

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN COMPUTER SCIENCE

COSC 00107: APPLICATIONS PROGRAMMING

STREAMS:

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 13/12/2017

11.30 A.M – 1.30 P.M

INSTRUCTIONS:

- **Answer question one and any other two from section B**
- **Do not write on this paper**

SECTION A {compulsory}

QUESTION ONE(30MKS).

- a) State **three** characteristics of an event-driven programming languages **(3marks)**.
- b) programmer was advised to decompose to decompose a large module into multiple procedures ,Explain two reasons for this **(2marks)**.
- c) Given that X=5 and Y=2,evaluate the following Visual Basic expression **(2marks)**.

$$X-0.8 /Y +(X +2)$$

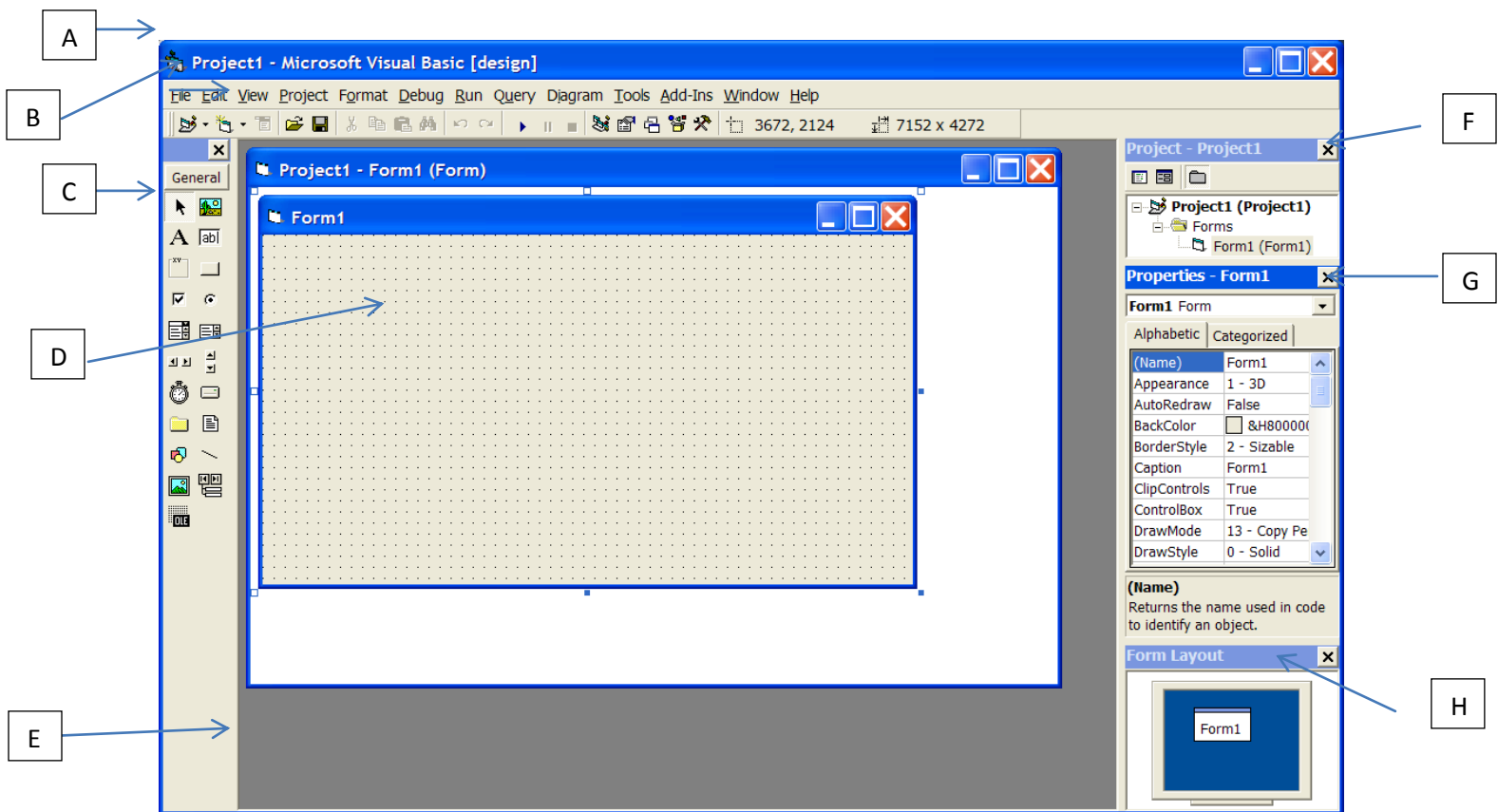
- d) In visual basic program ,the variables x and y stores the values 10 and 4 respectively.State the output generated from each of the following logical statements when executed:
 - i.(x+y)<> 15 And y >3 **(2marks)**
 - ii.(x+y)<> 15 Or y>3 **(2marks)**.
- e) Explain the scope of a procedure defined by use of the following keywords
 - i.Public **(2marks)**.
 - ii.Private **(2marks)**.
- f) Under what circumstances would each of the following errors occur in Visual Basic Programming

- i. Syntax errors **(2marks).**
 - ii. Logic errors **(2marks).**
- g) Outline two properties that must be set on a text box in order to manipulate data in a database when programming in visual basic. **(2marks).**
- h) Define each of the following terms as used in visual basic programming
 - i. Compiling **(2marks).**
 - ii. Debugging **(2marks).**
 - iii. Execution **(2marks).**
- i) Identify a data type appropriate to store each of the data items in visual basic program
 - i. Gender where a true or false values are used **(1mark).**
 - ii. Number of students in each university in the country **(1mark).**
 - iii. The distance between two towns in kilometre rounded to 1 decimal place **(1mks).**

SECTION B

QUESTION TWO (20MKS).

- a) Identify each of the following parts of a Visual Basic Screen. **(8marks).**



- b) Identify any **THREE** variables in the Visual Basic code below: (6 marks)

```
Private Sub cmdCompute_Click()
picResults.Cls speed = 50
timeElapsed = 14
distance = speed * timeElapsed
picResults.Print distance
distance = 410
timeElapsed = distance / speed
picResults.Print timeElapsed
End Sub
```

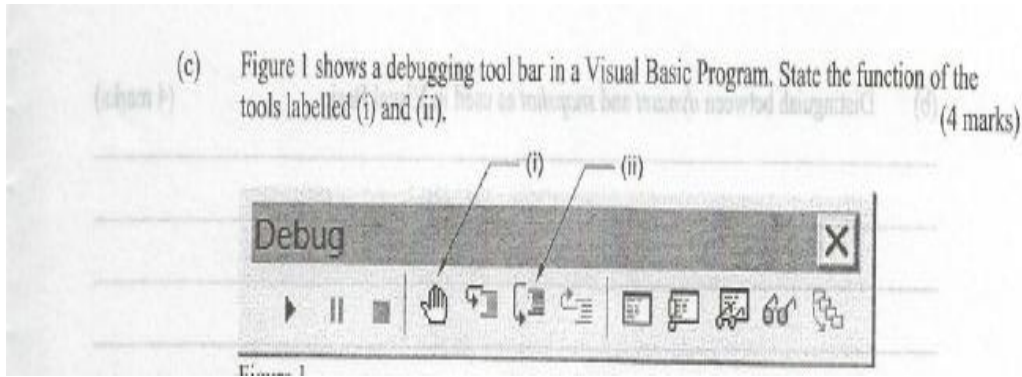
- c) Explain the difference between each of the following widgets: (6 marks)
- i. **List box**
 - ii. **Combo box**
 - iii. **Check box**

QUESTION THREE (20MKS).

- a) Explain **THREE** main types of user interfaces (6 marks).
- b) State two differences between sub procedures and event procedures as used in Visual programming(4mks).
- c) Outline each of the following events of a command button as used in visual programming
 - i.MouseHover (1mks).
 - ii.KeyPress (1mks).
 - iii.MouseDown (1mks).
- d) Distinguish between *Visual programming* and *object-oriented programming* (4marks).
- e) With the aid of an example ,explain the purpose of library functions in a Visual Programming Language. (3marks).

QUESTION FOUR (20MKS).

- a) The figure below shows a debbuging tool bar in visual Basic Program .State the function of the tools labelled (i) and (ii) (4marks).



- b) Explain the function of each of the following types of procedures in Visual Basic.(4marks).
- i. Function procedure
 - ii. Event procedure
- c) Explain the term event driven programming languages (2marks).
- d) Distinguish between a general procedure and an event procedure as used in visual programming.givin synthax in each (6 marks).
- e) With the aid of an example ,distinguish between dynamic array and static array as used in visual programing language (4marks).

QUESTION FIVE(20MKS).

- a) State and explain the THREE main types of database models (6 marks).
- b) Write a Visual Basic program that allows the user to specify two numbers and then adds, subtracts, or multiplies them when the user clicks on the appropriate command button. Note: The output should give the type of arithmetic performed and the result. (9 marks)
- c) Write Visual basic code that displays the text "Hello World" on a form . [5marks]