AIN2601

PRACTICAL ACCOUNTING DATA PROCESSING

Duration 2 Hours

EXAMINATION PANEL AS APPOINTED BY THE DEPARTMENT.

Use of a non-programmable pocket calculator is permissible.

Closed book examination.

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.

THIS EXAMINATION PAPER CONSISTS OF SIXTEEN (16) PAGES.

PLEASE NOTE:

1. All questions must be answered.
2. Each question must commence on a separate page.
3. Write the main question numbers numerically on the cover of the answer books.
4. Answer books may not be completed in pencil.
5. This paper consists of the following six (6) questions:

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>TOPIC</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Short questions (Multiple choice)</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Short questions (Missing word)</td>
<td>8</td>
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<td>3</td>
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</tr>
<tr>
<td>4</td>
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<td>33</td>
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<tr>
<td>5</td>
<td>Spreadsheets</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Spreadsheets</td>
<td>13</td>
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</tbody>
</table>

100

[TURN OVER]
QUESTION 1  
(8 marks)

WRITE THE CORRECT ANSWER (A, B, C OR D) IN YOUR ANSWERBOOK NEXT TO THE RELEVANT QUESTION NUMBER. EACH CORRECT ANSWER COUNTS ONE (1) MARK.

1.1 Each branch of an organization enters its request for inventory online as needed. The transaction file containing the different branches’ requests is updated to the master file every two days. The branch manager can extract order information directly from the operational system. This is an example of a(n) ____________ processing system.

(A) online input, real-time processing and interactive output
(B) online input, batch processing and interactive output
(C) batch input, batch processing and interactive output
(D) batch input, batch processing and batch output

1.2 When selecting a new accounting program, we need to perform a requirement analysis for the accounting information system (AIS). Which one of the following best describes ‘requirement analysis’?

(A) Determine the organisation’s requirements for the AIS.
(B) Determine whether the product features meet the organisation’s requirements.
(C) Determine whether the program can be tailored for the organisation’s needs.
(D) Determine if the program can run on the organisation’s current hardware configuration.

1.3 ____________ output occurs when all requests for information are grouped together and periodically extracted from the computerised information system (CIS).

(A) Batch
(B) Group
(C) Interactive
(D) Online

1.4 A(n) ____________ commonly known as a column, represents one unique characteristic of a single database table.

(A) field
(B) attribute
(C) record
(D) reference

[TURN OVER]
QUESTION 1 (continued)

1.5 A __________ is a semi-permanent database file containing data records reference to by the transaction file in order to complete a transaction

(A) value file
(B) history file
(C) master file
(D) reference file

1.6 In a relational database a(n) __________ contains a single data value and is the smallest unit of data that can be accessed in a database.

(A) attribute
(B) field name
(C) data field
(D) data record

1.7 In a(n) __________ database model, data and the operations to be performed on the data are both stored in the database.

(A) object-oriented
(B) hierarchical
(C) relational
(D) multi-dimensional

1.8 Which one of the following database languages is used in the routine operation of a database to insert, delete, modify and maintain the data stored in the database?

(A) Data control language
(B) Data definition language
(C) Data query language
(D) Data manipulation language

[8]

[TURN OVER]
QUESTION 2  (8 marks)

COMPLETE THE FOLLOWING STATEMENTS BY INSERTING THE CORRECT WORD(S) WRITE DOWN THE QUESTION NUMBER AND THE CORRECT WORD(S) ONLY EACH CORRECT ANSWER COUNTS ONE (1) MARK

2.1 _________ is raw data that has been processed by the company's computerised information system

2.2 A pivot table is an example of a processing method that can be used to _________ data

2.3 The level, in a three-level database architecture, that gives the individual end-user's view of the data and database is called the _________ level

2.4 A(n) _________ is a smaller data warehouse extracted from the main data warehouse

2.5 An accounting information system (AIS) collects and processes an organisation's day-to-day financial and _________ transactions

2.6 In an AIS each specific user will only have access to the tasks directly linked to his or her role and responsibilities. This internal control is known as _________

2.7 A _________ language is associated with the formatting of text files using specific codes called tags to process, define and present text

2.8 A _________ is a list of accounts used in the organisation's general ledger

[8]
QUESTION 3  (18 marks)

Your sister, Bongi, has always been a bit of an entrepreneur. Two years ago she started selling and renting out beautiful wedding decorating items. The business has grown substantially over the last year and Bongi needs valuable information in order to make business decisions.

Bongi requires a daily report that can give her the inventory levels for the previous day. She also wants to see the total inventory bought over a period, with the ability to examine in greater detail the inventory per warehouse and inventory per product.

Bongi is investigating a suspected theft in the Kempton Park warehouse between 10 to 15 May. For this she requires a report that will show the stock movement in that specific warehouse for the period that the suspected theft occurred. Because of the theft, Bongi wants to receive an automatically generated report whenever unauthorised employees attempt to access the warehouse.

Bongi does not know much about information systems and she has decided to ask you for advice.

Required:

3.1 Bongi has heard that both management information systems and business intelligence software operates in a database environment. She wants to know if there are any disadvantages of using a database environment.

List three (3) disadvantages of using a database environment. (3)

3.2 You have explained to Bongi that a management information system (MIS) will help her with her reporting requirements.

Refer to the case study information above. Draw the table below in your answer book and use the table format to answer questions 3.2.1 and 3.2.2.

3.2.1 List the four (4) types of MIS output reports (4)

3.2.2 With reference to the case study information, for each type of output report identified in 3.2.1, give an example of a report that will meet Bongi’s reporting requirements needs. (4)

<table>
<thead>
<tr>
<th>3.2.1 Type of MIS output report</th>
<th>3.2.2 Example of report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 Bongi heard one of her friends talk about Extensible Business Reporting Language (XBRL) and she wants to know what XBRL means.

Briefly define XBRL. (1)

[TURN OVER]
3.4 Bongi would like to analyse the data so that she can make better management decisions. She wants to know if she should use online analytical processing (OLAP) or data mining.

3.4.1 Briefly describe the difference between OLAP and data mining

3.4.2 Name the database model usually used for OLAP

3.5 You have explained to Bongi that a database management system (DBMS) is an integrated set of software that enables users to operate and interact with the database. Bongi wants to know what the DBMS will enable users to do.

List three (3) functions of a DBMS

3.6 (33 marks)

Ruby is the owner of Polka Mazurka. Polka Mazurka sells wedding décor items in bulk at retail prices to wedding planners and stylists. The décor items that are sold by Polka Mazurka include vintage bird cages, bell jars, antique silver trophies and glass vases. Polka Mazurka buys and resells some of the items and some of the items are manufactured in house.

Polka Mazurka is a registered Value Added Tax (VAT) vendor and the current VAT rate is 14%.

During the year Ruby decided to buy the Pastel Partner accounting software package and her accounting staff performed the necessary take-on of opening balances and captured all the current year transactions on Pastel Partner.

Lilies & Lace is one of Polka Mazurka’s biggest clients and they always buy on credit. Early payment terms for all customers are 10% within ten days from period end. Lilies & Lace always pays regularly and on time. They claim early payment discount if applicable. They only buy from Polka Mazurka once a month.

Lilies & Lace purchased bell jars to the total value of R5,000.00 excluding VAT on 27 September 2014. A cash payment to settle this invoice has been received on 9 October 2014.

Lilies & Lace phoned Polka Mazurka’s debtor’s clerk on 31 October 2014 upon receiving their monthly statement and quenched the fact that no settlement discount has been granted.
QUESTION 4 (continued)

Ruby consulted you as her good friend with Pastel experience. You investigated the matter and you found the following during your investigation with regard to the setup of customers (refer to the screen shot from Pastel Partner version 12 below)

![Customer Accounts Screen Shot]

**Required:**

4.1 Refer to the case study information and the screen shot from Pastel Partner version 12 above and explain why settlement discount has incorrectly NOT been granted. (2)

4.2 Refer to the case study information and the screen shot from Pastel Partner version 12 above

Draw the table below in your answer book. Now use this table to write the accounting entries into the general ledger master file for the transaction on 9 October 2013 as if settlement discount has been granted correctly on transaction date. Note: You should show all the applicable accounting entries, based on accounting principles and use specified accounts where available.

<table>
<thead>
<tr>
<th>General ledger account description</th>
<th>Debit/Credit</th>
<th>Amount</th>
</tr>
</thead>
</table>

Tip: Draw the T-accounts for yourself as rough work in your answer book to help ensure your debits and credits are correct. (9)

[TURN OVER]
QUESTION 4 (continued)

Refer to the screen shot from Pastel Partner version 12 below to answer questions 4.3 – 4.6

4.3 Define a foreign key

4.4 Identify the foreign key on the ‘Process Cashbook’ screen shot above which will be used in the receipts cashbook transaction file. Only write down the applicable field name

4.5 Refer to the Tax column as indicated by the arrow and the case study information above. Briefly explain why the Tax type 00 was selected for the payment received from Lilies & Lace?

4.6 Which Pastel Partner main menu will you use for the following procedures?

4.6.1 Selecting the cashbook which will serve as the Transfer Account

4.6.2 Creating sub general ledger accounts to use for the take on of opening balances.

4.6.3 Take on of opening balances by means of a general journal.

4.6.4 Reprinting a customer tax invoice

4.6.5 Making a backup of company data

4.7 Ruby needs advice on which processing method to use for Lilies & Lace. Refer to the case study information above and answer questions 4.7.1 and 4.7.2

4.7.1 Make a recommendation on the applicable processing method

4.7.2 Give two reasons to motivate your answer in 4.7.1

[TURN OVER]
QUESTION 4 (continued)

4.8 Please refer to the extract from the generic revenue process figure as provided below.

Write down the numbers 4.8.1 to 4.8.4 in your answer book and indicate next to each number the missing accounting information system (AIS) document relating to the relevant process in the generic revenue process.

<table>
<thead>
<tr>
<th>Process</th>
<th>Customer actions</th>
<th>Organisation actions</th>
<th>AIS document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quotation</td>
<td>Request prices</td>
<td>Prepare &amp; send quotation to customer</td>
<td>4.8.1</td>
</tr>
<tr>
<td>Order</td>
<td>Place order</td>
<td>Credit checks &amp; Accept/Reject order</td>
<td>4.8.2</td>
</tr>
<tr>
<td>Delivery</td>
<td>Accept goods or service</td>
<td>Deliver inventory or service</td>
<td>4.8.3</td>
</tr>
<tr>
<td>Billing</td>
<td>Receive sales invoice</td>
<td>Create sales invoice &amp; send to customer</td>
<td>4.8.4</td>
</tr>
</tbody>
</table>

4.9 Various AIS reports can be printed during the business processes which all form part of the revenue and receipts cycle. Which AIS reports can be printed during the processes below?

4.9.1 Quotation process
4.9.2 Sales order process
4.9.3 Customer return process

[TURN OVER]
QUESTION 4 (continued)

4.10 Ruby is uncertain of the effect on inventory quantities when Polka Mazurka manufactures decor items. Write down the numbers 4.10.1 to 4.10.4 in your answer book. Next to each number write down the effect (increase / decrease / stay the same) on the inventory quantities for the inventory process and type provided on the next page.

<table>
<thead>
<tr>
<th>Process</th>
<th>Inventory type</th>
<th>Effect on quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished goods</td>
<td>Work in progress (WIP)</td>
<td>4.10.1</td>
</tr>
<tr>
<td>Finished goods</td>
<td>Finished goods</td>
<td>4.10.2</td>
</tr>
<tr>
<td>Manufacture</td>
<td>Work in progress (WIP)</td>
<td>4.10.3</td>
</tr>
<tr>
<td>Sale of finished goods</td>
<td>Finished goods</td>
<td>4.10.4</td>
</tr>
</tbody>
</table>

THE FOLLOWING IS APPLICABLE TO QUESTIONS 5 and 6

~Please leave a line open after each individual answer.

~You used the Excel Help function to obtain the following formula structures which might come in handy when answering questions 6 and 7.

- =VLOOKUP(lookup_value,table_array,col_index_num,range_lookup)
- =PMT(rate,nper,pv,fv,type)
- =FV(rate,nper,pmt,pv,type)
- =PV(rate,nper,pmt,fv,type)

QUESTION 5  (20 marks)

You are the financial manager for GlasBot Pty Ltd, a registered VAT vendor. GlasBot manufactures a range of glass perfume bottles.

GlasBot wants to invest in a new glass bottle-manufacturing machine. The production manager, Mr Mashile has short-listed four machines. He asked your help in creating a spreadsheet calculating the monthly installment amount as well as extracting the downtime days and error margins from the given information.

[TURN OVER]
QUESTION 5  (continued)

Mr Mashile provided you with the following information

a) The Value Added Tax (VAT) percentage is 14% (refer to cell B3)

b) All the machines will be financed using the same loan finance terms
   - Interest is compounded monthly at the end of each month at an annual interest rate of 8%
     (refer to cell B4)
   - The finance period is five (5) years (refer to cell B5)

c) The purchase price including VAT for each machine (refer to range B15 B19)

d) The residual value of each machine at the end of the five (5) year term (refer to range C15 C19)

e) Each machine has a specific UMDG scale code. A machine’s UMDG scale code will fall within a
   specific scale bracket (refer to cell range A7 C13), which indicates the error margin percentage (%)
   at which each machine operates. For example a machine with a UMDG code of 120 will fall in the
   scale bracket 100 to 199 and the machine will therefore have an error margin of 2 5%

f) Each machine’s name (refer to range A15 A19) has a specific structure. The machine name
   contains the UMDG scale code as well as the downtime code

   The machine name structure is as follows:

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>A</td>
<td>N</td>
<td>X</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>C</td>
</tr>
</tbody>
</table>

   Characters 1-3  MAN
   Character 4  Space
   Character 5 X (machine configuration)
   Character 6  - (hyphen/dash)

   Characters 7-9 UMDG scale code (also refer to point e)
   Character 10  Downtime code (also refer to point g)

g) Each machine has either a B or a C downtime code. The downtime code indicates the number of
   downtime days i.e. the number of days per month a machine will not be operational due to routine
   maintenance. Two (2) days downtime is indicated by a B and a C downtime code will be equal to
   one (1) day downtime.
QUESTION 6  (continued)

You created the spreadsheet below:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>GlasBot Pty Ltd - New machine Investigation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>VAT</td>
<td>14%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>Annual interest rate</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>Period (years)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>UMDG scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>From</td>
<td>To</td>
<td>Error margin (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td>100</td>
<td>199</td>
<td>2.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>200</td>
<td>299</td>
<td>1.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td>300</td>
<td>399</td>
<td>2.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>400</td>
<td>499</td>
<td>4.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>500</td>
<td>599</td>
<td>3.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>Machine name</td>
<td>Purchase price (including VAT)</td>
<td>Residual value after 5 years</td>
<td>Monthly instalment (including VAT)</td>
<td>Monthly instalment (excluding VAT)</td>
<td>UMDG scale code</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>Man X-545C</td>
<td>R 4,747,160</td>
<td>R 300,000</td>
<td>R 100,338 21</td>
<td>R 88,015 97</td>
<td>545</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td>Man V-339B</td>
<td>R 6,327,420</td>
<td>R 600</td>
<td>R 128,297 26</td>
<td>R 112,541 46</td>
<td>339</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td>Man X-237C</td>
<td>R 7,528,060</td>
<td>R 40,000</td>
<td>R 153,186 30</td>
<td>R 134,373 95</td>
<td>237</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td>Man Z-183B</td>
<td>R 4,925,000</td>
<td>R 50,000</td>
<td>R 100,541 73</td>
<td>R 88,194 50</td>
<td>183</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td>Largest monthly instalment excluding VAT</td>
<td></td>
<td></td>
<td>R 134,373 95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[TURN OVER]
QUESTION 5  (continued)

Required:

Use the information and spreadsheet provided to answer the following questions
Note: Where it is indicated that your formula will be copied to other cells, your formula must take absolute and relative addresses into account, but only where necessary!

5.1 Which spreadsheet formula was entered into cell D16 to calculate the monthly instalment amount including VAT for Man X-545C? The formula should return a positive answer. Note: Your formula will be copied to cells D17:D19. (4 5)

5.2 Which spreadsheet formula was entered into cell E16 to calculate the monthly instalment amount excluding VAT for Man X-545C? Note: Your formula will be copied to cells E17:E19. (2)

5.3 Which spreadsheet formula was entered into cell F16 to extract the UMDG scale code for Man X-545C from the machine name? Note: Your formula will be copied to cells F17:F19. (2 5)

5.4 Which spreadsheet formula was entered into cell G16 to extract the downtime code for Man X-545C from the machine name? Note: Your formula will be copied to cells G17:G19. (2)

5.5 Which spreadsheet formula was entered into cell H16 to obtain the error margin % for Man X-545C from the UMDG scale starting in cell A7? Note: Your formula will be copied to cells H17:H19. (4)

5.6 Which spreadsheet formula was entered into cell I16 to calculate the number of downtime days for Man X-545C? Note: Your formula will be copied to cells I17:I19. (3)

5.7 Which spreadsheet formula was entered into cell E21 to calculate the largest instalment excluding VAT for all the machines? (2)

[20]
QUESTION 6  (13 marks)

GlasBot’s production manager, Mr Mashile, was so impressed with the spreadsheet you have created for him previously that he asked you for further help with the new machine investigation.

Mr Mashile asked you to create a spreadsheet which will calculate the estimated net profit per machine taking the downtime days and the error margins into account.

Mr Mashile provided you with the following information:

a) All the amounts are exclusive of Value Added Tax (VAT)

b) The cost price per unit excluding VAT is R15 per unit (refer to cell B3)

c) The mark-up margin is 50% (refer to cell B4)

d) The available workdays in a month is 20 days (refer to cell B6)

e) Available information per machine
   • Purchase price excluding VAT (refer to row 11) and the monthly instalment amount (refer to row 19)
   • The error margin % (refer to row 9) is the percentage of flawed bottles produced. The error margin is expressed as a % of the total quantity of bottles produced by each machine per day. Flawed bottles cannot be sold.
   • The total quantity bottles that each machine can produce per day before the error margin is taken into account (refer to row 12)
   • The saleable quantity (refer to row 13) is calculated as the quantity produced per day reduced by the quantity of flawed bottles
   • Downtime days per month (refer to row 10) are the number of days in a month the machine will not produce bottles due to planned maintenance
   • Productive work days per month (refer to row 14) are the available work days less the downtime days per month i.e. the number of days in a month the machine will produce bottles

f) The mark-up amount calculation assumes that all the saleable quantities will be sold

g) The monthly maintenance cost is calculated as a percentage of the monthly instalment amount. For all machines with a purchase price (excluding VAT) of R5 million or more a monthly maintenance cost of 11.5% of the monthly instalment amount is charged and for all other machines a monthly maintenance cost of 9% of the monthly instalment is charged.

h) Each machine’s monthly operational cost (refer to row 21) calculation is based on the monthly operational cost per unit (excluding VAT) of R5 60 (refer to cell B5), the total quantity produced per day and productive work days.

[TURN OVER]
QUESTION 6  (continued)

You created the spreadsheet below

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>GlasBot Pty Ltd - New machine investigation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cost price per unit (excluding VAT)</td>
<td>R 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Markup margin</td>
<td>50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Monthly operational costs per unit</td>
<td>R 5 60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Available work days per month</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Machine name</td>
<td>Man X-545C</td>
<td>Man X-237C</td>
<td>Man Z-183B</td>
<td>Man V-339B</td>
</tr>
<tr>
<td>9</td>
<td>Error margin (%)</td>
<td>3 00%</td>
<td>1 50%</td>
<td>2 50%</td>
<td>2 00%</td>
</tr>
<tr>
<td>10</td>
<td>Downtime days</td>
<td>1 0</td>
<td>1 0</td>
<td>2 0</td>
<td>2 0</td>
</tr>
<tr>
<td>11</td>
<td>Purchase price (excluding VAT)</td>
<td>R 4,164,175</td>
<td>R 6,603,561</td>
<td>R 4,320,175</td>
<td>R 5,560,368</td>
</tr>
<tr>
<td>12</td>
<td>Total quantity produced per day</td>
<td>10,000</td>
<td>18,000</td>
<td>10,400</td>
<td>16,000</td>
</tr>
<tr>
<td>13</td>
<td>Saleable quantity produced per day</td>
<td>9,700</td>
<td>17,730</td>
<td>10,140</td>
<td>15,680</td>
</tr>
<tr>
<td>14</td>
<td>Productive work days per month</td>
<td>19</td>
<td>19</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Estimated net profit (excluding VAT) per month</td>
<td>Man X-545C</td>
<td>Man X-237C</td>
<td>Man Z-183B</td>
<td>Man V-339B</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>Man X-545C</td>
<td>Man X-237C</td>
<td>Man Z-183B</td>
<td>Man V-339B</td>
</tr>
<tr>
<td>18</td>
<td>Mark-up</td>
<td>R 1,382,250 00</td>
<td>R 2,526,525 00</td>
<td>R 1,368,900 00</td>
<td>R 2,116,800 00</td>
</tr>
<tr>
<td>19</td>
<td>Monthly instalment</td>
<td>R -88,015 97</td>
<td>R -134,373 95</td>
<td>R -88,194 50</td>
<td>R -112,541 46</td>
</tr>
<tr>
<td>20</td>
<td>Maintenance costs</td>
<td>R -7,921 44</td>
<td>R -15,453 00</td>
<td>R -7,937 50</td>
<td>R -12,942 27</td>
</tr>
<tr>
<td>21</td>
<td>Operational costs</td>
<td>-R 1,064,000 00</td>
<td>-R 1,915,200 00</td>
<td>-R 1,048,320 00</td>
<td>-R 1,612,800 00</td>
</tr>
<tr>
<td>22</td>
<td>Estimated net profit per month</td>
<td>R 222,312 59</td>
<td>R 461,498 05</td>
<td>R 224,448 00</td>
<td>R 378,516 27</td>
</tr>
</tbody>
</table>

[TURN OVER]
QUESTION 6  (continued)

Required:

Use the information and spreadsheet provided to answer the following questions
Note: Where it is indicated that your formula will be copied to other cells, your formula must take absolute and relative addresses into account, but only where necessary!

6.1 Which spreadsheet formula was entered into cell B13 to calculate the saleable quantity produced per day for Man X-545C? The formula should round the answer to zero digits. Note: Your formula will be copied to cells C13:E13.  

6.2 Which spreadsheet formula was entered into cell B18 to calculate the monthly mark-up amount for Man X-545C? Note: Your formula will be copied to cells C18:E18.  

6.3 Which spreadsheet formula was entered into cell B20 to calculate the monthly maintenance cost for Man X-545C? Note: Your formula will be copied to cells C20:E20.  

6.4 Which spreadsheet formula was entered into cell B21 to calculate the monthly operational cost for Man X-545C? Note: Your formula will be copied to cells C21:E21.  

6.5 List two (2) general security controls relating to Excel file access controls that may be implemented  

[13]

Total [100]

©  

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In this memorandum the mark allocation is indicated as follow:

√ = 1 Mark  ^ = ½ Mark

Please do not use the abovementioned symbols in your examination answers.

In this memorandum SG refers to Study guide; SU to Study unit and S to Section.

**QUESTION 1 (8 marks)**

1.1. B | SG1, SU1, S6
1.2. A | SG2, SU14, S3.2
1.3. A | SG1, SU1, S5.1
1.4. B | SG1, SU2, S6.3
1.5. D | SG1, SU2, S6.3
1.6. C | SG1, SU2, S6.3
1.7. A | SG1, SU2, S6.1
1.8. D | SG1, SU2, S5.3

**QUESTION 2 (8 marks)**

2.1. Information | SG1, SU1, S3
2.2. Summarised | SG1, SU1, S4
2.3. External | SG1, SU2, S5.2a
2.4. Data mart | SG1, SU3, S4
2.5. Nonfinancial | SG2, SU7, S3
2.6. Segregation of duties | SG2, SU13, S2
2.7. Markup | SG2, SU20, S2
2.8. CoA/Chart of Accounts | SG2, SU13, S3
QUESTION 3  (18 marks)

3.1 Any 3
- Start-up and operating costs are expensive/high ✓
- Database systems are complex to design and use ✓
- Time-consuming to design ✓
- Database or database management software failure will affect all application software linked to that specific database ✓ OR A failure can shut down a whole organisation or department(s) in the organisation, making the organisation unable to run its daily operations and provide adequate customer service. ✓

(SG1, SU2, S3.2)
(max 3)

3.2

<table>
<thead>
<tr>
<th>3.2.1 Type of output report</th>
<th>3.2.2 Example of Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled ✓</td>
<td>Daily inventory level report ✓</td>
</tr>
<tr>
<td>Drill down ✓</td>
<td>Drilled down inventory report ✓ OR Inventory per warehouse and inventory per product ✓</td>
</tr>
<tr>
<td>Demand ✓</td>
<td>Kempton Park stock movement report for 10-15 May ✓</td>
</tr>
<tr>
<td>Exception ✓</td>
<td>Unauthorised warehouse access report ✓</td>
</tr>
</tbody>
</table>

(SG2, SU19, S7)
(8)

3.3 XBRL is used when financial information is exchanged in XML format. ✓

OR

The electronic communication of financial and business information to all stakeholders. ✓

(SG2, SU20, S2)
(1)
QUESTION 3 (continued)

3.4.1  OLAP is used to summarise data according to user-defined categories.

Data mining is used to break down data in order to uncover trends/ patterns/ relationships.

OR

Data mining will answer questions such as the following: Why have sales increased in Mpumalanga? Or A person with what characteristics would be more likely to buy our product? ^

OLAP is used to answer the following kind of questions: What is the value of motor accident claims for women driving green motorcars in Kwazulu-Natal by month? ^ or What are the average sales of electric drills by month and by region? ^

(SG1, SU3, S7)
(max 2)

3.4.2  Multidimensional OR Relational database model

(SG1, SU3, S6 & SG1, SU2, S6.1e)
(max 1)

3.5  Any 3

- Design, create and maintain the database structure and the database; 
- Control the organisation, storage and retrieval of data in the database; 
- Capture, maintain (delete, insert, amend) and manipulate the data in the database; 
- Share data between multiple users simultaneously; 
- Execute queries and generate outputs; 
- Control the movement of the data between authorised users and the database; 
- Control and monitor access to the database; 
- Analyse and monitor database performance

(SG1, SU2, S5.1)
(max 3)
QUESTION 4 (33 marks)

4.1
- The early payment terms have incorrectly been set up as 10% from invoice date. ✓
- The early payment terms should have been set up as 10% from period end. ✓
- Period end refers to the end of the financial period. ✓
- Lilies & Lace therefore qualified for discount as the sales transaction took place on 27 September and they made a cash payment on 9 October ✓, which is within 10 days from period end.

(max 2)
(Pastel manual, Lesson 4.23)

4.2

<table>
<thead>
<tr>
<th>Account description</th>
<th>Dr/Cr</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>Dr</td>
<td>5 130 ✓ (5 700 * 90%)</td>
</tr>
<tr>
<td>Trade Receivables /Lilies and Lace /LIL001</td>
<td>Cr ✓</td>
<td>5 700 ✓</td>
</tr>
<tr>
<td>Discount granted ^OR Sales^ OR Settlement discount^</td>
<td>Dr ✓</td>
<td>500 ✓ (5 700 * 10% /1.14)</td>
</tr>
<tr>
<td>VAT control^</td>
<td>Dr ✓</td>
<td>70 ✓ (500 *0.14)</td>
</tr>
</tbody>
</table>

(SG2, SU8, S4)
(Pastel manual Lesson 4.23) (9)

4.3. When a primary data field of a database file^ is entered into another database file^ to create a relation between the two database files ✓, the primary data field in the other database file is known as a foreign key ✓.

(SG1, SU2, S6.3) (max 2)

4.4 Account

(1)

4.5
- VAT has already been calculated and taken into account ✓ when the sales transaction was recorded. ✓
- This transaction is a receipt from a customer. ✓
- The greyed out Tax column is a built in Pastel control to prevent double VAT/tax accounting. ✓

(max 2)
**QUESTION 4 (continued)**

4.6.1 Setup  (Pastel manual Lesson 9.62)  (1)

4.6.2 Edit   (Pastel manual Lesson 8.6) (1)

4.6.3 Process  (Pastel manual Lesson 12.10) (1)

4.6.4 View  (Pastel manual Lesson 11.20) (1)

4.6.5 File  (Pastel manual Lesson 4.49)    (1)

4.7.1 Balance forward processing method✓  (1)

4.7.2  
- Not a large number of transactions (does not buy more than once a month) ✓  
- Pays regularly and on time. ✓  

(Pastel manual Lesson 4.26)

4.8.1 Quotation ✓

4.8.2 Sales order ✓

4.8.3 Delivery note ✓

4.8.4 Sales invoice ✓  

(Topic 3, SU8, S2)

4.9.1 Outstanding/open quotation report✓  

4.9.2 Outstanding/open sales order report✓  

4.9.3 Any 1  
- Credit note analysis✓  
- Customer statements✓  
- Customer age analysis✓  
- Customer detail ledger✓  
- General ledger accounts details✓  

(SG2, SU8, S3)  (max 1)

4.10  

<table>
<thead>
<tr>
<th>Process (FYI)</th>
<th>Inventory type (FYI)</th>
<th>Effect on quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished goods</td>
<td>Work in progress (WIP)</td>
<td>4.10.1 Decrease^</td>
</tr>
<tr>
<td>Finished goods</td>
<td>Finished goods</td>
<td>4.10.2 Increase^</td>
</tr>
<tr>
<td>Manufacture</td>
<td>Work in progress (WIP)</td>
<td>4.10.3 Increase^</td>
</tr>
<tr>
<td>Sale of finished goods</td>
<td>Finished goods</td>
<td>4.10.4 Decrease^</td>
</tr>
</tbody>
</table>

(Topic 3, SU 10, S3.3)
**QUESTION 5 & 6**

The following is applicable to both the Excel questions.

- Mark the formulas and functions from left to right.
- Mark the first option where students give options between different formulas i.e. XXXX or YYYY.
- Where students ‘build-up’ a formula mark the final answer i.e. amounts → cell reference → cell reference with $.
- For a student to earn the applicable mark the cell references (taking the $ into account where applicable) must be **exactly the same** as indicated on the memorandum.
- If information is given in a cell the student must refer to that specific cell. E.g. Vat given in a cell – student cannot use 14% in a formula but must refer to that specific cell reference.

**Marks are deducted as follows (per individual question):**

*(Note: A student can’t get less than 0 for a formula.)*

<table>
<thead>
<tr>
<th>Not starting a formula with =</th>
<th>-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>When referring to a range of cells using a ; to indicate the range i.e. A10:D10 (correct)</td>
<td>-1</td>
</tr>
<tr>
<td>A10;D10 (-1 mark)</td>
<td></td>
</tr>
<tr>
<td>Logical issue in a formula e.g. multiply where we should divide, subtract where we should add, etc.</td>
<td>-1</td>
</tr>
<tr>
<td>Incorrect use of ( ) or not using it where necessary or not closing brackets</td>
<td>-1</td>
</tr>
<tr>
<td>Using [ ] instead of ( )</td>
<td>-1</td>
</tr>
<tr>
<td>Using SUM in a formula where it is not applicable i.e. =sum(H18 - H23)</td>
<td>-1</td>
</tr>
<tr>
<td>Using a formula when a function is available i.e. = B5+B6+B7 instead of =sum(B5:B7)</td>
<td>-1</td>
</tr>
<tr>
<td>Add an argument which is not applicable to the end of the function i.e. =Right(A11,1,1)</td>
<td>-1</td>
</tr>
<tr>
<td>Students can use either the , or ; as an argument separator but it must be used consistently throughout the question.</td>
<td></td>
</tr>
<tr>
<td>Using x instead of * or ÷ instead of /</td>
<td>-1</td>
</tr>
</tbody>
</table>

**For marks deducted at a function:** The part in brackets can however not be less than 0.
### QUESTION 5  (20 marks)

5.1 \[=\text{PMT}(B\$4/12,B\$5*12,B16,C16,0)\] or \[=\text{PMT}(B\$4/12,B\$5*12,B16,C16,0)-1\] or \[=\text{PMT}(B\$4/12,B\$5*12,-B16,-C16,0)\]  
*For half a mark: The – should be included in front of BOTH the B16 and C16*  
B$4 or $B$4 is correct and B$5 or $B$5 is correct

5.2 \[=D16/(1+B\$3)\] or \[=1/(1+B\$3)*D16\]  
*B$3 or $B$3 is correct

5.3 \[=\text{MID}(A16,7,3)\]

5.4 \[=\text{RIGHT}(A16,1)\]

5.5 \[=\text{VLOOKUP}(F16,A\$7:C\$13,3,TRUE)\]

5.6 \[=\text{IF}(G16=\text{"B",2,1})\] or \[=\text{IF}(G16=\text{"C",1,2})\]

*No mark for B or C if inverted commas were not used.*  
*No mark for “1” and “2” as these are values and not text.*

5.7 \[=\text{MAX}(E16:E19)\] or \[=\text{MAX}(E16:E20)\]

### QUESTION 6  (13 marks)

6.1 \[=\text{ROUND}(B12*(1-B9),0)\] or \[=\text{ROUND}(B12-B12*B9,0)\] or \[=(\text{ROUND}(B12*B9,0)-B12)*-1\] or \[=-(\text{ROUND}(B12*B9,0)-B12)\]

6.2 \[=B13*B14*B3*B4\]  
*B$3 or $B$3 is correct; $B4 or $B$4 is correct

6.3 \[=\text{IF}(B11>=5000000,B19*11.5%,B19*9%)\] or \[=\text{IF}(B11<5000000,B19*9%,B19*11.5%)\] or \[=\text{IF}(B11>=5000000,11.5%,9%)*B19\] or \[=\text{IF}(B11<5000000,9%,11.5%)*B19\]

*0.09 can be used instead of 9% and 0.115 instead of 11.5%*

6.4 \[=\text{MAX}(B\$5*B14)\] or \[=B12*\text{MAX}(B\$5*B14)\]

*No mark for B or C if inverted commas were not used.*  
*No mark for “1” and “2” as these are values and not text.*

6.5 Any 2  
- a password required for opening or reading workbooks  
- a password required to make changes to the workbook structure  
- a password required for changing the content in a sheet or cell  

(SG1, SU6, S3)