INSTRUCTIONS

1. Answer ALL questions.
2. This examination has **TWO** Sections.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>MULTIPLE CHOICE</td>
<td>20 Marks</td>
</tr>
<tr>
<td>B</td>
<td>SHORT ANSWERS</td>
<td>80 Marks</td>
</tr>
</tbody>
</table>

3. The answer sheet for **Section A** is found on the inside front cover (page 2). Write the answers for **Section B** on the spaces provided in this booklet.
4. Write your **Student Personal Identification Number (SPIN)** in the box at the top right hand corner of this page and on the last page of this booklet.
5. Check that this booklet contains pages 2 – 21 in the correct order blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR BEFORE YOU LEAVE THE EXAMINATION ROOM.

TOTAL MARKS 100
MULTIPLE CHOICE ANSWER SHEET

Remember to write the letter of the correct answer only.

1. □ □
2. □ □
3. □ □
4. □ □
5. □ □

6. □ □
7. □ □
8. □ □
9. □ □
10. □ □

CHECK THE QUESTION NUMBER CAREFULLY

11. □ □
12. □ □
13. □ □
14. □ □
15. □ □

16. □ □
17. □ □
18. □ □
19. □ □
20. □ □

P.2  □ □  S.A
SECTION A  MULTIPLE CHOICE  (20 MARKS)

Write the LETTER of the BEST answer for each question in the correct box on page 2. If you want to change your answer, put a cross through your first answer and write the letter of your new choice beside the box.

1. A computer ______________ is used to process computer instructions.
   A. Power Supply
   B. Hard Disk Drive
   C. Read Only Memory
   D. Central Processing Unit

2. You need a ______________ to allow a computer to send output to the monitor.
   A. switch
   B. modern card
   C. pixel card
   D. graphic card

3. A ______________ is an optional device useful for converting paper documents into digital format.
   A. printer
   B. scanner
   C. projector
   D. flash memory

4. ______________ can also supply electrical power across the cable to devices without their own power source.
   A. Firewire
   B. Bus lines
   C. USB slots
   D. Parallel ports

5. One of the known facts about laser printers is their ability to ______________.
   A. print low quality texts
   B. print high quality texts
   C. print with ink and toner
   D. print only black and white texts
6. A chip-based operating system can be used to run _____________.
   A. laptops
   B. thin clients
   C. cell phones
   D. computer desktops

7. QWERTY is often referred to the arrangement of _____________.
   A. keys on a standard keyboard
   B. function keys on any keyboard
   C. special menu items on the desktop
   D. command buttons, menus and toolbars

8. Random Access Memory (RAM) stores data that ____________ by the computer.
   A. needs to be saved
   B. are currently in use
   C. needs to be used later
   D. requires regular updating

9. To steal and disclose company information to other businesses is an illegal violation of _____________.
   A. copyright
   B. computer piracy
   C. computer privacy
   D. corporate confidentiality

10. The employer needs a ____________ to analyze, design and implement information systems.
    A. programmer
    B. system analyst
    C. graphic designer
    D. helpdesk support officer

11. One of the key features of word processing is document _____________.
    A. analysis and design
    B. creation and removal
    C. editing and formatting
    D. protection and security
12. A key feature that causes the word processor to force all text to fit within the defined margins is _______________.
   A. editing
   B. mail merging
   C. spell checking word wrapping
   D. word wrapping

13. It is best to use a spreadsheet application for _______________.
   A. creating flyers
   B. creating letters
   C. storing patient records
   D. calculating financial data

14. The practice of data integrity checks in a worksheet allow users to check for _______________.
   A. saved data
   B. data history
   C. data accuracy
   D. data efficiency

15. A _________________ is NOT an accepted cell value in a spreadsheet.
   A. school name
   B. digital photo
   C. registration date
   D. mathematical formula

16. An example of using absolute referencing in a spreadsheet formula is _______________.
   A. =A2+B2
   B. =$A2+B2
   C. =$A$2+B2
   D. =SUM ($A2:$B2)

17. An appropriate function of a database system is _______________.
   A. managing clients
   B. storing documents
   C. client data backups
   D. retrieving client information.
18. A Boolean data type in a database can have ___________ value(s).
   A. null
   B. one
   C. two
   D. many

19. Deleting a row from a database table is referring to removing a ___________.
   A. field
   B. query
   C. record
   D. report

20. SQL is best described as _________________________________________________.
   A. a common language used for recording data in a database
   B. the set of instructions used to check data records in a database
   C. the set of instructions used to interact with a relational databases
   D. a common database standard used by database management system
SECTION B: SHORT ANSWERS (80 MARKS)

Answer ALL five questions.
Each question is worth 16 marks.

QUESTION ONE: (16 Marks)

1. Your school has received a donation inform of a computer hardware components. Use the list of computer hardware below to answer the questions that follow.

<table>
<thead>
<tr>
<th>HARDWARE COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asus Motherboard</td>
</tr>
<tr>
<td>Intel Pentium Dual Core CPU</td>
</tr>
<tr>
<td>2 GB DIMM RAM</td>
</tr>
<tr>
<td>500GB Hard Disk Drive</td>
</tr>
<tr>
<td>DVD External Drive</td>
</tr>
<tr>
<td>HP Deskjet printer</td>
</tr>
<tr>
<td>Logitech wireless keyboard and mouse</td>
</tr>
<tr>
<td>Sony webcam</td>
</tr>
<tr>
<td>Samsung 28&quot; monitor</td>
</tr>
</tbody>
</table>

a. Fill the table below with appropriate hardware parts.

<table>
<thead>
<tr>
<th>Components that can be found inside the computer box</th>
<th>Components that can be connected to the computer box</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>i.</td>
</tr>
<tr>
<td>ii.</td>
<td>ii.</td>
</tr>
<tr>
<td>iii.</td>
<td>iii.</td>
</tr>
<tr>
<td>iv.</td>
<td>iv.</td>
</tr>
</tbody>
</table>

(4 marks)
b. Select TWO (2) items from the list that are regarded as optional components that can be connected to the computer and describe their main use.

<table>
<thead>
<tr>
<th>Optional Components</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td></td>
</tr>
</tbody>
</table>

(3 marks)

c. One of the optional components comes with TWO (2) connecting cables: one to be connected to the Universal Serial Bus (USB) slots and one for the parallel port. Describe the differences between USB and Parallel connections.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)

d. The ASUS motherboard comes with a 64 bit bus lines with PCI-X expansion slots. Describe the role of:

i) bus lines

______________________________________________________________________
______________________________________________________________________

(1 mark)

ii) expansion slots

______________________________________________________________________
______________________________________________________________________

(1 mark)
e. A digital camera was provided by the computer store for free with a firewire connection. Describe your understanding of a firewire connection.

______________________________________________________________________
______________________________________________________________________
(1 mark)

2. You have been asked to prepare a computer lab for your school. Your preparation plan must consider the environmental conditions that may harm computer systems.

a. Identify a possible hardware problem caused by:
   i) dusty environment.

______________________________________________________________________
(1 mark)

ii) power surges.

______________________________________________________________________
(1 mark)

b. Describe an action that can be taken to overcome the computer hardware failures caused by:
   i) dusty environment.

______________________________________________________________________
(1 mark)

ii) power surges.

______________________________________________________________________
(1 mark)
QUESTION TWO: (16 Marks)

1. Some new computers purchased by your school were delivered without any software. Your task is to install the computer programs such as the operating system and user applications.

a. Describe a computer program.

______________________________________________________________________  

(1 mark)

b. Describe the purpose of an operating system.

______________________________________________________________________  

(1 mark)

c. State any FOUR (4) functions of operating system.

i.______________________________________________________________________  

ii.______________________________________________________________________  

iii.______________________________________________________________________  

iv.______________________________________________________________________  

(4 marks)

d. Describe the purpose of common computer application. You can use an example to support your answer.

______________________________________________________________________  

______________________________________________________________________  

______________________________________________________________________  

(1 mark)

e. Describe the relationship between an operating system and computer software.

______________________________________________________________________  

______________________________________________________________________  

(1 mark)
f. One of the key features of many computer operating system is the use of Graphical User Interface (GUI). Describe TWO (2) basic elements of a GUI operating system.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)

2. The school wants to buy a new printer and you were asked to recommend them a type of printing technology to buy.
   a. State the type of printing technology that you would recommend to buy.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(1 mark)

b. i) Explain ONE (1) of the common printing errors that are common with your preferred printing technology.

______________________________________________________________________

(1 mark)

ii) Suggest an appropriate method to fix the error that you explained in question b. i) above.

______________________________________________________________________

(1 mark)

3. Managing computer files is very important and there are key file management practices that users should know.
   a. Explain TWO (2) file management practices that users should use to protect and keep their files safe and easy to find.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)
b. Describe a technique known as data compression and are sometimes used by users when storing user files.

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

(1 mark)
QUESTION THREE:  (16 Marks)

1. Word processing applications are commonly used by students for preparing school assignments or school reports. Students can use a text processor or document processor.
   a. Demonstrate your understanding of the differences between using a text processor and document processor by filling the table below with either Yes or Not.

<table>
<thead>
<tr>
<th>Required Features</th>
<th>Text Processor (Yes or No)</th>
<th>Document Processor (Yes or No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can use formatting such as bold and italic</td>
<td>i)</td>
<td>i)</td>
</tr>
<tr>
<td>Can save or print the report</td>
<td>ii)</td>
<td>ii)</td>
</tr>
<tr>
<td>Can import images or other objects</td>
<td>iii)</td>
<td>iii)</td>
</tr>
<tr>
<td>Can edit text with cut, copy and paste</td>
<td>iv)</td>
<td>iv)</td>
</tr>
</tbody>
</table>

   (2 marks)

b. Define the following features that a student can use with a document processor.

   i) thesaurus

   ________________________________________________________________
   ________________________________________________________________

   (1 mark)

   ii) mail-merge

   ________________________________________________________________
   ________________________________________________________________

   (1 mark)

c. Explain the differences between serif and sans serif fonts.

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

   (2 marks)
d. State the word processing features that can be used to perform the following formatting tasks.

i) To move the title and the content to the centre of a document.

________________________________________________________________________

(1 mark)

ii) To show the date and page number on the very top or bottom of the page.

________________________________________________________________________

(1 mark)

2. The Ministry of Health is very much concerned with the recent installation of new Health Management System. The new system allows health workers online access to patient information and other health information.

a. With the information above discuss an ethical issue that patient must know with the use of the new online Health Management System.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(2 marks)

b. Discuss appropriate measures that the Ministry of Health must provide to safeguard or protect patient information.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(2 marks)
c. The Ministry of Health doctors are trialing and testing the use of video conferencing for diagnosing patients in remote islands. Discuss how the use of video conferencing will change the nature of work within the Ministry.

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

(2 marks)

3. Describe the following key roles in the field of Information Communication Technology.

a. Data entry operator.

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

(1 mark)

b. Project manager

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

(1 mark)
1. The spreadsheet below shows Mafi’s computer class marks. Use it to answer the questions that follow.

<table>
<thead>
<tr>
<th>ID</th>
<th>Test 1 /30</th>
<th>Test 1 /10</th>
<th>Test 1 /20</th>
<th>Exam /40</th>
<th>Total Marks /100</th>
</tr>
</thead>
<tbody>
<tr>
<td>20024406</td>
<td>13</td>
<td>6</td>
<td>12</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>20504058</td>
<td>18</td>
<td>6</td>
<td>10</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>20802230</td>
<td>12</td>
<td>5</td>
<td>13</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>20802235</td>
<td>18</td>
<td>4</td>
<td>11</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>20802236</td>
<td>5</td>
<td>3</td>
<td>14</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>20802239</td>
<td>17</td>
<td>6</td>
<td>13</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>20802240</td>
<td>17</td>
<td>6</td>
<td>12</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>20802242</td>
<td>12</td>
<td>7</td>
<td>16</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>20802243</td>
<td>17</td>
<td>7</td>
<td>12</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>20802245</td>
<td>18</td>
<td>8</td>
<td>12</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>20802248</td>
<td>16</td>
<td>7</td>
<td>12</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>20802251</td>
<td>13</td>
<td>7</td>
<td>11</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

a. Describe how the following spreadsheet features and functions can be useful for Mafi.

i) the COUNT function.

ii) the MAX and MIN function.

iii) the SORT feature.

(1 mark)

(1 mark)

(1 mark)
b. Write a spreadsheet function that can be used to compute the Total marks in cell F4.

______________________________________________________________________
______________________________________________________________________

(2 marks)

c. Explain to Mafi the quickest way to find all the remaining total marks for all the students.

______________________________________________________________________
______________________________________________________________________

(1 mark)

d. Comment in cell G4 by write down an IF function to return “PASS” if the students Total mark is more or equal to 50 or “FAIL” if the total mark is less than 50.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)

e. Mafi wants to present her students’ Total Marks on a graph. Describe the steps that you may take in creating an appropriate excel chart for Mafi. You should include all the appropriate components required for your chart.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(3 marks)
2. The spreadsheet table below shows the total volume of petrol bought by a petrol station in a month. Use the spreadsheet table to answer the questions that follow.

<table>
<thead>
<tr>
<th>Months</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (Litres)</td>
<td>500</td>
<td>450</td>
<td>460</td>
<td>480</td>
<td>520</td>
<td>510</td>
</tr>
<tr>
<td>Costs ( $2/litre)</td>
<td>$1,000.00</td>
<td>$900.00</td>
<td>$920.00</td>
<td>$960.00</td>
<td>$1,040.00</td>
<td>$1,020.00</td>
</tr>
</tbody>
</table>

a. Describe TWO (2) cell formats being applied on the cells with the monthly costs.

______________________________________________________________________
______________________________________________________________________

(1 mark)

b. The owner is very concerned with the unexpected change in petrol prices. Clearly explain to the owner why applying “what if” analysis to his spreadsheet can be very helpful.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)

c. The owner wants to print only the range of cells shown on the table. Briefly explain how the owner can make sure that he prints only the required cells using the spreadsheet application.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

(2 marks)
QUESTION FIVE

1. Mafi has been asked to develop a Database for the school to replace their manual system. She needs to present to the school administrators that the new database will be very useful.

   a. Describe TWO (2) important factors to support Mafi’s presentation that having a Database is very useful for the school.

      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

      (2 marks)

   b. Fill the spaces below with appropriate fields for the STUDENT information with related data types and sample data. The table should include data about the student’s name, date of birth, gender and village.

      | Field | Data Type | Sample Data |
      |-------|-----------|-------------|
      | i)    |           |             |
      | ii)   |           |             |
      | iii)  |           |             |
      | iv)   |           |             |

      (4 marks)

   c. Demonstrate your understanding of SQL statements by explaining the purpose of the following statements used by Mafi.

      i) SELECT fieldname FROM student.

      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

      (1 mark)

      ii) SELECT fieldname1 FROM student WHERE (fieldname2='value 1') AND (fieldname3='value 2')

      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

      (2 marks)
2. Use the database table below to produce the output for each of the following database operations.

(Table name : Member)

<table>
<thead>
<tr>
<th>Code</th>
<th>Area</th>
<th>Fee</th>
<th>Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1108</td>
<td>Zone 1</td>
<td>$20</td>
<td>Yes</td>
</tr>
<tr>
<td>1103</td>
<td>Zone 2</td>
<td>$25</td>
<td>Yes</td>
</tr>
<tr>
<td>1102</td>
<td>Zone 5</td>
<td>$100</td>
<td>No</td>
</tr>
<tr>
<td>1101</td>
<td>Zone 2</td>
<td>$80</td>
<td>Yes</td>
</tr>
</tbody>
</table>

a. SELECT Area FROM Member
ORDER BY code ASCENDING

b. SELECT Code, Area, Fee FROM Member
WHERE Area = 'Zone 2' OR Fee = '$20'

c. SELECT COUNT (Paid) AS YES FROM Member
WHERE Paid = 'YES'

3. Describe how you can transfer data from a database table to a spreadsheet.
## TONGA FORM SIX CERTIFICATE

### COMPUTER STUDIES

#### 2014

(Marker’s Use Only)

<table>
<thead>
<tr>
<th>SECTIONS</th>
<th>MARK</th>
<th>CHECK MARKER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Choice</td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Question One</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Question Two</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Question Three</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Question Four</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Question Five</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>