification (RFID) technology
4 mouse, MICR, scanning devices

Question 10

*Which one of the following statements regarding measuring the quality of screen images is **FALSE**?*

1 The quality of a screen image is often measured by the number of horizontal and vertical pixels used to create it The more pixels per square centimetre, the lower the clarity of the image
2 It is possible to use the dot pitch to measure image quality The smaller the dot pitch, the better the picture
3 Greater pixel densities and smaller dot pitches yield sharper images of higher resolution
4 The common range of dot pitch is from 0,25mm to 0,31mm

Question 11

*Which one of the following statements regarding computer systems types is **TRUE**?*

1 Portable computers are single-user computers that provide ease of portability because of their smaller size, some of which are as small as a credit card

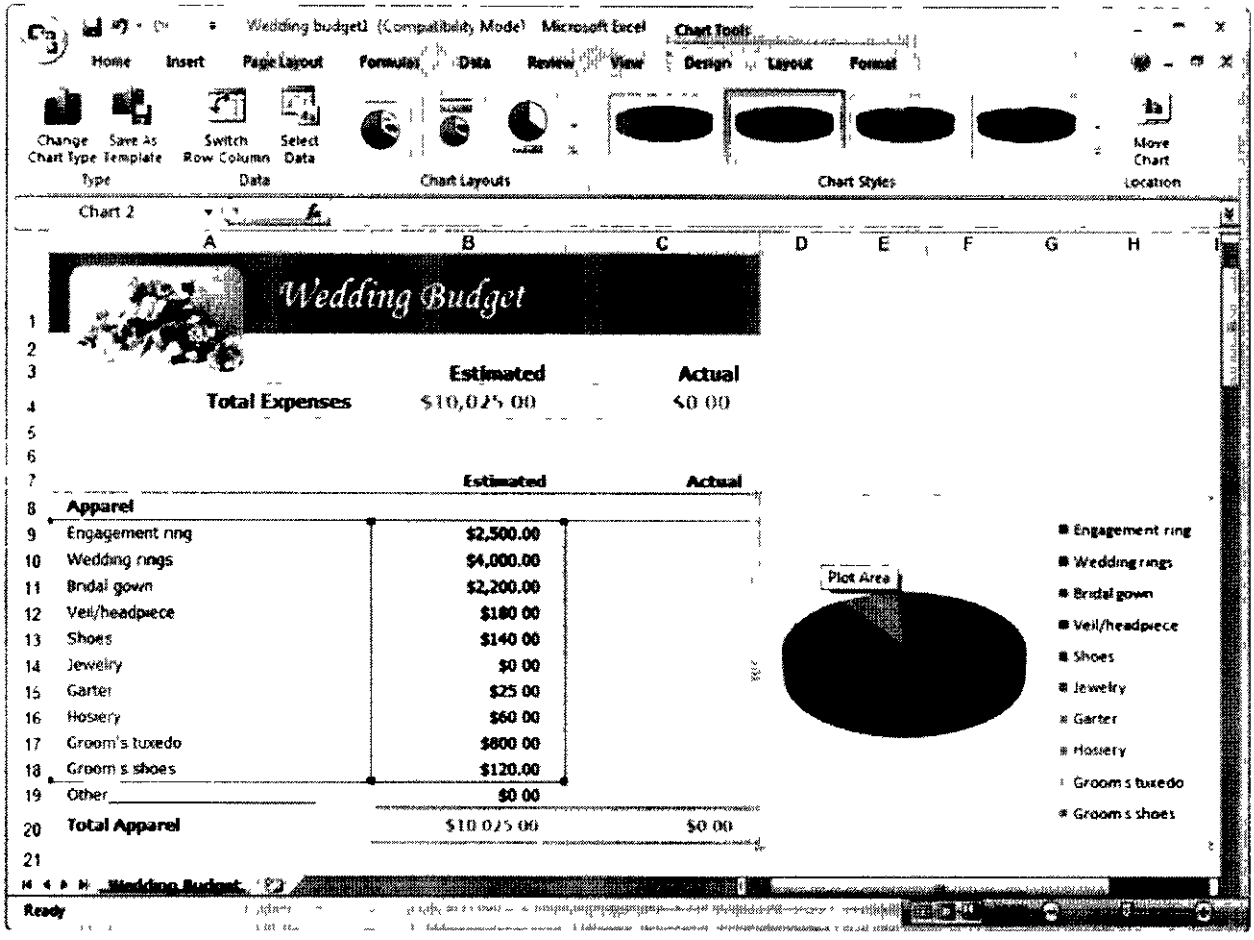
2 Midrange computers are large, powerful computers often shared by hundreds of concurrent users connected to the machine over a network

3 Thin clients are low-cost, stripped-down versions of desktop computers They do not have the storage capacity or computing power of typical desktop computers, nor do they need it for the role they play

4 A computer server is a computer designed for a specific task, such as network or Internet applications. Servers are the most powerful computer systems, with the fastest processing speeds

Question 12

The following diagram is an example of a_____personal application software



1 word processing

2 database

3 desktop publishing

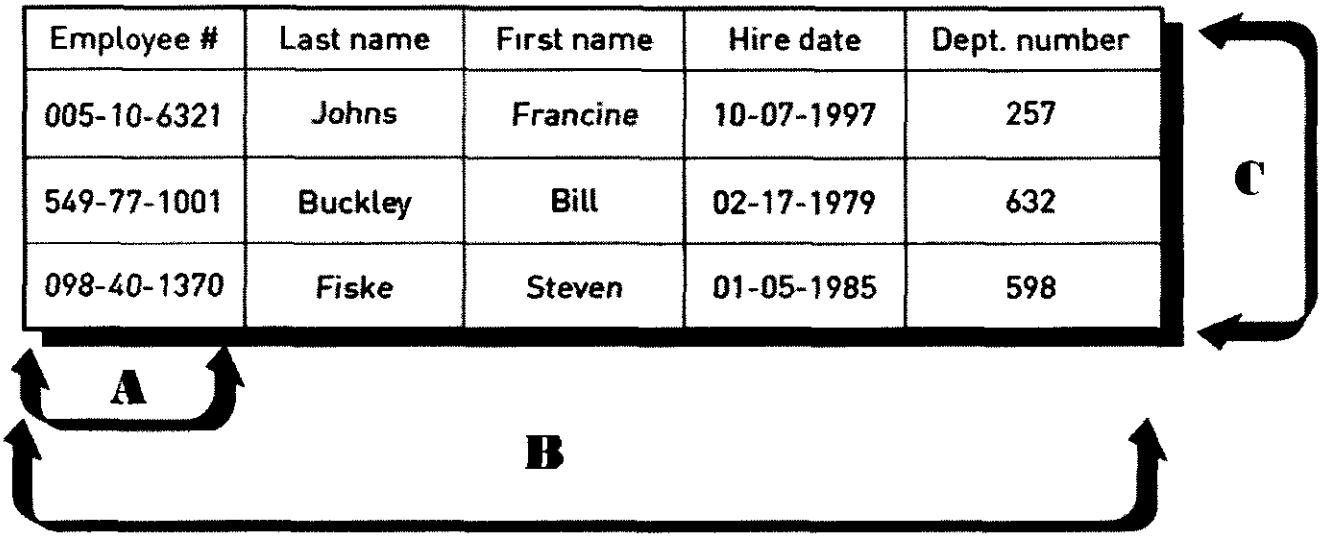
4 spreadsheet

Question 13

Using _____, a built-in facility that is part of every Office application, users can enhance off-the-shelf applications to tailor the programs for special tasks

1 C++
2 Java
3 Visual Basic for Application (VBA)
4 Fortran

The following table represents a database Questions 14 and 15 are based on the following table



Question 14

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

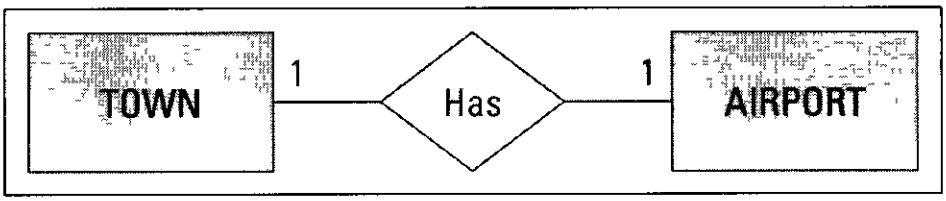
Question 15

Label 'B' represents _____

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

Question 16

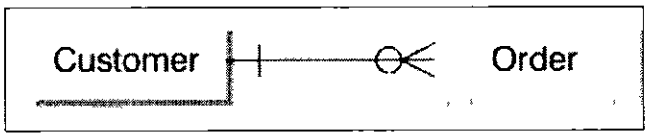
What aspect of designing relational databases is depicted in the following diagram?



1 degree
2 cardinality
3 optionality
4 index

Question 17

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 18

*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 19

*Which one of the following is an **ADVANTAGE** of using a distributed database?*
1 greater flexibility
2 data security
3 accuracy
4 timeliness

Question 20

The term ____ refers to a telecommunications system that supports a much lower rate of data exchange than broadband

1 router
2 gateway
3 distributed communications
4 narrowband communications

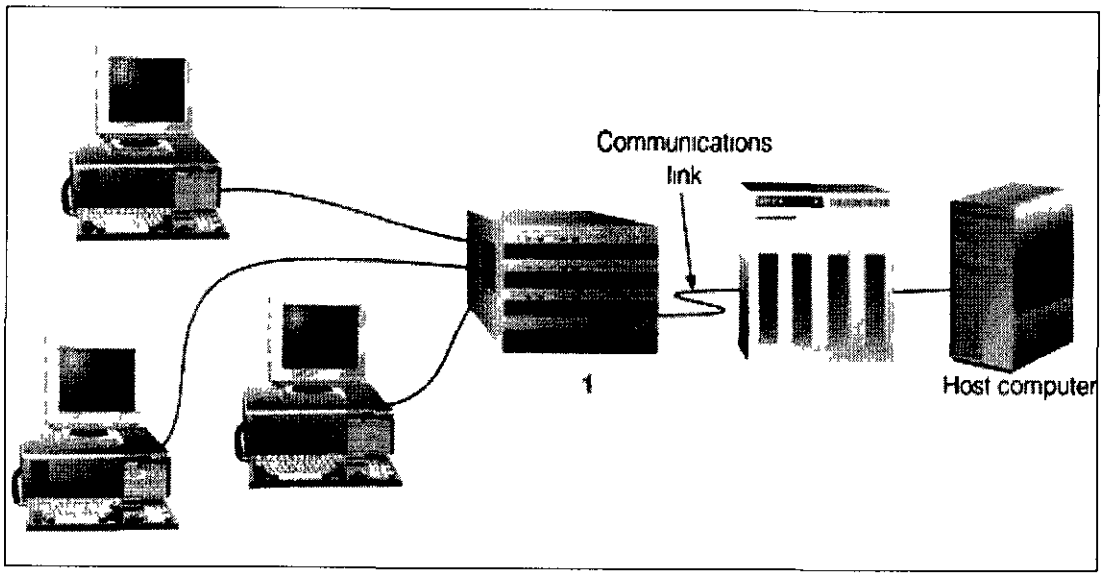
Question 21

The following diagram is a typical illustration of wireless transmission media types



1 True
2 False

Question 22

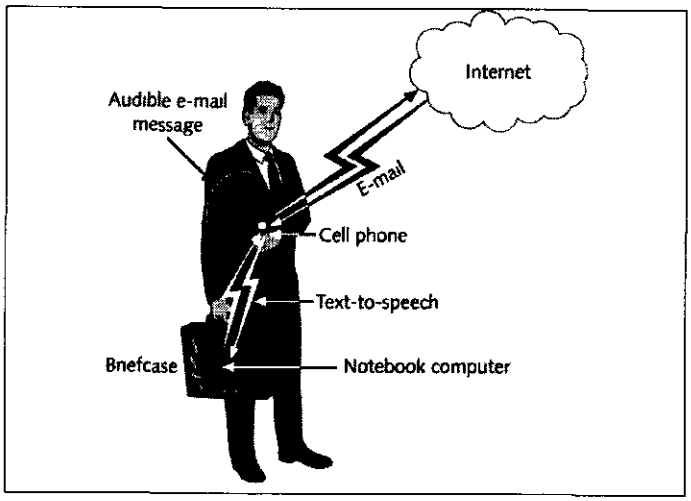


In the figure depicted above, "1" denotes a _____

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

Question 23

What type of network is depicted in the following diagram?



1 Local Area Network (LAN)
2 Wide Area Network (WAN)
3 Personal area network (PAN)
4 Metropolitan area network (MAN)

Question 24

Which one of the following statements regarding communications protocols is ***INCORRECT?***

1 WiMAX offers faster data speeds and broader coverage than Wi-Fi It also offers a higher quality of service than Wi-Fi by supporting applications such as digital life-size videoconferencing

2 Conventional wireless communications employs a single antenna at the source and another single antenna at the destination However, with this system, a signal can suffer from multipath effects when it encounters obstructions (e g , buildings, hills). Using two or more antennas or MIMO (multiple input, multiple output), along with the transmission of multiple signals (one for each antenna) at the source and the destination, eliminates these multipath problems

3 Ultra Wideband (UWB) transmissions consist of a stream of pulses only picoseconds wide These extremely short impulses result in high frequencies spread over a wide band

4 The International Telecommunications Union (ITU) established a single standard for cellular networks in 1999 This standard was called IMT-2000 at that time and is now referred to as 4G 4G provides for faster transmission speeds in the range of 2–4 Mbps that will enable applications such as VoIP, video telephony, mobile multimedia, and interactive gaming

Question 25

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

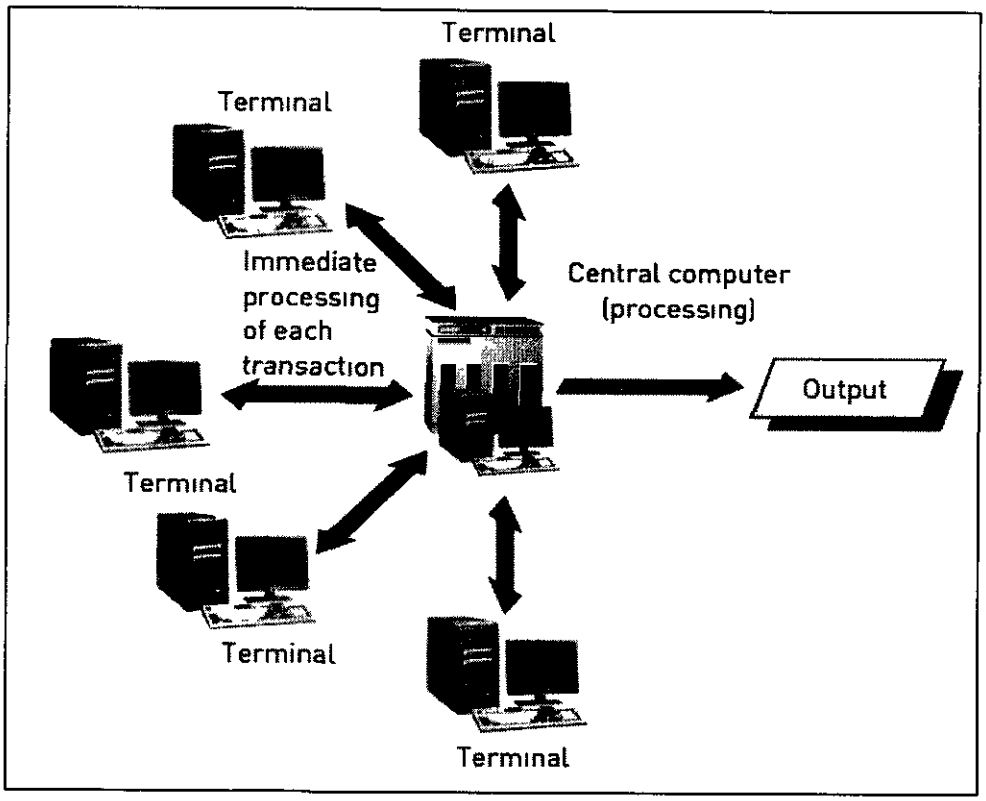
2 Using FTP, users can copy files from one computer to another

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 26

Which transaction processing method is depicted in the following diagram?



1 Online Transaction Processing (OLTP)
2 batch processing
3. accumulated processing
4 occurrence processing

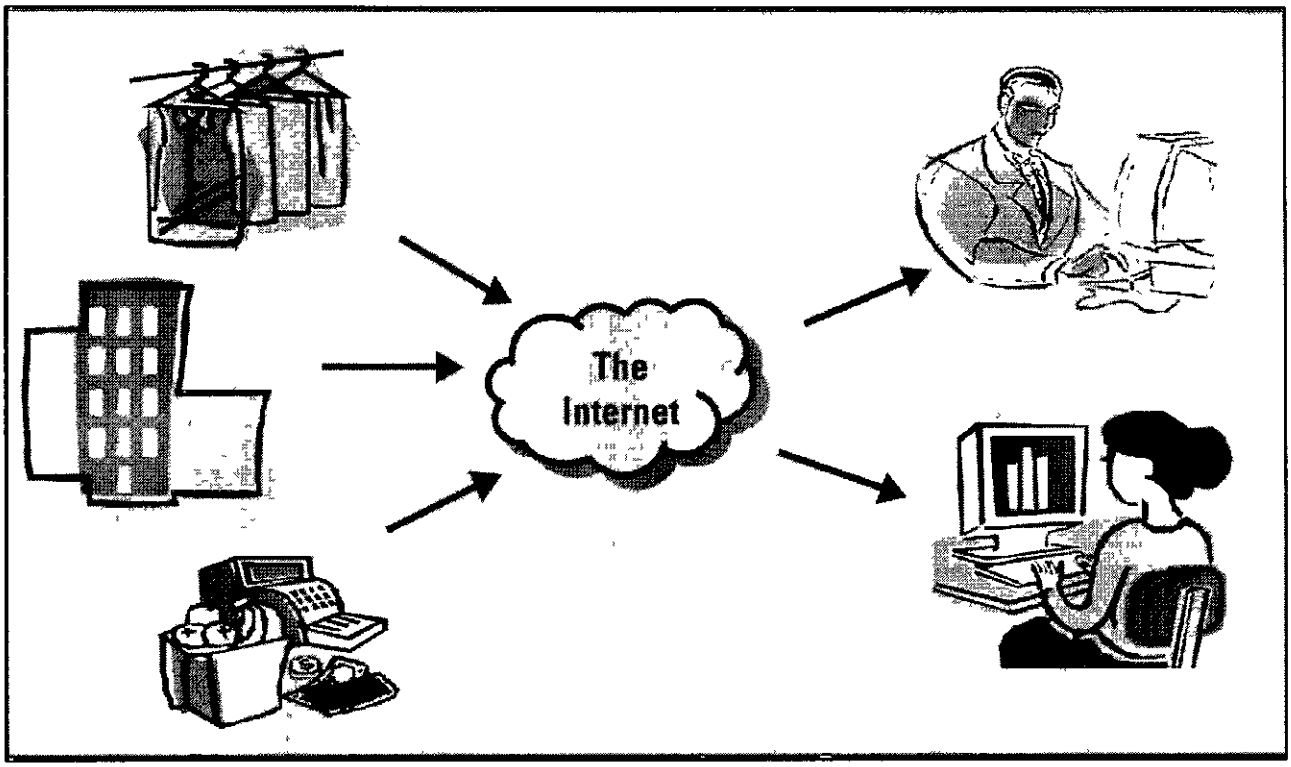
Question 27

*Which one of the following statements about the data collection activity for a TPS is **NOT TRUE**?*

1 It requires the capturing and gathering of all data necessary to complete a transaction
2 It may never be done manually
3 Data collection can be automated through the use of bar code scanners.
4 It results in the origination of data that is input into the transaction processing system

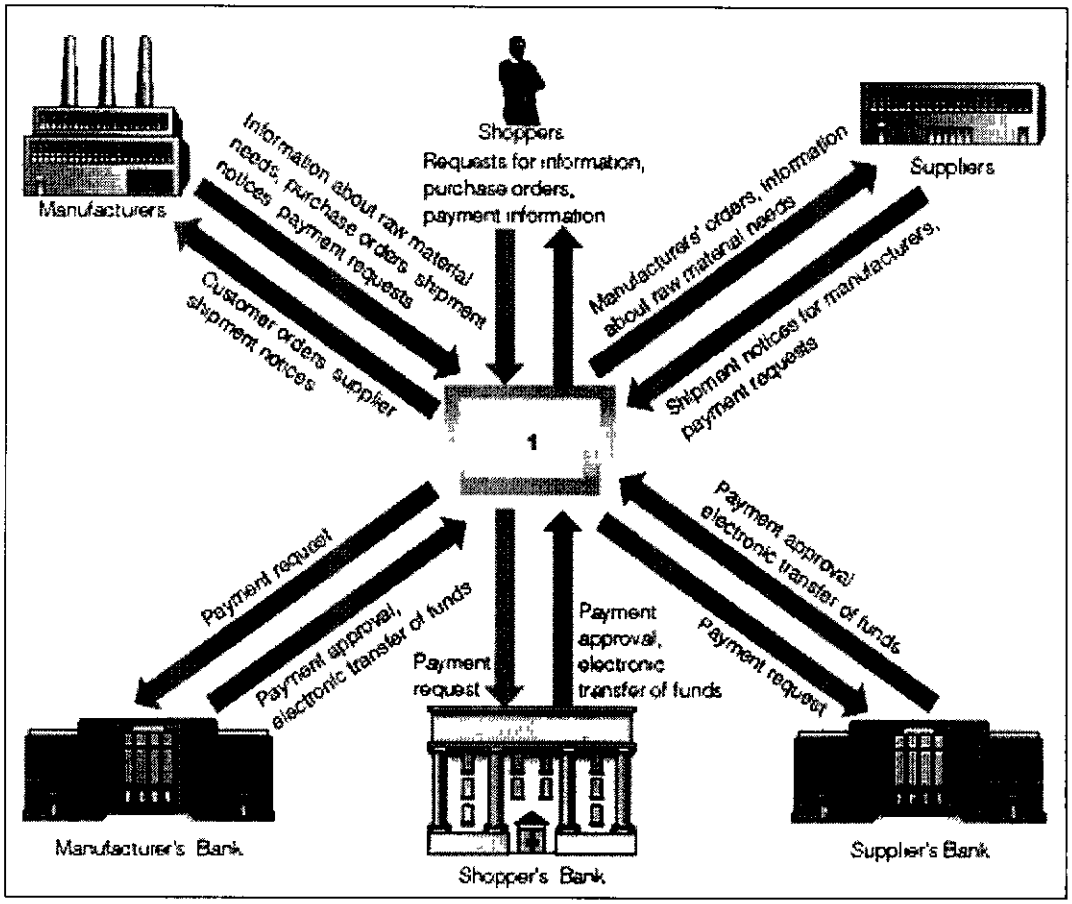
Question 28

Which form of Electronic Commerce (e-commerce) is depicted in the following diagram?



1 Government-to-Business (G2B)
2 Business-to-Consumer (B2C)
3 Consumer-to-Consumer (C2C)
4 Business-to-Business (B2B)

Question 29



In the figure above, the box labeled '1' represents _____

1 e-tailing
2 electronic bill presentment
3 an electronic exchange
4 a cybermall's infrastructure

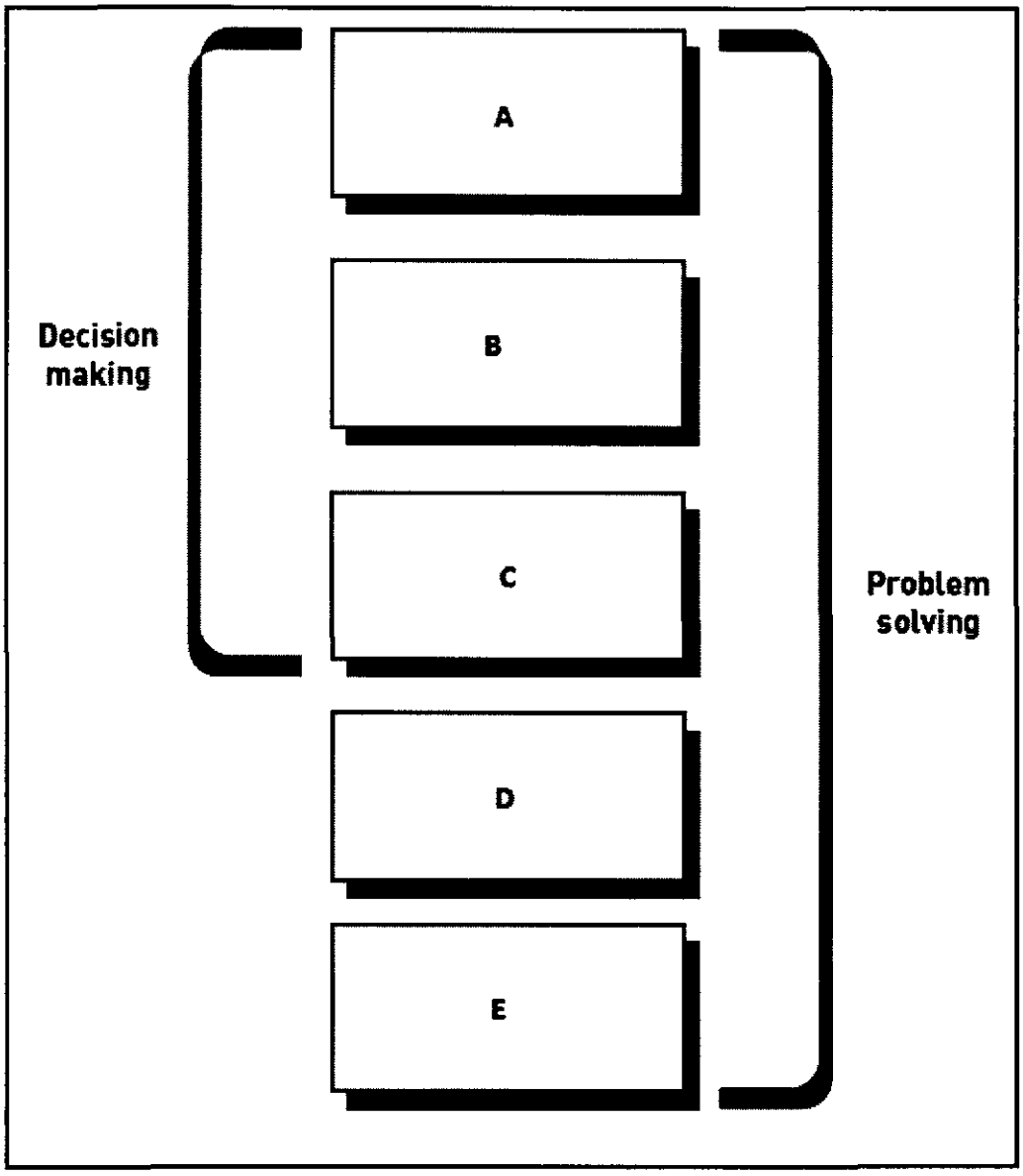
Question 30

ERP systems follow a systematic process for developing a production plan that draws on the information available in the ERP system database The process starts with _____ *to develop an estimate of future customer demand*

1 a sales and operations plan
2 sales forecasting
3 detailed scheduling
4 demand management

Question 31

Study the following diagram depicting how decision making relates to problem solving.



In the _____, stage denoted by the letter _____, you identify and define potential problems or opportunities

1 implementation, D
2 monitoring, E
3 design, B
4 intelligence, A

Question 32

The output from most Management Information Systems (MIS) is a collection of reports that are distributed to managers Match the description of a report with the relevant term

DESCRIPTION OF REPORT
Produced periodically, according to a schedule
Produced to summarize previous day's critical activities, allows managers to take quick, corrective action
Prior to closing a sale, a sales representative might ask for a (n) ____to determine if sufficient inventory exists
An Internet stock broker offers its clients e-mail notification when a particular stock drops below a certain price This is a (n) ____

1 scheduled reports, exception reports, demand report, key-indicator report
2 demand reports, exception reports, key-indicator report, scheduled report
3 exception reports, key-indicator reports; scheduled report, demand report
4 scheduled reports, key-indicator reports; demand report; exception report

Question 33

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 34

The overall purpose of the ____ subsystem of the human resource MIS (HRMIS) is to put the right number and kinds of employees in the right jobs when they are needed.

1 human resource planning
2 personnel selection and recruiting
3 training and skills inventory
4 scheduling and job placement

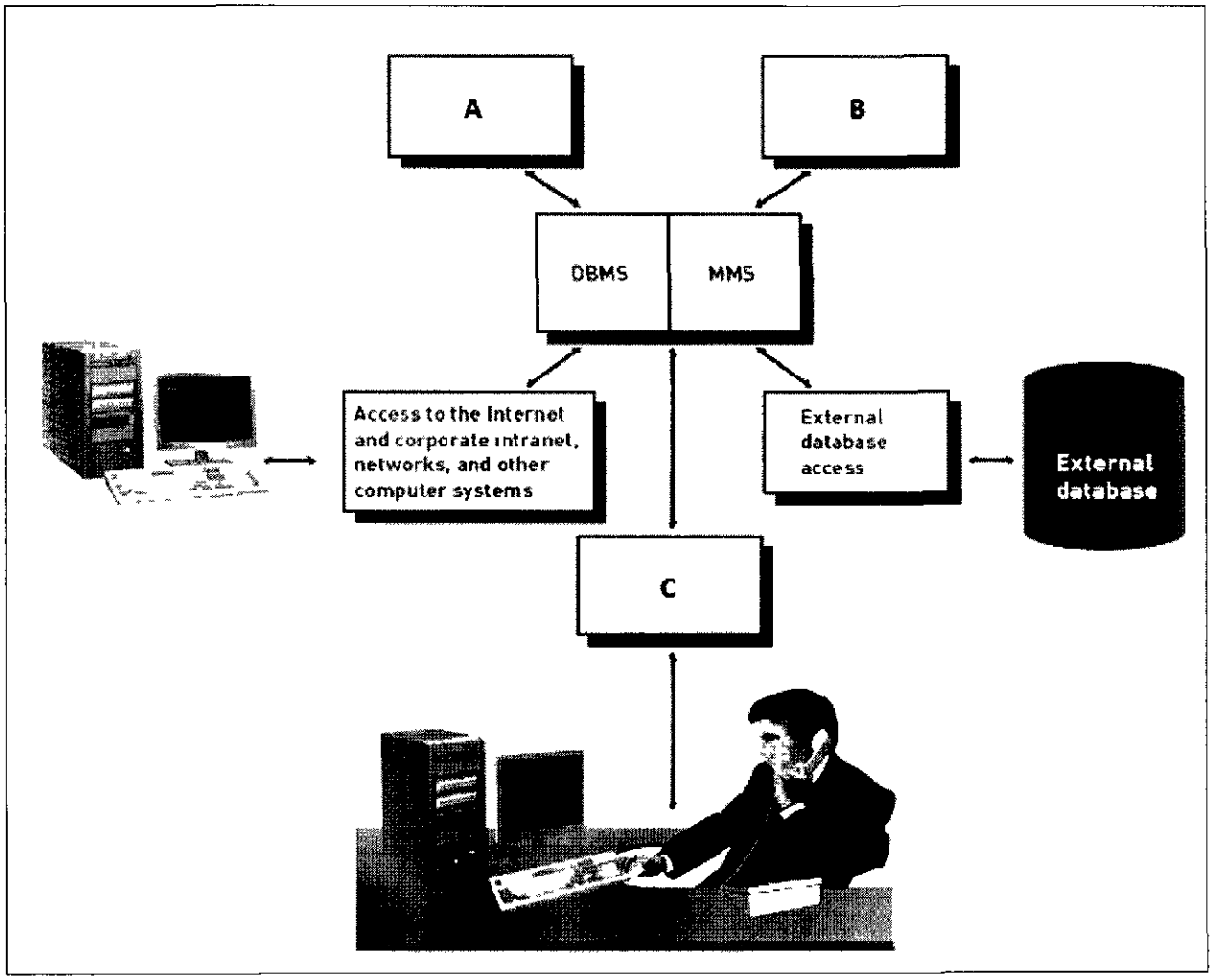
Question 35

Highly structured decisions rely on _____

1 known facts and relationships
2 ambiguous facts and known relationships
3 TPS-based inputs only
4 known facts from the TPS only

Question 36

Study the following diagram depicting the components of a DSS What do the letters 'A', 'B' and 'C' respectively represent?



1 Executive Support System (ESS), knowledge base, user
2 Group Support System (GSS), Model Management Software (MMS), end-user
3 explanation facility, inference engine, dialogue manager
4 database, model base, user interface

Question 37

DSSs allow users to _____ questions, executive support systems (ESSs) allow executives to _____ questions

1 ask, answer
2 answer, ask
3 support, ask
4 answer, support

Question 38

A knowledge management system (KMS) can involve different types of knowledge _____ knowledge is objective and can be measured and documented in reports, papers and rules _____ knowledge is hard to measure and document, and typically is not objective or formalized

1 Tacit, explicit
2 Explicit, tacit
3 Expert, tacit
4 Explicit, expert

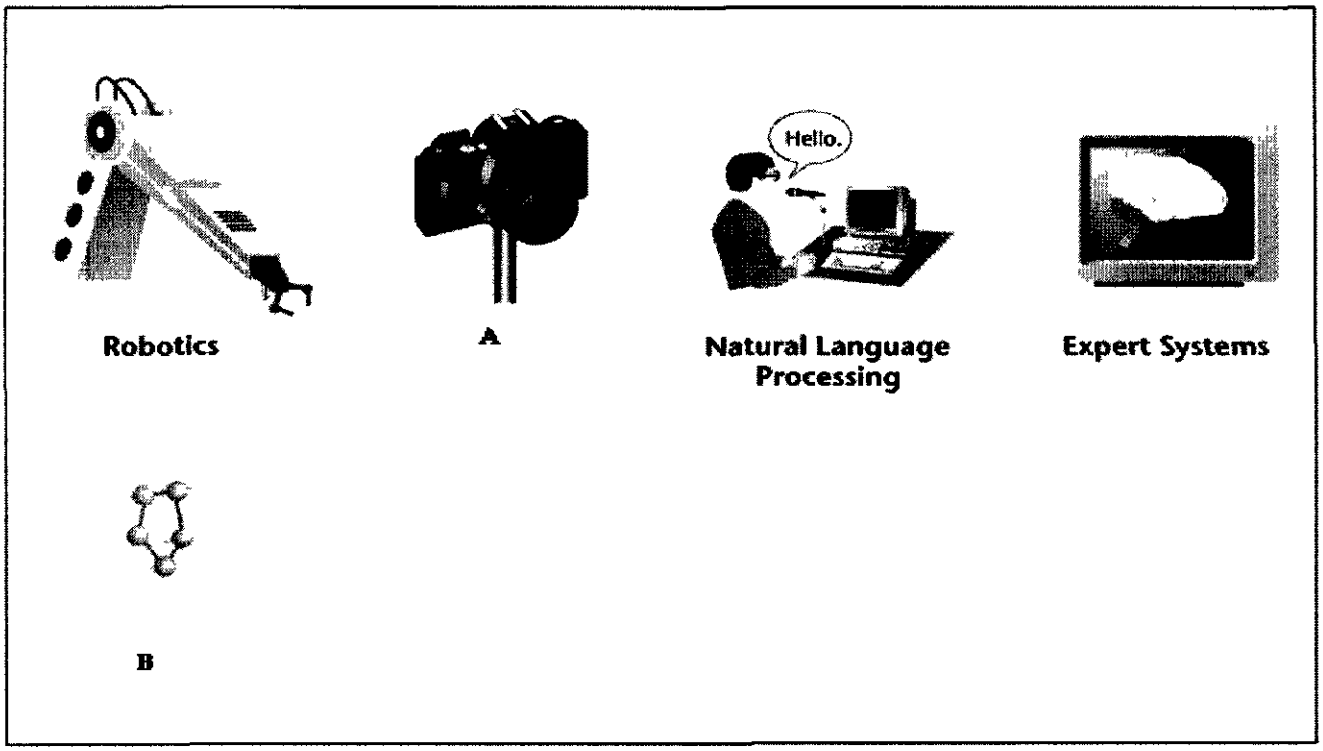
Question 39

*Which one of the following attributes is measured as **HIGH** in humans but **LOW** in machines?*

1 The ability to use a variety of information sources
2 The ability to make complex calculations
3 The ability to use sensors
4 The ability to acquire a large amount of external information

Question 40

Which specialty areas of Artificial Intelligence (AI) are denoted by the letters 'A' and 'B' respectively 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 41

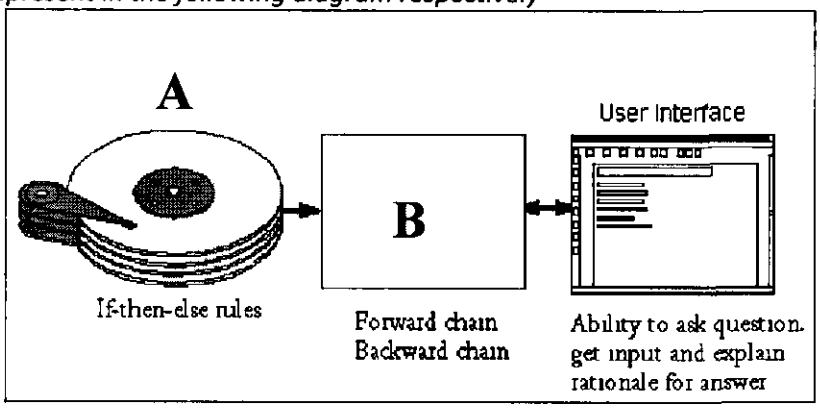
*Which one of the following is **NOT** a specific ability of neural networks?*

a Discovering relationships and trends in large databases
b. Solving complex problems for which all the information is not present
c Solving large, complex problems in which many repeated operations or models change and evolve until the best one emerges

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

Question 42

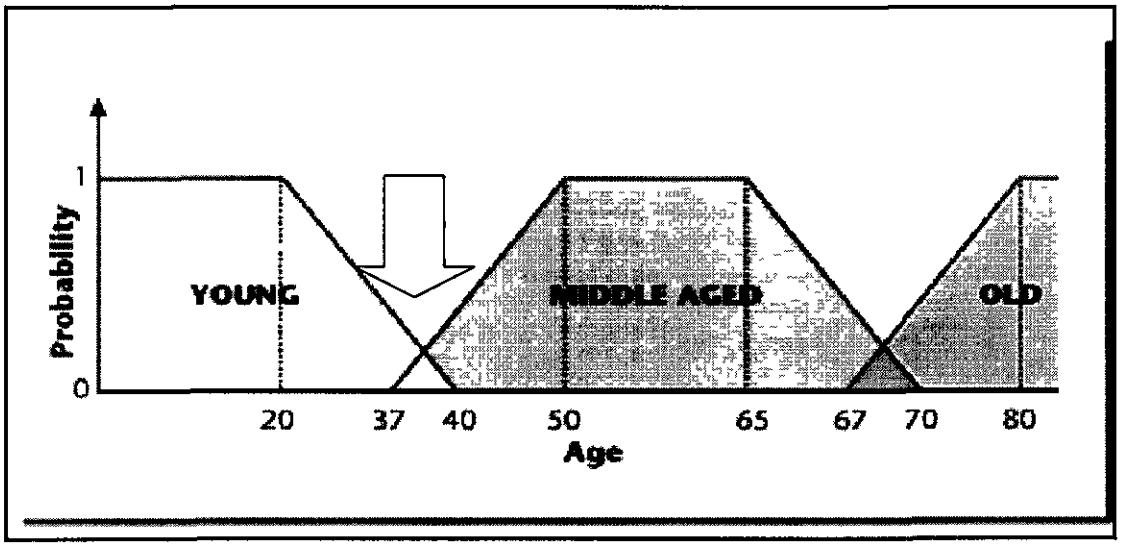
What do 'A' and 'B' represent in the following diagram respectively?



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 43

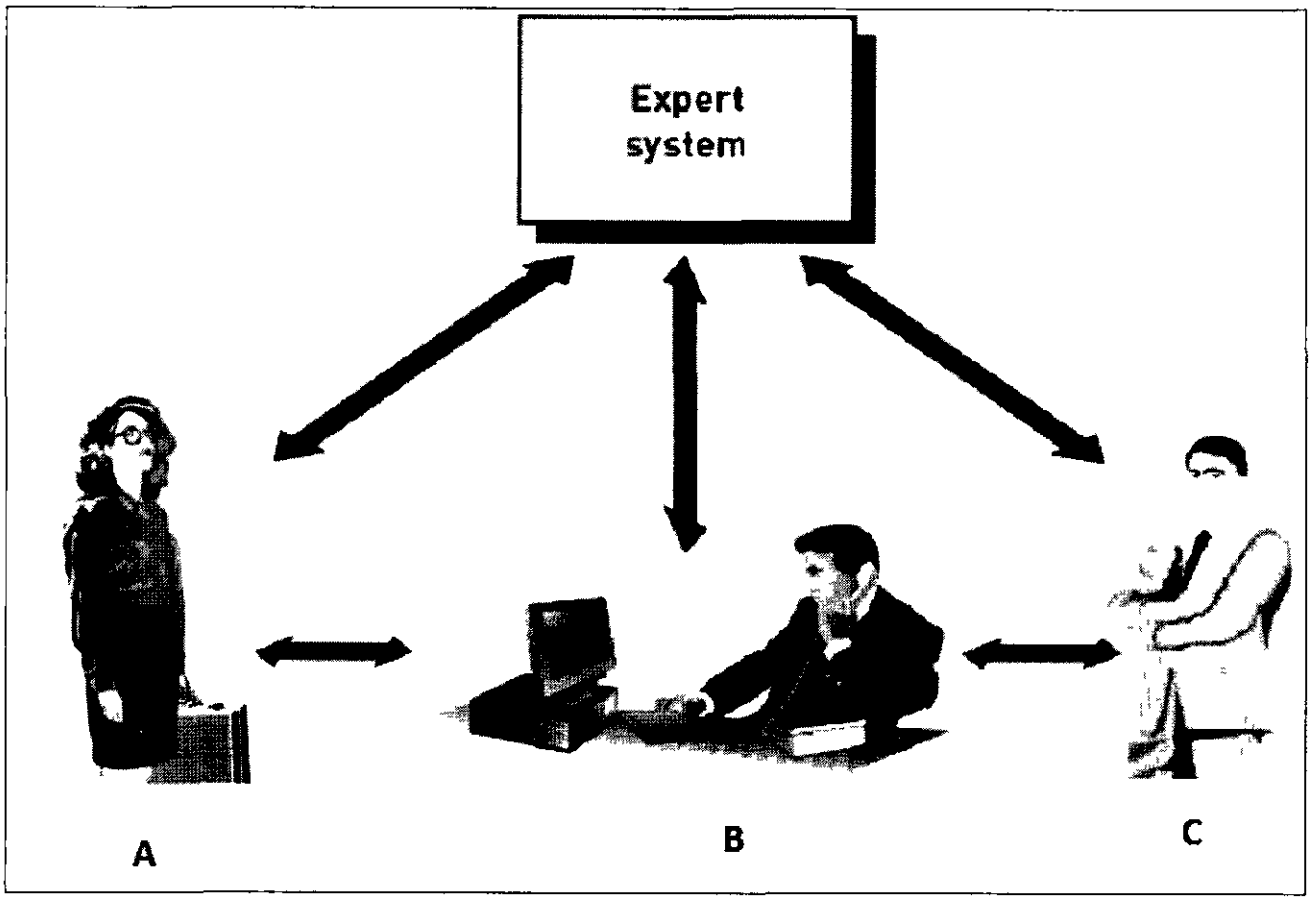
The figure depicted below illustrates that a person who is 38 years old is considered somewhat young and somewhat middle-aged This is a typical example of _____ .



1 experts systems
2 intelligent agents
3 fuzzy logic
4 genetic algorithms

Question 44

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

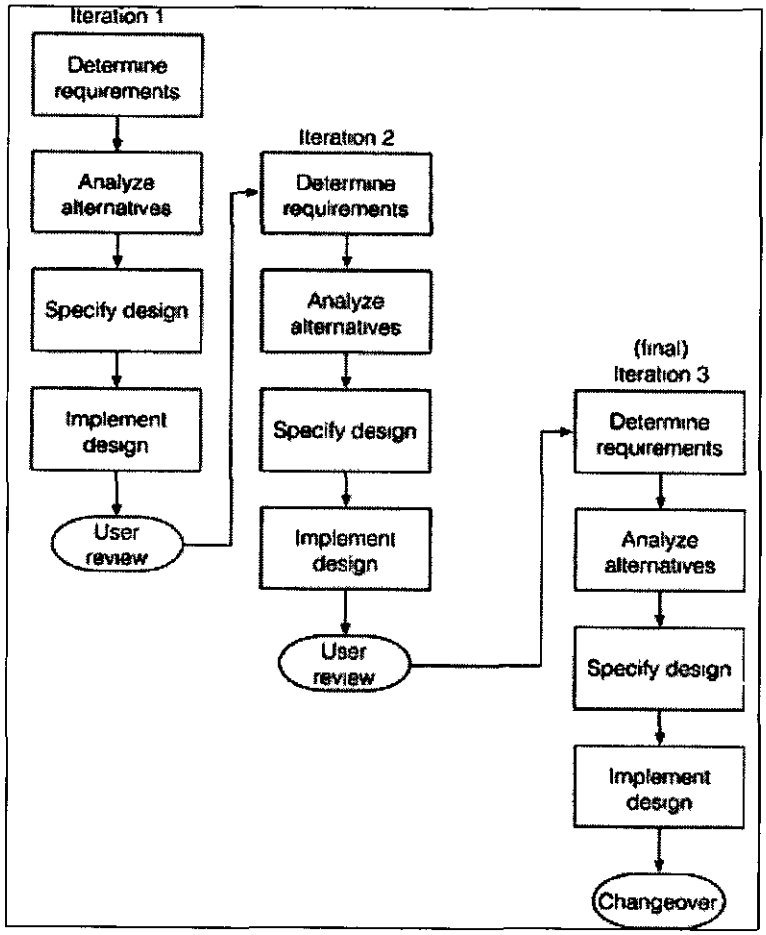
Question 45

*Accounting manager Chad O'Keefe's department will benefit from the new Web-based accounts payable system He is a (n)*_____

1 designer
2. end user
3 stakeholder
4 analyst

Question 46

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 47

a. *Due to the lack of sufficient technical IT staff in the hardware manufacturing company HWare Private Ltd, the management decided to hire a private firm 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; internal expertise being lost
2 outsourcing, signing of restrictive legal contracts
3 downsizing; inadequacy
4 downsizing, legal battles

Question 48

Jackie Jackson is involved with systems investigation She would probably be most likely to use ____

1 upper-Computer-aided software engineering (CASE) tools
2 lower-CASE tools
3 a visual programming language
4 a project PERT diagram

Question 49

Interviews and observations are both means of_____.

1. data collection
2 data analysis
3 systems investigation
4. requirements analysis

Question 50

Data and activity modeling are useful during _____ to show data flows and the relationships among various objects, associations and activities.

1. object modeling
2 data analysis
3 information analysis
4 information modeling

Question 51

Before constructing the new payroll system, Fred Lyons needed to describe the related objects, associations, and activities. A good way to do this is through the creation of a (n) _____

1 data analysis report
2 entity-relationship diagram
3 Data-Flow Diagram (DFD)
4 data model

Question 52

Grant Graystone was responsible for logical systems design. He needs to _____

1 describe the functional requirements of the system
2 describe the characteristics of the physical components of the system
3 determine hardware and software requirements
4 begin the computer programming process

Question 53

After receiving all the invited proposals, Gorgonza Cheese Corporation conducted a_____to determine which proposals would not meet their requirements

1. point evaluation
2 decision analysis
3 preliminary evaluation
4 final evaluation

Question 54

*The **FIFTH** step in systems implementation is*_____

1 site preparation
2 testing
3 software acquisition
4 user preparation

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 _____ *running, which is depicted in figure* _____

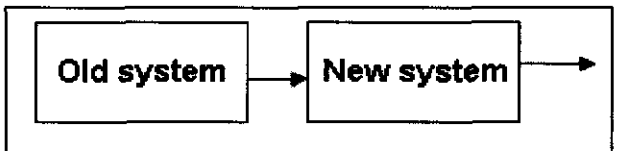


Figure A

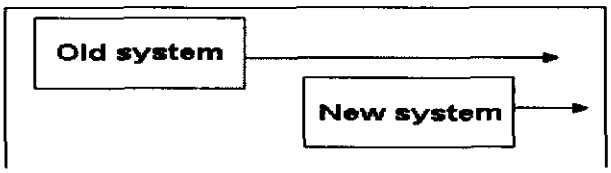


Figure B

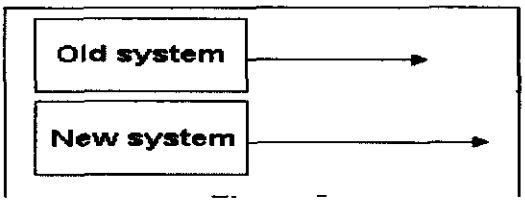


Figure C

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

Question 56

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 57

*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 unauthorised or illegal access to computer systems
3 cracker with little technical savvy who downloads programmes 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 58

PC-cillin is a type of _____.

1 logic bomb
2 virus
3 intrusion detection software
4 antivirus software

Question 59

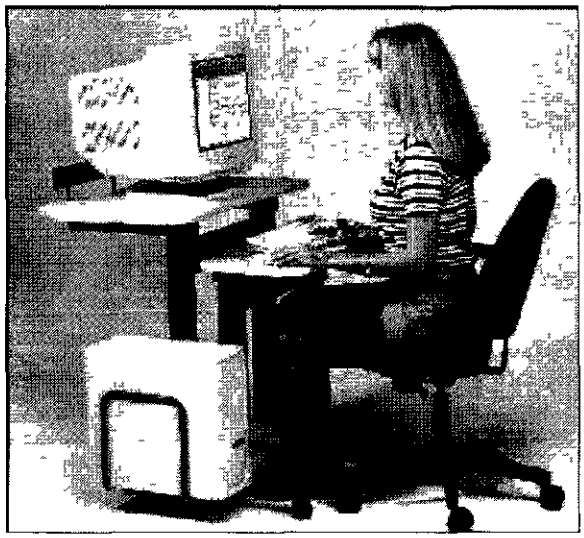
Do people have a right to know about data stored about them and to decide what data is stored and used? These issues can be broken down into four issues as depicted in the following table Name these ***FOUR*** *issues.*

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

Proper placement of the computer keyboard, as shown in the accompanying figure, is an aspect of _____



1 ergonomics
2 biometrics
3 security
4 managed security service providers (MSSPs)

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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

7

UNIQUE PAPER NO
UNIEKE VRAESTEL NR

8

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	2	3	4	5	36	37	38	39	40
6	7	8	9	10	41	42	43	44	45
11	12	13	14	15	46	47	48	49	50
16	17	18	19	20	51	52	53	54	55
21	22	23	24	25	56	57	58	59	60
26	27	28	29	30	61	62	63	64	65
31	32	33	34	35	66	67	68	69	70

71	72	73	74	75	106	107	108	109	110
76	77	78	79	80	111	112	113	114	115
81	82	83	84	85	116	117	118	119	120
86	87	88	89	90	121	122	123	124	125
91	92	93	94	95	126	127	128	129	130
96	97	98	99	100	131	132	133	134	135
101	102	103	104	105	136	137	138	139	140

Specimen only