### INFORMATION & INSTRUCTIONS:

**DURATION:** 2 HOURS

**TOTAL MARKS:** 100

**EXAMINERS:** Mr N. Ajayi, Mr S. Ako-Nai, Mrs S. Civilcharran, Mr D. Kumar, Ms Z. Ndamase, Mr N. Narsai, Mrs I. Padayachee, Mr R. Raghavjee

**MODERATOR:** Mr S Ranjeeth

1. Please fill in and code your STUDENT NUMBER and EXAM details on the top left hand section of your MCQ answer sheet (number and name). The School will not be held liable for your failure to complete these details as requested.

2. This examination paper consists of **36** pages and **97** multiple choice questions. Please count your pages to ensure you have a complete question paper.

3. You must hand in your MCQ ANSWER SHEET. You may take the MCQ question paper away with you.

4. Choose the MOST correct answer for each multiple choice question and, using an HB pencil, mark your answer on the multiple choice answer sheet.
   - Mark allocation per question:
     - Correct answer = 1 (NB: A few questions carry more than 1 mark)
     - Incorrect answer = 0
     - No answer = 0
     - More than 1 answer = 0
VERY IMPORTANT

INSTRUCTIONS FOR FILLING IN MULTIPLE CHOICE ANSWER SHEETS

Failure to complete the answer sheet in the manner described below will result in your script not being marked by the scanner.

- Use only an HB PENCIL (pen is NOT acceptable).
- Fill in your student number and surname AND fill in the appropriate circles (as shown below). Failure to do so will result in your script not being marked.

- To answer each question, fill in the letter that you think corresponds to the most correct answer. Two or more answers for a question will be marked as incorrect.

<table>
<thead>
<tr>
<th>STUDENT NUMBER</th>
<th>SURNAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 01 23 45 6</td>
<td>CLEVER</td>
</tr>
</tbody>
</table>

**DO NOT** fill in the circles by simply placing a dot, an x or a circle around the circle (as shown below). These will not be picked up by the scanner and you will not get marks for these answers.

**DO** fill in your answers as shown below. Using an HB pencil, clearly fill in the answer you have chosen by filling in the complete circle.
Information Systems in Organisations (5 marks)

1. In order to work effectively, organizations must collect and organize facts such that the facts are meaningful to the user. These collected and organized facts are called ________.
   
   [A] knowledge  
   [B] process  
   [C] information  
   [D] data  
   [E] resources

2. In order to work with information, a person must understand the different types of data that exist. Which of the following is/are a data type(s)?
   
   [A] Video  
   [B] Audio  
   [C] Alphanumeric  
   [D] [B] and [C]  
   [E] All of the above

3. An organisation is planning to use information systems to enhance the operations of the business. As an IT employee in the organisation, you have been asked to enlighten the CEO about what information systems could be used for. Your response to the CEO should be that information systems can be used for ________.
   
   [A] E-commerce and M-commerce  
   [B] transaction processing  
   [C] decision support  
   [D] management of information  
   [E] All of the above
4. Effectiveness of a business involves a computing procedure that ________.

[A] compares system performance to the initially set standard
[B] divides business production by consumption
[C] determines variations from the established standard of a system
[D] divides business achieved goals by the total intended goals
[E] All of the above

5. If performance of your business manages to reach a level whereby it delivers the lowest possible cost for products and services, it is considered to be experiencing benefits of ________.

[A] cost leadership
[B] strategic management
[C] greater productivity
[D] [A] and [C]
[E] [B] and [C]

Windows and Word (5 marks)

6. The bold effect in text when using MS Word can be accomplished by ________.

[A] clicking the B button on the home tab and typing your text
[B] selecting some text using the mouse and then right clicking and selecting the bold option
[C] using the Shift-B shortcut combination and typing your text
[D] [A] and [C]
[E] All of the above

7. Creating folders within another folder ________.

[A] results in the creation of folders that are called subfolders
[B] is illegal in Windows due to security issues
[C] is illegal in Windows due to privacy issues
[D] can only be performed by a network administrator
[E] [B] and [C]
8. A temporary storage area that MS Word uses to keep text or images that have to be copied or moved is known as the ________.

[A] saving area
[B] recycle bin
[C] temporary bin
[D] clipboard
[E] None of the above

9. Which MS Word function would you use if you wanted to change a word in your document to another word of a similar meaning?

[A] Grammar check
[B] Synonyms
[C] Footnote
[D] Thesaurus
[E] [B] and [D]

10. A ________ is a document that contains predefined settings and can be used as a basis for a new document.

[A] template
[B] mail-merged letter
[C] macro
[D] header
[E] footer

Hardware and Software (8 marks)

11. The speed of processing instructions by a Central Processing Unit (CPU) may be increased by ________

[A] the use of pipelining
[B] adding more secondary storage
[C] connecting additional input devices
[D] using sequential access as a retrieval method
[E] None of the above
12. The order in which a CPU accesses data on a computer is ________.

[A] Cache \( \rightarrow \) Register \( \rightarrow \) Main memory \( \rightarrow \) Secondary storage
[B] Register \( \rightarrow \) Cache \( \rightarrow \) Secondary storage \( \rightarrow \) Main memory
[C] Secondary storage \( \rightarrow \) Cache \( \rightarrow \) Main memory \( \rightarrow \) Register
[D] Register \( \rightarrow \) Main memory \( \rightarrow \) Cache \( \rightarrow \) Secondary storage
[E] Register \( \rightarrow \) Cache \( \rightarrow \) Main memory \( \rightarrow \) Secondary storage

13. Which of the following allows organizations to subscribe to Web delivered business application software by paying a monthly service fee or per-use fee.

[A] Off-the-shelf software
[B] An Application service provider (ASP)
[C] Proprietary software
[D] Software as a Service (SaaS)
[E] None of the above

14. Companies A and B have recently merged to form Company C. Which of the following will allow the information systems of both companies to inter-operate?

[A] Service Oriented Architecture (SOA)
[B] Middleware
[C] Workgroup Software
[D] Utility Software
[E] None of the above

15. Ben has been consulted by Henry to help choose the right system for a new job. Which of the following should Ben consider when helping Henry choose the system?

[A] Processor speed
[B] Memory size
[C] Storage capacity
[D] Software
[E] All of the above
16. Which of the following statements regarding Random Access Memory (RAM) and Read Only Memory (ROM) is true?

[A] RAM is not easily accessible but ROM is easily accessible
[B] RAM and ROM are both examples of a cache memory
[C] RAM is volatile but ROM is not volatile
[D] RAM is slower in response to query but ROM is faster
[E] None of the above

17. You just finished coupling the hardware components of a computer system and then realized you need the set of programs that can coordinate the activities and functions of the coupled hardware. What type of program do you need?

[A] Batch program
[B] System software
[C] Application software
[D] Computer program
[E] End-User License program

18. Which of the statements about off-the-shelf software is/are true?

[A] It is produced by software vendors to address needs that are common across businesses
[B] It is designed for a specific application and owned by the organization that uses it
[C] It has an initial lower cost because the software firm can spread the development costs over many customers
[D] [A] and [B]
[E] [A] and [C]
Spreadsheets (16 marks)

19. Cell A1 contains the text 'Percentage Mark' and A2 contains the value 60. What error message would be displayed in cell A3 if the formula =A1*A2 was entered into cell A3?

[A] #NUM!
[B] #NAME?
[C] #REF!
[D] #VALUE!
[E] No error message will be displayed as cell A1 will be taken as a zero

20. In the worksheet below, cell A1 is selected and the Fill handle dragged down column A. Cells C1 and C2 are then selected and the Fill handle dragged down column C. What will be displayed in cells A3 and C3?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January 15, 2009</td>
<td></td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cell A3  | Cell C3
---------|---------
[A] January 15, 2011  | 110
[B] January 17, 2009  | 130
[C] March 15, 2009    | 130
[D] March 17, 2011    | 110
[E] It is impossible to determine from the information given
21. In addition to typing each value into a cell, the values in the screenshot below can be obtained through typing ________.

![Excel Sheet](image)

i) the first value, selecting the typed value and dragging the fill handle until cell H21
ii) the first two values, selecting the typed values and dragging the fill handle until cell H21
iii) the first three values, selecting the typed values and dragging the fill handle until cell H21
iv) the first and the last values, selecting a typed value and dragging a fill handle to the middle cells

[A] i) and ii)  
[B] i) and iii)  
[C] ii) and iii)  
[D] ii) and iv)  
[E] iii) and iv)
22. The worksheet shown below contains data with regard to Eric’s course marks. He wants to know what mark he would need for Statistics in order for his average mark to be 80. Using Goal Seek, what three (3) values will he need to input to achieve this?

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>70</td>
</tr>
<tr>
<td>Accounting</td>
<td>65</td>
</tr>
<tr>
<td>Information Systems &amp; Tech</td>
<td>88</td>
</tr>
<tr>
<td>Economics</td>
<td>87</td>
</tr>
<tr>
<td>Statistics</td>
<td>50</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set Cell</th>
<th>To value</th>
<th>By changing cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A] B7</td>
<td>80</td>
<td>A6</td>
</tr>
<tr>
<td>[B] B7</td>
<td>80</td>
<td>B6</td>
</tr>
<tr>
<td>[C] B6</td>
<td>80</td>
<td>B7</td>
</tr>
<tr>
<td>[D] A6</td>
<td>80</td>
<td>A7</td>
</tr>
</tbody>
</table>

23. What value will be returned to cell D7 if the applicable function is =COUNTA(A1:C7)

[A] 11  
[B] 12  
[C] 13  
[D] #NUM!  
[E] #VALUE!
24. Which function(s) will return the value 11?

i)  =COUNT(A1:C7)
ii) =COUNT(A1:C6)
iii) =COUNTA(A1:C6)
iv)  =COUNT(Multiples_of_4)

[A]  i)
[B]  i) and iii)
[C]  ii) and iii)
[D]  i), ii) and iv)
[E]  All of the above

25. If the cell range A1:C3 is selected, which values will be displayed in the Name Box and Formula Bar?

<table>
<thead>
<tr>
<th>Name Box</th>
<th>Formula Bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A] C3</td>
<td>A1</td>
</tr>
<tr>
<td>[B] C3</td>
<td>Multiples_of_4</td>
</tr>
<tr>
<td>[C] A1</td>
<td>4</td>
</tr>
<tr>
<td>[D] 4</td>
<td>Multiples_of_4</td>
</tr>
<tr>
<td>[E] 36</td>
<td>Multiples_of_4</td>
</tr>
</tbody>
</table>
26. In the bar chart below, what is the element labelled 1 called?

![Bar Chart]

[A] Axis title  
[B] Legend  
[C] Data point  
[D] Plot area  
[E] Chart area

Questions 27 and 28 are based on the following spreadsheet extract:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

27. If the formula =LARGE(A1:G1,6) was entered into cell H1, what would be displayed in cell H1?

[A] 1  
[B] 2  
[C] 3  
[D] #REF!  
[E] #NUM!
28. If the formula =MIN(A1:H1,4) was entered into cell K1, what would be displayed in cell K1?

[A] 0  
[B] 1  
[C] 6  
[D] 8  
[E] An error message

29. The formulas used to display the output in cells L5 and L6 respectively are ________.

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>student</td>
<td>student</td>
</tr>
<tr>
<td>4</td>
<td>residence</td>
<td>residence</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>studentresidence</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>student residence</td>
</tr>
</tbody>
</table>

i)  =CONCATENATE(K3,K4)  
ii) =SMALL(AVERAGE(K3+K4)  
iii) =CONCATENATE(K3,,K4)  
v)  =CONCATENATE(K3,"",K4)

[A] i) and ii)  
[B] i) and v)  
[C] ii) and iii)  
[D] i) and iv)  
[E] iv) and v)
30. In the worksheet below, the formula =SMALL(A1:A7,8) is entered into cell B1. What will be displayed in cell B1?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

[A] #NUM!
[B] #REF!
[C] 1
[D] 7
[E] 8

31. Cells A1 and A2 contain the values 5 and 9 respectively and cell A3 is empty. What value will be returned by the formula =IF(A1>A2,COUNT(A1:A3),AVERAGE(A1:A3))?  

[A] 2
[B] 3
[C] 4
[D] 7
[E] 12

32. Which of the following is an example of a logical test?  

[A] G1:G10
[B] B7:B8
[C] A1>A2
[D] B3=B10
[E] [C] and [D]
33. The value in cell C43 is the outcome of the function \( =\text{AND}(7*3>20,11+7=18,3>2) \). The value in cell D43 is the outcome of the function \( =\text{ISERROR}(C43) \). What value is returned to cell D43?

[A] TRUE  
[B] #NUM!  
[C] #NAME?  
[D] FALSE  
[E] #VALUE!

34. Which of the following formulas will return a value of FALSE?

i) \( =\text{NOT}(23>16) \)  
ii) \( =\text{AND}(14>11,4+8=12,9<6) \)  
iii) \( =\text{OR}(4>8,8-5=3,56>42) \)  
iv) \( =\text{NOT}(K1<J7) \) where K1 is 8 and J7 is 5

[A] i) and ii)  
[B] i) and iv)  
[C] ii) and iii)  
[D] i), ii) and iv)  
[E] i), iii) and iv)

Networks (8 marks)

35. John is using a browser to access information that is formatted using a markup language which also allows linking of the information to other resources on the Internet using specially highlighted text. He is using _______ technology.

[A] world wide web  
[B] web 2.0  
[C] Internet 1.0  
[D] web resource sharing  
[E] cloud computing
36. Which of the following is not a telecommunication service?

[A] Telepresence
[B] Teleporting
[C] Call centre
[D] Teleconferencing
[E] Telecommuting

37. A bank is said to have a distributed processing banking system if ___________.

(2 marks)

[A] each branch has its own banking application and these systems are also interconnected
[B] it has only a single banking system located at the head office and accessed by all the branches
[C] the bank’s intranet allows access to the banking system by all clients
[D] its central system is installed on a mainframe with several processes to run the various transactions
[E] each branch does its own banking independently

38. Which of the following is not a form of Cloud Computing?

[A] Community Cloud
[B] Private Cloud
[C] Public Cloud
[D] Internet Cloud
[E] Hybrid Cloud
39. Which of the following is/are TRUE for wireless networks:

   (2 marks)
   
   i) Wireless networks are inherently more secure than guided media.
   ii) Most wireless networks now use Wi-Fi Protected Access (WPA) security protocol that offers improved protection over Wired Equivalent Privacy (WEP).
   iii) ZigBee is an example of wireless technology.
   iv) Their acceptance levels are very low even though they provide benefits of mobility over guided media.

   [A] i) and ii)
   [B] i) and iii)
   [C] ii) and iii)
   [D] ii) and iv)
   [E] i), ii) and iv)

40. ABC Corp plans to collaborate extensively with business partners internationally on the development of a new tablet that they plan to launch next year. They intend to use the internet for communication but are concerned about sending confidential information to their partners over open internet channels. What technology would you advise them to use to ensure that their information stays safe?

   [A] intranet
   [B] virtual private network
   [C] strong encryption technology to send encrypted data
   [D] [A] and [B]
   [E] [B] and [C]
Databases (17 marks)

41. Based on the table shown below, the following entity instance (B004, 32 Manse Rd, Bristol, BS99 1NZ) will represent a(n) ________.

<table>
<thead>
<tr>
<th>BranchNo</th>
<th>Street</th>
<th>City</th>
<th>Postcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>B005</td>
<td>22 Deer Rd</td>
<td>London</td>
<td>SW1 4EH</td>
</tr>
<tr>
<td>B007</td>
<td>16 Argyll</td>
<td>Aberdeen</td>
<td>AB2 3SU</td>
</tr>
<tr>
<td>B003</td>
<td>163 Main St</td>
<td>Glasgow</td>
<td>G11 9QX</td>
</tr>
<tr>
<td>B004</td>
<td>32 Manse Rd</td>
<td>Bristol</td>
<td>BS99 1NZ</td>
</tr>
<tr>
<td>B002</td>
<td>56 Clover Dr</td>
<td>London</td>
<td>NW10 6EU</td>
</tr>
</tbody>
</table>

[A] record  
[B] database  
[C] attribute  
[D] field  
[E] element

42. The marketing department of a retail chain store is looking for a database that will provide more flexibility in the use and organisation of the database at different stores in various cities. Which of the following database type should the company use?

[A] Relational  
[B] Replicated  
[C] Distributed  
[D] Local  
[E] [A] or [D]

43. A firm has received information that its rival company is planning to release new software that will allow users to double their Internet browsing speed. The firm then decides to release similar software earlier, in order to “steal” the market share. This is an example of ________.

[A] strategic intelligence  
[B] company espionage  
[C] competitive intelligence  
[D] counter intelligence  
[E] [A] and [C]
44. Retailers use ________ to upgrade occasional customers into frequent purchasers by researching what products they would buy if offered an appropriate incentive.

[A] drill down analysis  
[B] research analysis  
[C] data mining  
[D] systems analysis  
[E] predictive analysis

45. Because the DBMS is responsible for access to a database, one of the first steps in installing and using a large database involves the declaration of the logical and physical structure of the data and relationships among the data in the database for each user. This description is called a(n) ________.

[A] schema  
[B] data model  
[C] record  
[D] relation  
[E] entity

46. To determine degree, cardinality and optionality, the database designer has to uncover ________ that exist in the organisation, usually by interviewing staff.

[A] relationships  
[B] enterprise rules  
[C] entities  
[D] schemas  
[E] All of the above
47. Which of the following is/are NOT correct with regard to the Supplier-Product relationship shown in the image below?

[A] The relationship between supplier and product is many-to-many, as one supplier can supply many products and one product can be supplied by many suppliers

[B] The optionality is non-obligatory from both supplier and product sides

[C] The optionality is obligatory between supplier and product on both sides

[D] [A] and [B]

[E] [A] and [C]

48. The statement below explains an advantage of the database approach. What would that advantage be?

“Data is organised by the DBMS and stored in only one location. This results in more efficient use of system storage space”

[A] Improved strategic use of corporate data

[B] Improved data integrity

[C] Reduced data redundancy

[D] Data and program independence

[E] None of the above
49. A leading software company has launched an extensive programme to improve their security policy, which involves installing firewalls, creating an intranet and having strong password access to certain confidential resources. This process can be described as ________.

[A] counter intelligence
[B] competitive intelligence
[C] online transaction processing
[D] business intelligence
[E] None of the above

50. ________ is a standardized data manipulation language developed in 1970s which allows database administrators and programmers to use one common powerful language across different DBMS systems.

[A] Query by example
[B] access
[C] DDL
[D] SQL
[E] None of the above

51. A small firm is creating a data repository to store detailed data about their product sales that will contain data collected over three years and thereafter analysed to take better business decisions. This is an example of ________.

[A] organisational file
[B] data warehouse
[C] data mart
[D] data mine
[E] knowledge base
52. Your organisation considers your role as a very important one due to the fact that you are responsible for planning, designing and monitoring the database systems. You are a ________.

[A] data analyst  
[B] data manager  
[C] database administrator  
[D] data controller  
[E] database owner

53. An insurance company wants to develop a web portal that can handle a very large number of online users concurrently. The users will be able to try various investment options available with a varied range of (high to low) returns. This functionality involves complex calculations to be performed on large data. As a database expert, what database management system would you recommend so that it provides the best performance?

[A] relational  
[B] object oriented  
[C] object relational  
[D] virtual  
[E] replicated

54. Which of the following is used by database management systems to avoid potential problems when two or more users’ attempt to access or update the same record at the same time.

[A] Data control  
[B] Access control  
[C] Concurrency control  
[D] Data lock  
[E] Database lock
Questions 55 and 56 are based on tables provided below:

Table: Student

<table>
<thead>
<tr>
<th>Stud_No</th>
<th>FirstName</th>
<th>Surname</th>
<th>DOB</th>
<th>Degree</th>
<th>Phone</th>
<th>Address</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1011</td>
<td>Thandi</td>
<td>Meyela</td>
<td>11/03/1980</td>
<td>BCom</td>
<td>031-3335442</td>
<td>4,new rd</td>
<td>Durban</td>
</tr>
<tr>
<td>1012</td>
<td>John</td>
<td>Macenro</td>
<td>22/04/1977</td>
<td>BSc</td>
<td>031-3434545</td>
<td>2 old fort rd</td>
<td>Durban</td>
</tr>
<tr>
<td>1015</td>
<td>Radhika</td>
<td>Singh</td>
<td>12/07/1982</td>
<td>BCom</td>
<td>011-3243445</td>
<td>5 west st</td>
<td>Pretoria</td>
</tr>
<tr>
<td>1016</td>
<td>Dave</td>
<td>Naidoo</td>
<td>19/12/1978</td>
<td>BAdmin</td>
<td>012-2343434</td>
<td>8 ridge rd</td>
<td>Capetown</td>
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</table>

Table: Books

<table>
<thead>
<tr>
<th>BookCode</th>
<th>Title</th>
<th>Author</th>
<th>Publisher</th>
<th>Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Intro to IS</td>
<td>Stair</td>
<td>Cengage</td>
<td>10</td>
</tr>
<tr>
<td>102</td>
<td>Programming</td>
<td>Bradely</td>
<td>McGraw Hill</td>
<td>2</td>
</tr>
<tr>
<td>103</td>
<td>Accounting Basics</td>
<td>Moore</td>
<td>Pearson</td>
<td>6</td>
</tr>
<tr>
<td>104</td>
<td>Maths</td>
<td>Looney</td>
<td>Penguin</td>
<td>4</td>
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</table>

Table: Book_Issued

<table>
<thead>
<tr>
<th>BookCode</th>
<th>Stud_No</th>
<th>IssueDate</th>
<th>ReturnDate</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>1011</td>
<td>01/05/2013</td>
<td>15/05/2013</td>
<td>returned</td>
</tr>
<tr>
<td>102</td>
<td>1015</td>
<td>15/04/2013</td>
<td>30/05/2013</td>
<td>returned</td>
</tr>
<tr>
<td>103</td>
<td>1011</td>
<td>07/04/2013</td>
<td>06/04/2013</td>
<td>pending</td>
</tr>
<tr>
<td>101</td>
<td>1012</td>
<td>10/04/2013</td>
<td>25/04/2013</td>
<td>pending</td>
</tr>
</tbody>
</table>

55. Which of the following is TRUE regarding the database provided above: (2 marks)

i) Table Student is the master table and Books is the child table
ii) Table Student and Books are both master table and Book_Issued is a child table
iii) The relationship between Student and Book_Issued is 1:1
iv) The relationship between Books and Book_Issued is 1:M

[A] i) and ii)  
[B] i) and iii)  
[C] ii) and iii)  
[D] ii) and iv)  
[E] i), ii) and iv)
56. Which of the following is NOT true regarding the database provided above:

[A] The table Book_Issued is a bridge entity between Student and Books
[B] The relationship between the Student and the Books table is 1:M
[C] There is no relationship between Student and Books tables
[D] [A] and [B]
[E] [B] and [C]

Business Information Systems (30 marks)

57. eBay is the world’s leading online auction site. On the site you can buy and sell anything from electronics, cars, fashion apparel, collectibles to coupons. This is an example of a (an) ________ e-commerce site.

[A] B2C
[B] C2C
[C] B2B
[D] G2C
[E] TPS

58. Bank customers using their wireless, handheld devices to access their accounts and pay bills is an example of ________.

[A] mobile commerce
[B] a web ring
[C] an electronic exchange
[D] wireless decision making
[E] None of the above
59. Abby wants to buy an item online, and she has approached you as an IT student for assistance. Which of the following tips would you ask Abby to consider before or when buying the item?

[A] Abby should be wary of entering personal information other than what is required to complete a purchase

[B] Abby should look for the seal of approval such as Better Business Bureau Online or eTRUST

[C] Abby should determine what the website’s policy is for return of items purchased

[D] Abby should review the website’s privacy policy

[E] All of the above

60. Which of the following statements is FALSE in respect of transaction processing systems (TPSs)?

[A] Data manipulation refers to the process of performing calculations and other transformations related to the business transactions.

[B] The majority of the input for a management information system is provided by the TPS

[C] Data editing refers to the process of correcting erroneous input

[D] A typical TPS would include systems such as accounting and inventory control

[E] A TPS can be used to perform batch processing tasks.

61. Which of the following processing methods is normally used by a retail store to update its sales on a daily basis in the electronic accounting system?

[A] Online Transaction Processing

[B] Just in time processing

[C] Batch processing

[D] Real time processing

[E] None of the above
62. In order to ensure all users within the business functions have access to current and consistent data for operational decision making and planning, a ________ must be at the core of the ERP system?

[A] database  
[B] transaction processing system  
[C] decision support system  
[D] website  
[E] spreadsheet application

63. Which of the following is FALSE about Business Intelligence (BI)?

[A] It involves the gathering of enough of the right information to shine a spotlight on the organization’s performance  
[B] It has become an essential component of most organization’s ERP system  
[C] It has become an important data capturing tool for most organization’s ERP systems  
[D] It accesses operational data captured in the ERP database and analyses performance  
[E] It highlights the areas for improvement and monitor results of business strategies

64. Which of the following is a programmed decision?

[A] Deciding the most appropriate location for a manufacturing facility  
[B] Deciding whether to develop a new type of product line  
[C] Determining a suitable training program for a new employee  
[D] Establishing which are the top ten products according to sales  
[E] Weighing the benefits of installing a new pollution control system
65. Which of the following is TRUE about decision making and problem solving?

[A] After identifying a problem, the process of solving the problem begins with decision making.

[B] Problem solving is an internal activity of an organization while decision making is an external activity.

[C] Problem solving is an external activity of an organization while decision making is an internal activity.

[D] Decision making is the sole responsibility of the CEO while problem solving is the sole responsibility of managers in an organization.

[E] None of the above

66. Which of the following is/are characteristics of Executive Support System?

[A] They are tailored to individual executives

[B] They have a future orientation

[C] They are linked with value-added business processes

[D] Support the need for external data

[E] All of the above

67. The dialogue manager component of a DSS ________.

[A] is the interface between the user and the DSS

[B] hides the complexity of the interaction between the various components of the DSS from the user

[C] enables the user to communicate with the DSS using common business terminology

[D] [A] and [B]

[E] All of the above

68. Which one the following systems/software would act like or simulate the functioning of the human brain?

[A] Expert Systems

[B] Neural Networks

[C] Vision

[D] Natural Language processing

[E] Robotics
69. A medical expert system has come to the conclusion that a patient has cancer of the throat given certain symptoms together with the results of blood tests carried out on the patient. The specialist on throat cancer does not agree with the result of the expert system. He uses the ______ to determine how the expert system came to its conclusion, to see where they differ in their diagnoses?

[A] inference engine  
[B] diagnosis facility  
[C] explanation facility  
[D] knowledge acquisition facility  
[E] knowledge engine

70. Which of the following options represent the correct composition of participants used to develop and use Expert Systems?

[A] Domain consultant, knowledge engineer and knowledge user  
[B] Domain consultant, knowledge technician and knowledge user  
[C] Domain expert, knowledge engineer and knowledge consultant  
[D] Domain expert, knowledge technician and knowledge consultant  
[E] Domain expert, knowledge engineer and knowledge user

71. Which of the following is a combination of software and hardware that allows a computer to change how it functions or reacts to a situation based on feedback it receives.

[A] Robotics  
[B] Natural language processing  
[C] Learning systems  
[D] Neural networks  
[E] Informatics
72. A hacker created additional clicks that he uses to generate revenue in a pay-per-click online advertising environment. This is an example of ________.

[A] phishing  
[B] online auction fraud  
[C] click fraud  
[D] clickstream data fraud  
[E] None of the above

73. In order to develop a website of their own, the web developer of an organization must learn or know how to ________.

i) host the website with one of the web site hosting companies  
ii) use HTML, Java and web design software  
iii) use all the web page editors  
iv) obtain and register for a domain name

[A] i) and iv)  
[B] ii) and iv)  
[C] iii) and iv)  
[D] i), ii) and iv)  
[E] i), ii), iii) and iv)

74. An electronic exchange forum owned and operated by a single company where manufacturers, suppliers and competitors buy and sell goods, trade market information, and run back office operations is called a(n) ________.

[A] e-commerce exchange  
[B] public exchange  
[C] personal organisational exchange  
[D] personal exchange  
[E] private exchange
75. Which of the following is NOT an advantage of a hosted software model?
   
   [A] Decreased total cost of ownership
   [B] Faster system startup
   [C] Lower implementation risk
   [D] Management of systems outsourced to experts
   [E] Zero data security issues

76. Customisation of a vendor’s ERP system is often required to ________.
   
   [A] to support additional data fields and/or filed sizes than what comes with the package
   [B] enable your other business systems to work with the ERP package
   [C] to meet specific regulatory requirements for your business
   [D] cater for local languages where people do not speak English
   [E] All of the above

77. The form of data processing where each transaction is processed immediately, without the delay of accumulating transactions is called ________ processing.
   
   [A] batch
   [B] online transaction
   [C] fast
   [D] non-delay
   [E] group

78. The ERP system has evolved from the ________ system.
   
   [A] expert
   [B] transaction processing
   [C] decision support
   [D] organisational operational activities
   [E] materials requirement planning
79. A manager at a large company sets a trigger point for the system to automatically produce a report that contains all projects over budget by R20,000 or more. This is an example of a(an) ________ report?

[A] scheduled  
[B] key indicator  
[C] demand  
[D] drill-down  
[E] exception

80. Which of the following statements regarding an Executive Support System (ESS) is FALSE?

[A] An ESS often focuses on giving executives a means of tracking critical success factors  
[B] An effective ESS should have the capability to support executive decisions with capabilities such as strategic planning and organising, and crisis management  
[C] An ESS is designed to assist operational managers with routine operational decisions  
[D] An ESS is also called an EIS  
[E] An ESS is a specialised DSS that includes hardware, software, data, procedures and people designed to assist senior-level executives within an organisation.

81. The owner of an organisation is using a Management Information System (MIS). Which of the following will s/he NOT be able to perform?

[A] Produce hard and soft copy reports  
[B] Use internal data stored in computer system  
[C] Allow users to develop custom reports  
[D] Require user requests for reports developed by systems personnel  
[E] Perform simulation analysis
82. Which information system makes use of an “anonymous input” to reduce negative behavior from other participants?

[A] Transaction Processing System (TPS)
[B] Group Support System (GSS)
[C] Enterprise Resource Planning (ERP)
[D] Executive Information System (EIS)
[E] [A] and [C]

83. A car manufacturer uses a specialised information system to simulate and design factories. This system which the car manufacturer uses to perform these activities is an example of a(an) ________ system.

[A] expert
[B] informatics
[C] virtual reality
[D] cybernetics
[E] artificial intelligence

84. What type of person creates, uses, and disseminates knowledge?

[A] Knowledge worker
[B] Information worker
[C] Domain expert
[D] Knowledge engineer
[E] None of the above

85. The ________ is NOT a key component of an expert system.

[A] explanation facility
[B] user interface
[C] knowledge base acquisition facility
[D] data warehouse
[E] inference engine
86. Which of the following is NOT a current use for robotics?

[A] Banks  
[B] War machines  
[C] Hybrid assistive limb (HAL)  
[D] Surgery  
[E] Cleaning

Security (11 marks)

87. Which of the following methods is/are often used by criminal hackers to steal information such as PIN numbers and passwords?

[A] Shoulder surfing  
[B] Social engineering  
[C] Worming  
[D] [A] and [B]  
[E] All of the above

88. Sipho has written a program that affected some application programs. This program spreads quickly to other computers by attaching itself to e-mails and making copies of itself in the shared folders of file sharing applications. What is this program?

[A] Worm  
[B] Trojan horse  
[C] Antivirus  
[D] Logic bomb  
[E] None of the above

89. The Business Software Alliance checks to ensure that a company’s software ________.

[A] is free from viruses and other malicious software  
[B] is physically secured by keeping the software server in a secure location  
[C] is updated with the latest intrusion detection systems  
[D] has legal licensing and has not been illegally acquired  
[E] None of the above
90. Wayne receives an e-mail from a person, posing to be his bank. The email requests him to confirm his Internet banking details on a fake bank website. The person then uses Wayne's banking information to log into his Internet banking account. This is an example of ________.

[A] social engineering  
[B] cyberterrorism  
[C] identity theft  
[D] illegal access and use  
[E] equipment theft

91. Which of the following guidelines should you follow in order to protect yourself from computer criminals?

[A] Always ask for the recipient’s telephone number when transferring money to a bank account  
[B] Install strong user authentication and encryption capabilities on the firewall  
[C] Backing up data frequently avoids the costly expense of conducting security audits  
[D] Use guest accounts for people that are visitors  
[E] All of the above

92. Jason’s computer was hacked and his personal information was stolen. His files were also corrupt and some of his database entries were changed. Which of the following could Jason have used to prevent this disaster?

[A] A biometric system  
[B] An ergonomic system  
[C] Intrusion detection software  
[D] Trojan horse software  
[E] Antivirus software
93. A person has been found responsible for posting false information about her colleague on social media websites which allegedly can harm her reputation. This conduct is termed as ________ and it is a form of internet crime.

[A] blogging  
[B] libel  
[C] slander  
[D] social media offence  
[E] unfriendly  

94. Which of the following is a type of malware that executes when specific conditions occur?

[A] Virus  
[B] Worm  
[C] Logic bomb  
[D] Trojan horse  
[E] None of the above  

95. While creating and implementing a policy to avoid computer waste and mistakes, which of the following preventative measures should be considered?

i) System report titles should be as brief as possible or simply indicate a report number  
ii) The system should have controls and procedures to prevent invalid data entry  
iii) Avoid tight control over critical tables and URLs  
iv) Analyse computing capacity requirements in advance, before installing the equipment required for the designated level of activity  

[A] i) and ii)  
[B] i) and iii)  
[C] ii) and iii)  
[D] ii) and iv)  
[E] i), ii) and iv)
96. Thando, who uses her laptop to do internet banking, is getting constant email reminders from her bank to login into her online banking account, in order to avoid its expiry. The hyperlink to the website login page is also included. This could be a __________.

[A] new security implementation procedure by the bank, so that customers update their account information regularly
[B] phishing attack
[C] vishing attack
[D] Trojan horse attack
[E] None of the above

97. According to UKZN's e-communications policy, which of the following could be considered as non-compliance and result in disciplinary action:

i) Fabricating a message and/or sender of a message.
ii) Logging in and out of a system without prior permission of the computer lab technician in charge
iii) Sharing logon usernames or disclosing passwords to any third person(s)
iv) Intentionally bypassing security mechanism of the mail system

[A] i) and ii)
[B] i) and iii)
[C] ii) and iii)
[D] ii) and iv)
[E] i), iii) and iv)