

# KASNEB

DICT LEVEL III

## COMPUTER APPLICATIONS PRACTICAL II

MONDAY: 21 November 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

### Additional instructions:

1. Save all your work in the flash disk provided and in a folder bearing your registration number.
2. Work on each question should be saved in the subfolder contained in the folder created in number 1 above. The name of the subfolder should correspond to the question number.
3. Your registration number MUST appear as a header on every printout containing your answers.
4. You must indicate the number of the question answered on the header created in number 3 above.

Note: The information in numbers 1-4 above must be computer generated.

At the end of the examination duration, you should hand in to the invigilator(s):

- (a) The flash disk containing your work.
- (b) All printed work.
- (c) All unused printing paper(s).

### QUESTION ONE

Create a word processor document named "Question One".

Use Question One document to save solutions to questions (a) to (d) below:

- (a) Differentiate between the following sets of terms in the context of spreadsheet program:
    - (i) Date ( ) and today ( ). (2 marks)
    - (ii) Formulae and function. (2 marks)
  - (b) Highlight three advantages of general purpose applications. (3 marks)
  - (c)
    - (i) Describe application software virtualisation as used in computing. (2 marks)
    - (ii) State an advantage and a disadvantage of software virtualisation. (2 marks)
  - (d) Distinguish between "scratch area" and "bleed" as used in desktop publishing. (4 marks)
- (Total: 15 marks)

### QUESTION TWO

Using a word processor program, create a document named "Question Two".

Use Question Two document to save solutions to questions (a) to (d) below:

- (a) Explain the following terms as used in spreadsheet applications:
  - (i) Axis label. (2 marks)
  - (ii) Plot area. (2 marks)
  - (iii) Tick mark. (2 marks)

- (b) Explain four types of action queries in context of database systems. (4 marks)
- (c) Differentiate between a “primary key” and an “index” in context of database design. (2 marks)
- (d) State three activities involved in the design phase of a publication using a desktop publishing application. (3 marks)
- (15 marks)**

### QUESTION THREE

Use a spreadsheet program to perform the tasks below:

- (a) Create a workbook named “Final Results” containing a worksheet with students marks as given below:

|   | A          | B       | C                    | D                  | E                               | F       | G      |
|---|------------|---------|----------------------|--------------------|---------------------------------|---------|--------|
| 1 | First name | Surname | Software Engineering | Mobile Application | Strategy, Governance and Ethics | Average | Remark |
| 2 | Kenneth    | David   | 40                   | 60                 | 70                              |         |        |
| 3 | Judy       | Hannah  | 60                   | 50                 | 90                              |         |        |
| 4 | Peter      | Morah   | 70                   | 70                 | 70                              |         |        |
| 5 | Esther     | James   | 80                   | 80                 | 80                              |         |        |
| 6 | Naomi      | Adams   | 50                   | 40                 | 40                              |         |        |

(6 marks)

- (b) Name the worksheet created in (a) above as “Result”. (2 marks)
- (c) Using an appropriate function, compute the average marks for each student in the “Average” Column. (5 marks)
- (d) Complete the “Remark” column based on the following condition:  
If a student’s average mark is above 49, display “Pass” else “Fail”. (4 marks)
- (e) Use the data in the “First name” and the “Average” columns to create a pie chart in the “Result” worksheet. (4 marks)
- (f) On the pie chart created in (e) above, perform the following tasks:
- Insert a title named “Marks analysis”. (2 marks)
  - Position the legend at the bottom of the chart area. (2 marks)

Save and print the “Result” worksheet.

**(Total: 25 marks)**

### QUESTION FOUR

Open a database program and perform the following tasks:

- (a) Create a database file named “Customers”. (2 marks)
- (b) In the “Customers” database, create the following tables each with the fields provided.

(i) CUSTOMER

| Field       | Datatype      | Width   | Other       |
|-------------|---------------|---------|-------------|
| Customer ID | Number (Auto) |         | Primary Key |
| First Name  | Text          | 15 char |             |
| Second Name | Text          | 15 char |             |
| Address     | Text          | 20 char | Uppercase   |
| City        | Text          | 10 char | Uppercase   |

(2 marks)

(ii) PURCHASE

| Field            | Datatype    |
|------------------|-------------|
| Purchase ID      | Auto Number |
| Customer ID      | Number      |
| Purchases total  | Currency    |
| Date of purchase | Date        |

(2 marks)

(iii) SALES PERSON

| Field       | Datatype    | Width   |
|-------------|-------------|---------|
| Employee ID | Auto Number |         |
| First Name  | Text        | 20 char |
| Last Name   | Text        | 20 char |
| Customer ID | Number      |         |
| Purchases   | Text        | 20 char |

(2 marks)

(iv) Create a relationship between the three tables.

(3 marks)

(v) Print relationship report based on (iv) above with the page footer containing your registration number.

(2 marks)

(c) Open the database created in Question Four (a) above and perform the following tasks:

Create the following forms and enter data into each of the tables created in question four (b).

(i) CUSTOMER

| Customer ID | First Name | Second Name | Address      | City    |
|-------------|------------|-------------|--------------|---------|
| 1           | Sarah      | Amos        | P. O Box 3   | NAIROBI |
| 2           | Lucy       | Karura      | P. O Box 128 | MOMBASA |
| 3           | Mike       | Adams       | P. O Box 100 | KISUMU  |
| 4           | Leni       | David       | P. O Box 200 | NAIROBI |
| 5           | Koki       | Ndemi       | P. O Box 112 | NYERI   |
| 6           | Alan       | Monda       | P. O Box 321 | MOMBASA |

(2 marks)

(ii) PURCHASE

| Purchase ID | Customer ID | Purchases total | Date of Purchase |
|-------------|-------------|-----------------|------------------|
| 001         | 2           | 20,000          | 2/4/2016         |
| 002         | 4           | 30,000          | 6/4/2016         |
| 003         | 1           | 40,000          | 8/4/2016         |
| 004         | 3           | 50,000          | 7/4/2016         |
| 005         | 5           | 60,000          | 10/4/2016        |
| 006         | 6           | 50,000          | 11/4/2016        |

(2 marks)

(iii) SALES PERSON

| Employee ID | First Name | Last Name | Customer ID | Purchase    |
|-------------|------------|-----------|-------------|-------------|
| 1           | Caster     | Mary      | 3           | Motors      |
| 2           | Mark       | Jasper    | 4           | Cables      |
| 3           | Tony       | Orwa      | 1           | Connectors  |
| 4           | Cess       | Michael   | 2           | Connectors  |
| 5           | Anne       | Jack      | 5           | Motors      |
| 6           | Opiyo      | Alex      | 6           | Fibre coats |

(2 marks)

(iv) Create a report containing the following details:

Customer ID  
Customer First Name  
Customer Second Name  
Address  
Purchases total

Save the report as "Customers".

(2 marks)

(v) Use an appropriate method to create a query named "QryCustomers" showing all the customers who bought motors and connectors. Include customers' first name, last name and purchase.

(2 marks)

- (vi) Use an appropriate method to create a query named "QrySales" showing first name, second name and purchases total of customers who made "purchases total" of above 40,000. (2 marks)

Save customers database and print "QryCustomers" and "QrySales".

(Total: 25 marks)

### QUESTION FIVE

The manager of Talent Music School has contracted you to design the school newsletter.

Use a desktop publishing program to perform the following tasks:

#### Required:

- (a) Create a single page publication. (2 marks)
- (b) Set up the page as follows:
- Page size A4.
  - Page orientation: portrait.
  - Left margin 2.5 cm.
  - Right margin 2.5 cm.
  - Bottom margin 2.0 cm.
  - Top margin 2.0 cm.
- (c) Set the guidelines to horizontally divide the page into three equal parts. (3 marks)
- (d) Design a logo using the words "Talent music school" and place it at the top part of the page. (2 marks)
- (e) Using word art, type the name of the school "Talent Music School" on the upper right corner. (2 marks)
- (f) Using appropriate word art, insert the title "Talent monthly newsletter". (2 marks)
- (g) Insert two suitable clip arts each measuring 2 cm x 2 cm. (2 marks)
- (h) Insert today's date as a footer. (2 marks)
- (i) On each of the three columns, type the following text:

#### Column 1

"At the Talent Music School we help you realise that music is an art form and cultural activity whose medium is sound and silence. The school helps you put to practise the elements of music such as pitch (which governs melody and harmony), rhythm (and its associated concepts, tempo, meter and articulation) dynamics (loudness and softness) and the sonic qualities of timbre and texture (which are sometimes the colour of musical sound)".

#### Column 2: Music Genres

"Music can be divided into genres such as country music and sub genres like country blues and pop country. These are two of the many country sub-genres. Although the dividing lines and relationships are sometimes subtle and often open to personal interpretation and occasionally controversial."

#### Column 3: Musical instruments

At the Talent Music School you experience each of the following instruments:

- Guitars.
- Keyboards and controllers.
- Live recording.
- DJ equipment and much more.

(3 marks)

Save the publication as "Newsletter".

Print Newsletter Publication.

(Total: 20 marks)