



## 18.0 COMPUTER STUDIES (451)

Computer Studies was tested using three papers in the year 2007 KCSE examination. *Paper 1 (451/1)*, a theory paper tested the entire syllabus. It had two sections: A and B. Questions in *section A* were set from any part of the syllabus, while those in *section B* were mainly on computer applications. The paper is taken in 2½ hours and carries 100 marks. *Paper 2 (451/2)* is a practical paper with questions that were set from two packages: *database, spreadsheets, desktop publishing or word processing*. The two questions are compulsory and the examination is taken in 2½ hours and carries a total of 50 marks. *Paper 3 (451/3)* is a project paper taken by candidates from the months of March to September. It contributes 50 marks out of the 200 marks allowed for the whole examination.

### 18.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows performance in Computer Studies in the years 2006 and 2007.

Table 21: Candidates' Overall Performance in Computer Studies for the last Two Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	451/1		100	51.51	18.22
	451/2&3		100	57.57	16.77
	<b>Overall</b>	<b>4,181</b>	<b>200</b>	<b>109.08</b>	<b>32.00</b>
2007	451/1		100	45.89	18.3
	451/2&3		100	63.62	15.44
	<b>Overall</b>	<b>4,732</b>	<b>200</b>	<b>109.54</b>	<b>30.00</b>

From the table above, it can be observed that:

- 18.1.1 Candidature in Computer Studies (451) increased from **4,181** candidates in the year 2006 to **4,732** candidates in the year 2007, a candidature increase of **551** candidates (**13.18%**).
- 18.1.2 Performance in paper 2 (451/2) dropped from a mean score of **51.51%** in the year 2006 to **45.89%** in the year 2007. The drop can be attributed mainly to lack of adequate preparation by the candidates.
- 18.1.3 Performance in the practical and project papers combined (451/2&3) went up significantly from a mean score of **57.57%** in the year 2006 to **63.62%** in the year 2007.
- 18.1.4 Overall performance in computer studies improved slightly as attested by a mean score of **109.08** in the year 2006 when compared to **109.54** in the year 2007.

Questions which were poorly performed by candidates in the year 2007 KCSE Computer Studies (451) examination are discussed here below.

### 18.2 PAPER 1 (451/1)

#### Question 5

Some of the storage disks available are: Zip disks, 3  $\frac{1}{2}$  inch floppy disks, DVDs and 5  $\frac{1}{4}$  inch floppy disks. Arrange these devices in an ascending order of storage capacity.

Some storage disks, that is, Zip disks, 3½ inch floppy disks, DVDs and 5¼ inch floppy disks were listed randomly and candidates were required to list them in ascending order of storage capacity.

#### **Weaknesses**

Many candidates could not list these storage media in ascending order. Some even listed the 3½ inch floppy disks before the 5¼ inch floppy disks. This could have been as a result of candidates lack of knowledge on the 5¼ inch floppy disk which is now obsolete (outdated) and no longer in use.

#### **Expected Responses**

5¼ inch floppy disks, 3½ inch floppy disks, Zip disks, DVDs.

#### **Advice to Teachers**

Teachers should teach this area on storage media thoroughly and point out the differences between the various types of storage disks that are covered in the syllabus and their storage capacities even if the media has been overtaken by events. They should link the students to backward and forward ICTs.

#### **Question 6**

You have been asked to change your computer password. State a precaution you need to take in order to avoid each of the following:

- (a) forgetting the password
- (b) hacking.

Candidates were to state the precaution one needs to take in order to avoid forgetting a password.

#### **Weaknesses**

Many candidates stated what should be done if/when one forgets a password which was not the requirement of the question. Candidates may have misunderstood the question which required knowledge on the preventive action that one should take so as not to forget a password while the candidates gave the curative action that should be taken when one has already forgotten the password.

#### **Expected Responses**

- (a) To avoid forgetting a password, use a simple password that you can easily regenerate.
- (b) To avoid hacking, use a password, do not use your names, family names or one character.

#### **Advice to Teachers**

Teachers should explain to the students the best possible ways of creating both complex and easy passwords and how to avoid forgetting them.

#### **Question 10(b)**

State **four** situations in which data may lose integrity.

Candidates were required to state four situations in which data may lose integrity.

### Weaknesses

Most candidates gave detailed responses on lost integrity and did not address the requirement of the question in terms of threats to loss of integrity. It was evident from the candidates' responses that some misunderstood the question.

### Expected Responses

- During transmission.
- During data processing.
- During data capture.
- During data collection.
- During storage.

### Advice to Teachers

It is important for teachers to impress on candidates to take time to understand the question before they write down an appropriate response. While teaching the topic on *Data Security, Integrity and Controls*, teachers must differentiate threats to data security and actual situations where data has been compromised so that the students grasp the concepts properly. Accuracy, timeliness and relevance should be stressed.

### Question 17(a)

- (a) Define the following web related terms:
- (i) web browser
  - (ii) hyper link
  - (iii) hyper text document.

Candidates were required to define the terms Web browser, Hyperlink and Hypertext document

### Weaknesses

Many candidates viewed a web-browser as a person browsing and had difficulties distinguishing between a hyperlink and a hypertext document. This could have been as a result of many schools not having internet connections hence lack of exposure. Some candidates especially from remote areas have never used the internet.

### Expected Responses

- (i) A **browser** is a program that enables one to find, retrieve, view and send hypertext and hypermedia document(s) over the World Wide Web (www).
- (ii) A **hyperlink** is an element / text/ picture / icon or graphic in an electronic document that links to another place in the same document or entirely on a different document /page/site.
- (iii) A **hypertext document** is a document containing links to the documents located on the same computer or another computer on the internet.

### Advice to Teachers

Where there is no internet, Teachers should make use of simple web pages in stand-alone computers to train the students on Web terminology and skills. Visits to institutions connected to the internet will assist a lot.

### Question 19

A manager wishes to replace the current manual system with a computerised one.

- (a) Describe **three** main areas that must be evaluated to justify the replacement.
- (b) List the **three** areas that would be considered in the requirements specifications.
- (c) State and explain **three** ways that can be followed to replace the current system.

This question required candidates' to describe areas to justify replacement of a current system with a computerized one, state requirement specifications and explain ways to follow to replace the current system.

### Weaknesses

Most candidates just stated instead of describing the areas to justify replacement of a current system. Others mistook the methods of replacing a system with those of developing one. This could have been as a result of wrong interpretation of the question.

### Advice to Teachers

Teachers should use well explained diagrams while teaching the concepts of System Development Life Cycle (SDLC) to the students so that they grasp the pre-development, development and post-development strategies in SDLC.

### Expected Responses

- (a)
  - **Economic feasibility:** it involves benefits and cost.
  - **Technical feasibility:** it involves determining whether or not a system can actually be constructed to solve the problem at hand.
  - **Operation feasibility:** asks if the system will work when developed and installed and how the user will take it.
  - **Scheduled feasibility:** it is concerned with whether the system can be put into use within the stipulated time.
  - **Legal feasibility:** involves policies and government laws.
  - **Social feasibility:** acceptability by users.
- (b)
  - Hardware requirements
  - Software requirements
  - User requirements
  - Input requirements
  - Output requirements
- (c)
  - **Parallel change over:** the old system continues alongside the new system for a while.
  - **Direct change over:** the user stops using the old system and starts using the new one
  - **Phased / Pilot change over:** this is used with larger systems that can be broken into individual modules that can be implemented separately at different times.

### 18.3 PAPER 2 (451/2)

This paper was composed of two (2) questions. *Question 1* was on *spreadsheets* while *Question 2* was on *word processing*. Each question comprised of 50 marks and candidates were required to answer both questions.

#### Question 1(i) (ii)

Perfect Pizza Factory manufactures pasta for distribution to restaurants in Nairobi. Assuming that you are now working for the factory and have been given the following sales data:

	A	B	C	D	E	F	G	H	I
1	Restaurants	July	August	September	October	November	December	Total Product Sales	Average
2									
3	Nankos	34567	45671	89650	67222	56113	96282		
4	Burgees	100000	97600	82199	105999	140663	190654		
5	Kenge	96543	97600	82199	105999	140663	190654		
6	Tika	65000	97600	82199	105999	140663	190654		
7	Aspelos	103456	97645	82297	105669	140220	175000		
8	Marries	76899	85400	96709	101324	140882	181230		
9	Generals	98000	97600	82199	105999	140663	190654		
10	My Café	25000	19654	15222	8000	5602	200		
11	Shooters	86777	75432	84368	105999	55678	201345		
12									
13									
14	Total Monthly Sales								

Given that the July sales were 10% above the sales for June in all restaurants:

- (ii) insert a column before July and use absolute cell referencing to calculate the sales for June;

In this question, candidates were required to use absolute cell referencing to calculate 10% less of values existing in a worksheet, that is, values for June by use of July values.

#### Weaknesses

Most candidates were unable to compute the required values. The formula used was not correctly constructed. This portrayed lack of very basic computation techniques. Some candidates attempted to change the value provided, that is, 10 and changed it to 10% but still typed the wrong formula.

#### Expected Responses

Given that the value 10 is in cell B16 and that after inserting a blank column for June the column with July sales shifted to column C from B, the expected formula was

$$\begin{aligned}
 &= C3 * 100 / (100 + \$C \$16) \\
 &\quad \text{or} \\
 &= C3 * B\$ 16 / 11 \\
 &\quad \text{or} \\
 &= C3 * \$B \$ 16 / 11 \\
 &\quad \text{or} \\
 &= C3 * 100 / (100 + C \$16)
 \end{aligned}$$

The formula was to be typed in B3 and then copied down the column in order to generate the values for the other restaurants for the month of June.

## Question 2 (a) & (b)

Using a word processing package, type the passage below as it appears and save it as A:\STRESSDOC1.

# 1

*A parent who never expressed  
appreciation, said, 'Well done' or  
'I'm proud of you' can leave  
an indelible mark.*

## With attitude

There is much more to facing stress in life than the right diet and physical exercises. Indeed, it could be that the attitude on which your life is founded is the most vital part of the picture.

### Take charge of your life

Keeping stress at bay involves treating yourself as someone with a right to life. That will involve a degree of assertiveness and confrontation. Those very words can conjure up images of a shoot-out at the OK Corral. It does not have to be that way. There is a world of difference between being assertive and being aggressive. Sadly, many who need to break out from being always submissive to the expectation and demands of others can only imagine that the alternative is to be aggressive. While the real alternative is to be assertive.

#### *You are submissive when:*

- you are not willing or not able to express your feelings, needs, values and personal concerns
- you let others invade your personal space and trample on your rights.

#### *You are aggressive when:*

- you tend to stomp over other people
- you inflict and impose your views and values on others, expressing your feelings at their expense.

#### *You are assertive when:*

- you say what you want, without overwhelming or abusing other people
- you are clear about your own position and let other people know
- you can accept that others may have views different from your own and may wish to negotiate their position accordingly.

Assertiveness involves much more than defending your rights. It equally concerns your being prepared to expect that your own needs be recognized and met. In particular, two key statements typify the maturity of character that lies behind being assertive. These are the conviction that:

(a) *I have the right to decide for myself whether or not I am responsible for finding a solution to someone else's problem and they have the same right when faced with mine.*

(b) *I have the right to deal with people without having to make them like me and they have the same right concerning me.*

Few people find that assertiveness comes easily. But the hard work involved in monitoring your personal style together with some training through a local evening class or appropriate reading pays dividends. This is because mastering assertiveness leads to:

- better and more honest communication
- giving others greater dignity and respect
- learning to relax and reduce anxiety
- getting more of your needs accepted
- closer interpersonal relationships
- taking responsibility for what happens in your life
- feeling better about yourself
- protection from being taken advantage of by others.

(b) (i) Spell check the passage.

(ii) Indent the first line of the paragraph starting with "Keeping stress at bay....." by 1.2 cm (or 0.47").

(iii) Select the paragraph starting with "Assertiveness involves much more....." and set the left and the right margins to 2 cm (or 0.79") and fully justify. Save the changes as A:\STRESSDOC2.

(iv) Insert page numbering at the bottom center of each page.

In part 2(a) and (b) of the question, candidates were required to type the passage as it appeared, indent the first line in the paragraph, change margins of a paragraph and insert page numbers on the passage.

### Weaknesses

The paragraph starting with "*A parent who....*" was not correctly typed by quite a number of candidates. Some did not note that the paragraph was right aligned. So they kept on pressing the enter key at the end of each line. This changed some lower case characters to upper case at the beginning of each line. Another weakness was in the formatting of the character "*I*" to conform to the one that appeared in the passage. Most candidates did not pay attention to the size of the numeric character and instead left it unformatted. Others changed the font size to conform. Many candidates were also unable to indent the first line of the paragraph starting with "*Keeping stress at bay....*" by 1.2cm.

### Expected Responses

- (a) Candidates were expected to format the document and align it to the right while typing the given paragraph. Candidates could have formatted the character "*I*" properly if they treated it as a drop cap. The drop cap was in margin and dropped nine lines.
- (b) (i) Candidates were required to spell check the passage.
- (ii) Candidates were required to use paragraph formatting features to format the paragraph to the required specifications.
- (iii) Candidates were required to select the paragraph and then use page formatting features to change the margins to the required measurement.
- (iv) Candidates were required to correctly number the pages of the passage.

## **18.4 PAPER 3 (451/3)**

This paper comprised of one question that was to be undertaken in a period of seven (07) months. Candidates were required to be supervised by a teacher who was eventually expected to mark the candidates' work before the final marking by the external assessor who was sent by the Council.

### **Weaknesses**

Weaknesses were noted in *Analysis*, *Design* and in the *Implementation* of the design.

#### **18.4.1 Analysis**

Candidates were required to study the question thoroughly in order to identify weaknesses of the current system, possible benefits with the computerized system and feasibility analysis of the proposed system development as well as the complete problem definition.

### **Weaknesses**

Some candidates seemed to have knowledge of the requirements but they gave wrong content or very scanty explanations. This was depicted in the candidates' lack of ability to relate what they had learned with the problem at hand. This is a clear indication of the failure of the candidates to apply classroom knowledge in solving real life problems in computing.

#### **18.4.2 Design**

Candidates were required to use the details provided to come up with entities or relations and their attributes and their relationships. These structures were to be used as the system specifications for the required system.

### **Weaknesses**

Candidates portrayed lack of ability to formulate good designs for use in system implementation.

#### **18.4.3 Demonstration and Testing**

Candidates were required to implement ways of validating input since the users are prone to many typing errors.

### **Weaknesses**

One of the major weaknesses was in system validation especially with respect to input. Most candidates did not implement validation checks.



## 23.16 COMPUTER STUDIES (451)

### 23.15.1 Computer Studies Paper 1 (451/1)



MANYAM FRANCHISE  
Discover! Learn! Apply!

Name ..... Index number ...../.....

451/1

COMPUTER STUDIES

Paper 1

(THEORY)

Oct./Nov. 2007

2  $\frac{1}{2}$  hours

Candidate's signature .....

Date .....

**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**Kenya Certificate of Secondary Education**

**COMPUTER STUDIES**

**Paper 1**

**(THEORY)**

**2  $\frac{1}{2}$  hours**

*Write your name and index number in the spaces provided above.*

*Sign and write the date of the examination in the spaces provided above.*

*This paper consists of TWO sections; A and B.*

*Answer ALL the questions in section A.*

*Answer question 16 and any other THREE questions from section B.*

*All answers should be written in the spaces provided on the question paper.*

**For official Use Only**

Section	Question	Candidate's Score
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

**This paper consists of 14 printed pages**

**Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.**

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**Turn over**

### SECTION A (40 marks)

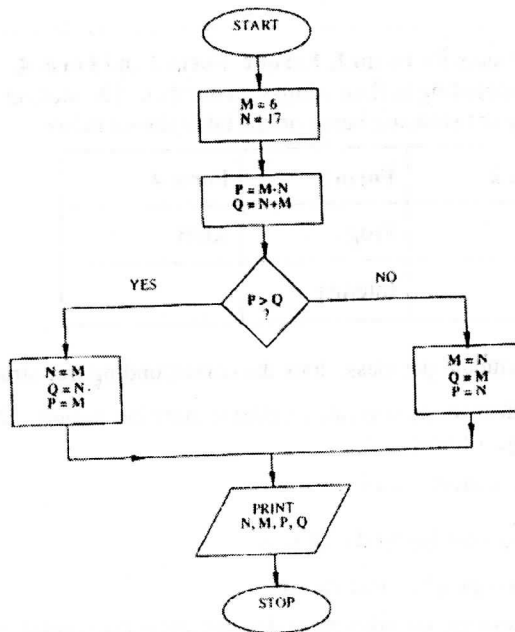
Answer **ALL** the questions in this section in the spaces provided.

- 1 Describe the computer booting process. (2 marks)
- 2 State the functions of the following keys on the computer keyboard: (2 marks)
  - (a) backspace .....
  - (b) insert (ins). .....
- 3 Jane has noticed the following problems in her computer:
  - ♦ it is taking a longer time to start up;
  - ♦ it is often hanging;
  - ♦ applications are taking longer to load.State **three** possible causes of these problems and how they can be solved. (3 marks)
- 4 (a) Define authenticity as used in software selection. (1 mark)  
(b) List **four** ways of acquiring software in an organization. (2 marks)
- 5 Some of the storage disks available are: Zip disks,  $3\frac{1}{2}$  inch floppy disks, DVDs and  $5\frac{1}{4}$  inch floppy disks. Arrange these devices in an ascending order of storage capacity. (2 marks)
- 6 You have been asked to change your computer password. State a precaution you need to take in order to avoid each of the following:
  - (a) forgetting the password (1 mark)
  - (b) hacking. (1 mark)
- 7 State **four** benefits of using a computer in a school library. (2 marks)
- 8 Using six bits, find the two's complement of  $-23_{10}$ . (4 marks)
- 9 Explain data series, axis and legend as used in spreadsheet charts: (3 marks)
  - data series .....
  - axis .....
  - legend. ....
- 10 (a) Describe the term data integrity. (2 marks)  
(b) State **four** situations in which data may lose integrity. (2 marks)
- 11 State the function of each of the following:
  - (a) network interface card (1 mark)
  - (b) network protocol (1 mark)
  - (c) hub. (1 mark)
- 12 List **four** types of publications that can be designed by using desktop publishing software. (2 marks)
- 13 Differentiate between the following pairs of terms as used in database design: (2 marks)
  - (a) input mask and design
  - (b) table and query. (2 marks)
- 14 List **four** factors to be considered when purchasing an operating system. (2 marks)
- 15 Write an algorithm to compute the area of a triangle. (2 marks)

## SECTION B (60 marks)

Answer **question 16** and any other **THREE** questions from this section in the spaces provided.

- 16 (a) Study the flowchart below and answer the questions that follow.



- (i) Name the control structures used in the flowchart. (2 marks)
- (ii) Determine the values of M, N, P and Q. (4 marks)
- (iii) Write the pseudocode for the flowchart. (7 marks)
- (b) List **four** functions of an assembler. (2 marks)
- 17 (a) Define the following web related terms:
- (i) web browser (1 mark)
- (ii) hyper link (1 mark)
- (iii) hyper text document. (1 mark)
- (b) List **six** activities performed on the web. (3 marks)
- (c) An institution has ten stand-alone computers.
- (i) Suggest with reasons the most appropriate topology required to inter-connect the computers. (3 marks)
- (ii) State the necessary steps required to connect the computers to the internet. (4 marks)
- (d) Below is an e-mail address:
- $\overbrace{ggitau}^{(i)} @ \overbrace{moest}^{(ii)} . \overbrace{edu}^{(iii)} . \overbrace{ke}^{(iv)}$
- Name the parts labelled : (2 marks)

- (i) .....
- (ii) .....
- (iii) .....
- (iv) .....

- 18 A computer C directory has folders for **Form 1**, **Form 2**, **Form 3** and **Form 4**. Each class has student's folders labelled according to their admission number. The students create their own folder for the subject they are studying based on the table shown below.

Form 1	Form 2	Form 3	Form 4
OS	SP	Prog.	ADB
WP	DTP DB	Internet	

- (a) Assuming there is one student per class, draw the corresponding tree structure. (6 marks)
  - (b) (i) A form four student wants to create a folder to store her project. State the path for that project folder. (2 marks)
  - (ii) Suggest how the student can ensure that:
    - work is not lost in case the hard disk fails; (1 mark)
    - the project is not copied by other students. (1 mark)
  - (c) (i) Other than I/O devices, list other three devices under the control of the operating system. (3 marks)
  - (ii) Explain any one of the devices named in (c)(i) above. (1 mark)
  - (d) Define the term trouble shooting. (1 mark)
- 19 A manager wishes to replace the current manual system with a computerised one.
- (a) Describe **three** main areas that must be evaluated to justify the replacement. (6 marks)
  - (b) List the **three** areas that would be considered in the requirements specifications. (3 marks)
  - (c) State and explain **three** ways that can be followed to replace the current system. (6 marks)
- 20 (a) A headteacher keeps the following student details in a database: Name, Address, Town, Date of birth, Marks scored, Fees paid.
- (i) Name the most appropriate primary key. Give a reason. (2 marks)
  - (ii) For each item in the student's details above, indicate its most appropriate datatype as used in the database. (3 marks)
  - (iii) Explain why input screens are better data entry designs than entering data directly to a table. (2 marks)
  - (b) List **two** career opportunities associated with databases. (2 marks)

(c) Distinguish between:

(i) a table in word-processing application and a table in a database application  
(2 marks)

(ii) mouse pointer and insertion point.  
(2 marks)

(d) Outline the steps to be followed in order to merge cells in a word processing table.  
(2 marks)

**23.15.2 Computer Studies Paper 2 (451/2)**

**451/2**  
**COMPUTER STUDIES**  
**Paper 2**  
**PRACTICAL**  
**Oct./Nov. 2007**  
**2½ hours**

**THE KENYA NATIONAL EXAMINATIONS COUNCIL**  
**Kenya Certificate of Secondary Education**  
**COMPUTER STUDIES**  
**Paper 2**  
**PRACTICAL**  
**2½ hours**

**INSTRUCTIONS TO CANDIDATES**

*Type your name and index number at the top right hand corner of each printout.  
Sign and write the date of the examination below the name and index number  
on each printout.*

*Write your name and index number on the diskette.*

*Write the name and version of the software used for each question attempted in the answer sheet.  
Passwords should not be used while saving in the diskettes.*

*Answer all questions.*

*All questions carry equal marks.*

*All answers must be saved in your diskette.*

*Make a printout of the answers on the answer sheets provided.*

*Hand in all the printouts and the diskette.*

**This paper consists of 5 printed pages**

**Candidates should check the question paper to ascertain that all the  
pages are printed as indicated and no questions are missing.**

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**Turn over**

1. Perfect Pizza Factory manufactures pasta for distribution to restaurants in Nairobi. Assuming that you are now working for the factory and have been given the following sales data:

	A	B	C	D	E	F	G	H	I
1	Restaurants	July	August	September	October	November	December	Total Product Sales	Average
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12									
13									
14	Total Monthly Sales								

- Enter the data shown above into a spreadsheet and save it as Exam 1. (10 marks)
- The sales for Appetos for October have been entered incorrectly, and should be 115669. Update the information in the spread sheet. (1 mark)
- Move the row containing Tika's information to the beginning of the list above Nankos. (1 mark)
- Delete the blank row after Shooters. (1 mark)
- Format all numeric values to 2 decimal places and use comma separators. (2 marks)
- Use a formula in Column H2 to calculate the Total Sales for the first restaurant. (1 mark)
- Copy the formula down the column to calculate the Total Sales for all restaurants. (1 mark)
- Use a formula to calculate the Total Sales for the Month of July. (2 marks)
- Copy the formula across the row to calculate the totals for the other months. (1 mark)
- Using an appropriate function, calculate the Average Sales for each restaurant in Column I. (3 marks)
- Format Columns H and I to currency with 2 decimal places. (1 mark)

- (l) Given that the July sales were 10% above the sales for June in all restaurants:
- (i) enter the label '% increment' in cell A16 and a value 10 in cell B16; (1 mark)
  - (ii) insert a column before July and use absolute cell referencing to calculate the sales for June; (5 marks)
  - (iii) save the file as EXAM 2. (2 marks)
- (m) Using a formula on cells B17 and B18 respectively, determine:
- (i) the number of restaurants whose sales were above 60000 for the month of November; (2 marks)
  - (ii) the maximum sales for the month of December. (2 marks)
- (n) Create a line graph on a new sheet (monthly sales) using the file EXAM 2 in part (l) above and label the following: (8 marks)
- Chart title: Monthly Pasta Sales July-Dec 2005  
Y-axis: Total Monthly Sales  
X-axis: Month  
Legend Position: Right
- (o) Print EXAM 1, EXAM 2 and the graph in landscape orientation. (6 marks)
2. (a) Using a word processing package, type the passage below as it appears and save it as A:\STRESSDOC1. (27 marks)

# 1

*A parent who never expressed appreciation, said, 'Well done' or 'I'm proud of you' can leave an indelible mark.*

## With attitude

There is much more to facing stress in life than the right diet and physical exercises. Indeed, it could be that the attitude on which your life is founded is the most vital part of the picture.

### Take charge of your life

Keeping stress at bay involves treating yourself as someone with a right to life. That will involve a degree of assertiveness and confrontation. Those very words can conjure up images of a shoot-out at the OK Corral. It does not have to be that way. There is a world



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- you are clear about your own position and let other people know
- you can accept that others may have views different from your own and may wish to negotiate their position accordingly.

Assertiveness involves much more than defending your rights. It equally concerns your being prepared to expect that your own needs be recognized and met. In particular, two key statements typify the maturity of character that lies behind being assertive. These are the conviction that:

*(a) I have the right to decide for myself whether or not I am responsible for finding a solution to someone else's problem and they have the same right when faced with mine.*

*(b) I have the right to deal with people without having to make them like me and they have the same right concerning me.*

Few people find that assertiveness comes easily. But the hard work involved in monitoring your personal style together with some training through a local evening class or appropriate reading pays dividends. This is because mastering assertiveness leads to:

- better and more honest communication
- giving others greater dignity and respect
- learning to relax and reduce anxiety
- getting more of your needs accepted
- closer interpersonal relationships
- taking responsibility for what happens in your life
- feeling better about yourself
- protection from being taken advantage of by others.

- (b) (i) Spell check the passage. (2 marks)
- (ii) Indent the first line of the paragraph starting with "Keeping stress at bay....." by 1.2 cm (or 0.47"). (2 marks)
- (iii) Select the paragraph starting with "Assertiveness involves much more....." and set the left and the right margins to 2 cm (or 0.79") and fully justify. Save the changes as A:\STRESSDOC2. (6 marks)
- (iv) Insert page numbering at the bottom center of each page. (2 marks)
- (c) (i) Retrieve A:\STRESSDOC1 and convert all the text from the paragraph starting with "There is much more....." into two columns of the same width and height. (5 marks)
- (ii) Change the line spacing for the entire paragraph starting with "There is more to facing stress....." to 1.5. (2 marks)
- (iii) Save the changes as A:\STRESSDOC3. (1 mark)
- (d) Print the documents; A:\STRESSDOC1, A:\STRESSDOC2 and A:\STRESSDOC3. (3 marks)

## 24.16 COMPUTER STUDIES (451)



MANYAM FRANCHISE  
Discover! Learn! Apply

### 24.16.1 Computer Studies Paper 1 (451/1)

1.
  - When the computer is switched on, the computer does power on self testing (POST).
  - Reads the system file in the ROM.
  - Loads the operating system after checking the drive(s) containing it.
  - The operating system checks the input/output devices. (4 x 1/2 = 2 marks)
2.
  - (a) **Backspace:** Deletes the characters to the left of the cursor/insertion point. Moves the cursor one space to the left. (1 mark)
  - (b) **Insert:** Switches between insert and type over or overwrite modes. (1 mark)
3.
  - **Too many programs installed:** uninstall unnecessary programs, increase main memory or upgrade the processor with a faster one.
  - **Corrupted system files:** re-install the operating systems and the applications.
  - **Virus attack:** load the latest anti-virus and clean the computer. (3 x 1 = 3 marks)
4.
  - (a) Information regarding the source of the software or a proof of origin of software. (1 mark)
  - (b)
    - In-house developed.
    - Outsourcing the software.
    - Buying ready made.
    - Free ware/ Shareware. (4 x 1/2 = 2 marks)
5. 5 1/4, 3 1/2, Zip disks, DVDs. (2 marks)
6.
  - (a) To avoid forgetting, use password that you can easily regenerate. (1 mark)
  - (b) To avoid hacking, use password, do not use your names, family names or one character. (1 mark)
7.
  - Faster issuing of books.
  - Easy access to the catalogue.
  - Upto date records.
  - Audit of books.
  - Online referencing. (Any 4 x 1/2 = 2 marks)
8. Step 1 Binary Equivalent  $23_{10} = 10111_2$   
Step 2 Add 0 in front of the MSB to make it six bit number =  $010111_2$   
Step 3 Find one's complement =  $101000_2$   
Step 4 Add 1 to No.

$$\begin{array}{r} 101000 \\ +1 \\ \hline 101001_2 \end{array}$$

(4 marks)
9.
  - **Data series:** The range of data from the worksheet that is used to create the graph.
  - **Axis:** A vertical or horizontal line against which data is plotted.
  - **Legend:** A cross reference showing how each series is represented in the chart, that is, a key. (3 marks)
10.
  - (a) Data integrity - Ensuring the accuracy and completeness of data when it enters a system and throughout its subsequent processing. (2 marks)

- (b)
- During transmission.
  - During data processing.
  - During data capture.
  - During collection.
  - During storage.
- (Any 4 x 1/2 = 2 marks)
11. (a) **Network Interface Card:** Provides a physical connection between a computer and data transmission media. (1 mark)
- (b) **Network protocols:** Provide a logic which governs the ways computers communicate over a network. (1 mark)
- (c) **Hub:** Provides additional ports for computer connectivity. (1 mark)
12. Newsletters (Periodicals), brochures, posters, calendars, certificates, cards, books.  
(Any 4 x 1/2 = 2 marks)
13. (a) **Input mask** is a format restricting the way data should be entered into the database while **design** is the establishment of the layout of the user interface that enable the user to interact with the database such as form and screen design. (2 marks)
- (b) **Table** is a structure consisting of rows and columns used by the database to store and display data, While a **Query** are set of statements used to filter and display data from the database. (2 marks)
- 14.
- Hardware configuration, for example: Memory size.
  - Model/design, for example: IBM.
  - Application intended for the computer.
  - User friendliness.
  - Availability in the market.
  - Cost.
  - Reliability.
- (Any 4 x 1/2 = 2 marks)
15. Read b, h  
     A       =       1/2bh  
     Display A  
     Exit  
(2 marks)
16. (a) (i) Selection Sequence (2 marks)
- (ii) M = N = P = Q = 17 (4 marks)
- (iii) Start  
       M = 6  
       N = 17  
       P = M-N  
       Q = N+M  
  
       If P > Q then  
  
       N = M  
       Q = N  
       P = M  
  
       Else

M = N  
Q = M  
P = N

End if  
Print N, M, P and Q

End

(7 marks)

(b)

- Translating assembly language to source language (Source code object code).
- Linking the object code with other programs.
- Deleting errors.
- Producing object code.
- Allocates memory for the object code.

(2 marks)

17.

(a)

- (i) A **browser** is a program that enables one to find, retrieve, view and send hypertext and hypermedia document over the world wide web. (1 mark)
- (ii) A **hyperlink** is an element in an electronic document that links to another place in the same document or to an entirely different document. (1 mark)
- (iii) A **hypertext document** is a document containing links to the documents located on the same computer or another computer on the internet. (1 mark)

(b)

- Searching for information.
- Downloading.
- Advertising.
- Learning.
- Bookings and reservations.
- Communication, for example: fax, e-mail.
- Electronic funds transfer.

(Any 6 x 1/2 = 3 marks)

(c)

(i)

Most appropriate topology is star topology because: (1 mark)

- it is easy to set up, configure, control.
- Adding new devices is easy.
- If a computer stops working, the network is not affected.
- if a piece of cable is affected, only one computer is affected.

(Any 4 x 1/2 = 2 marks)

(ii)

- Connect the network.
- Acquire internet software, modems etc.
- Identify an internet service provider.
- Acquire/establish a communication link.
- Configure the system.

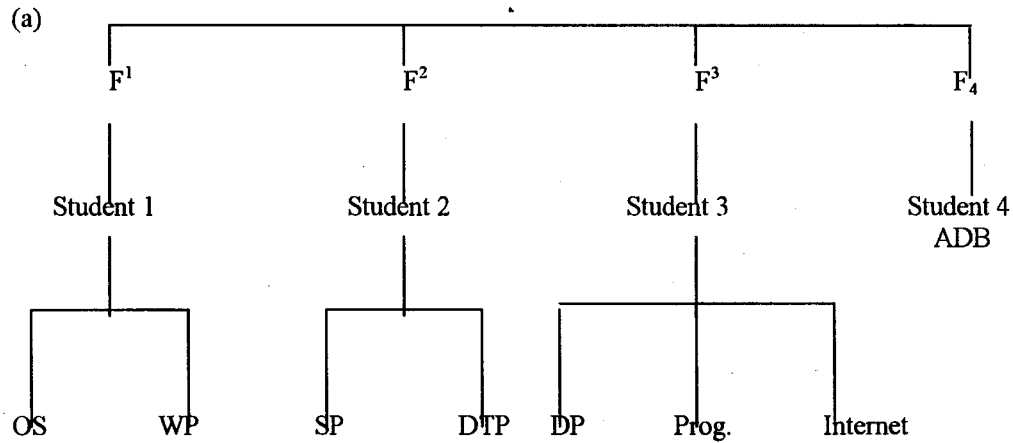
(Any 4 x 1 = 4 marks)

(d)

- (i) Personal identifier.
- (ii) Host/ server (computer).
- (iii) Top level domain.
- (iv) The country indicator.

(2 marks)

18.



(b) C: F<sub>4</sub>\Student 1\ADB\Project

- (c) (i) Back up. (1 mark)  
(ii) Use of password. (1 mark)

- (d) (i) **Processor:** The OS schedules the use of the processor by application packages.  
(ii) **Memory:** The OS partitions the memory and determines how it can be used.  
(iii) **Communication devices and ports:** The OS manages the routine of traffic via communication devices. (3 marks)

(e) Trouble shooting refers to detecting fault within an item (device).

(1 mark)

19.

- (a)
- **Economic feasibility:** It involves benefits and cost.
  - **Technical feasibility:** It involves determining whether or not a system can actually be constructed to solve the problem at hand.
  - **Operational feasibility:** This test of feasibility asks if the system will work when developed and installed.
  - **Schedule feasibility:** It is concerned with whether the system can be put into use within the stipulated time. (Any 3 x 2 = 6 marks)

- (b)
- Hardware requirements.
  - Software requirements.
  - User requirements. (3 marks)

- (c)
- **Parallel change over:** The old system continues alongside the new system for a few weeks or months.
  - **Direct change over:** The user stops using the old system and starts using the new system.
  - **Phased conversion:** This is used with larger systems that can be broken into individual modules that can be implemented separately at different times. (6 marks)

20.

- (a) (i) Name: It is the most appropriate as it is the one with the least chances of being shared wholly by more than one student. (2 marks)

- (ii) Name: Text  
Address: Text  
Town: Text  
D.O.B.: Date  
Marks: Number  
Fees: Currency (6 x 1/2 = 3 marks)
- (iii)
- Forms are more user friendly.
  - Forms have extended facilities for data entry that are not directly available on tables. (2 marks)
- (b)
- Database programmer.
  - Database administrator.
  - Database designer.
  - Data entry clerk.
  - Data processing manager. (2 x 1 = 2 marks)
- (c) (i) A table in a database contains records which can be referenced for or sorted but not for querying. (2 marks)
- (ii) **Mouse pointer** refers to the cursor that moves around as the mouse is moved on a surface / used to select. **Insertion point** is the position (marked by a cursor) where any typed character will appear. (2 marks)
- (d)
- Highlight the cells to be merged.
  - Invoke the merge command. (2 marks)

#### 24.16.2 Computer Studies Paper 2 (451/2)

1. (a) Award 1 mark for each of the 10 rows (for correct entries only). (10 marks)
- (b) 115699 to replace 105669. (1 mark)
- (c) Moving Row 7 to Row 2. (1 mark)
- (d) Deleting of R12. (1 mark)
- (e) Formatting to 2 decimal places (1 mark)  
Comma separator (1 mark)
- (f) = B2 + C2+ D2 + E2+ F2+ G2 (2 marks)
- (g) Copy of the formula in (f) (1 mark)
- (h) = Sum (B2:B10) (2 marks)
- (i) Copy of the formula in (h) (1 mark)
- (j) = Average (B2 : G2) (3 mark)
- (k) Formatting of "Total Product Sales" and 'average' to currency with 2dp. (1 mark)
- (l) (i) Value 10 in cell B 16. (1 mark)
- (ii)
- Insertion of a column. (1 mark)
  - Formula C<sub>2</sub> \*\$C\$16. (3 marks)

- Copy of formula. (1 mark)
    - Saving (file = Exam 2). (1 mark)
  - (m)
    - (i) = Count if (G2:G10, ">60 000"). (2 marks)
    - (ii) = Max(H<sub>2</sub>: H<sub>10</sub>). (2 marks)
  - (n)
    - Chart sheet. (1 mark)
    - Data selection. (2 marks)
    - V chart type. (1 mark)
    - Chart Title. (1 mark)
    - Axes title. (2 marks)
    - Legend placement. (1 mark)
  - (o) Printing
    - landscape orientation. (3 marks)
    - hardcopies. (3 marks)
- 2.
- (a)
    - 10 correct paragraphs, 1 mark each [typed correctly] formatting paragraph starting with A parent. (12 marks)
    - Title. (1 mark)
    - Any 3 bolded. (3 marks)
    - Bulleting. (4 marks)
    - Saving. (1 mark)
    - Drop cap 2 marks for 9 lines. (2 marks)
    - Italics Any 4 italicised. (4 marks)
  - (b)
    - (i) Spell check the passage [for whole document]. (2 marks)
    - (ii) Indenting. (2 marks)
    - (iii) Justification. (1 mark)
    - Left margin. (2 marks)
    - Right margin. (2 marks)
    - Saving. (1 mark)
    - (iv) Pagination. (2 marks)
  - (c)
    - (i) Retrieving into 2 columns. (5 marks)
    - (ii) Changing of line spacing to 1.5. (2 marks)
    - (iii) Saving new document. (1 mark)
  - (d) Printing the documents. (3 marks)