FUKIEN SECONDARY SCHOOL
S3 First Term Examination (2020-2021)
Computer Literacy
(30 minutes)

Date: 13th January 2021 Name:_____
Time: 8:30a.m. - 9:00a.m. Class: _____ No.: _____

Question Paper

Instructions to students:

1. Write your name, class and class number on both the question paper and the answer sheet.
2. Write your answers on the answer sheet.
3. Hand in the question paper and the answer sheet at the end of the examination.
4. The total mark of the paper is 100.

I. Practical Examination (40 marks)

II. Multiple Choice Questions (20 marks; 2 marks each)

1. The following block calculation evaluated to be _____.

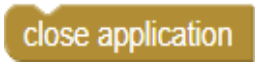
A. 2
B. 3
C. 4
D. 5

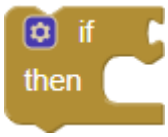
2. Which of the following statements correctly describes variables?
   A. We can only define one variable in a program.
   B. The value of variable can be changed when the app is running.
   C. Only numbers can be stored by variables.
   D. None of the above

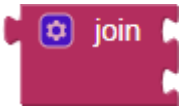
3. Without an Android device, which of the following methods should be used to test an app?
   A. Downloading apk file via QR code
   B. Downloading apk file to computer
   C. Using the Android Emulator
   D. Testing via USB connection

4. What is the default layout setting in App Inventor?
   A. HorizontalArrangement
   B. VerticalArrangement
   C. TableArrangement
   D. DiagonalArrangement

5. Which of the following blocks is needed to make a conditional statement?

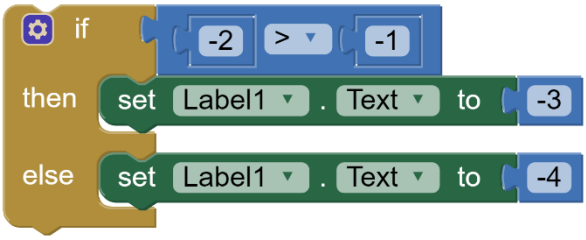
A. 

B. 

C. 

D. 

6. After the following program is run, what will the text of "Label1" be?



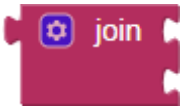
A. -1
B. -2
C. -3
D. -4

7. Which of the following blocks can be connected to the "if" part of an "if-then" block?

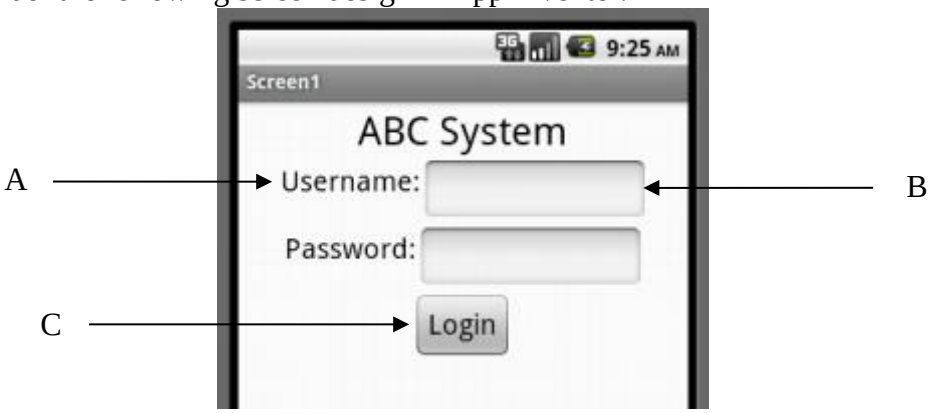
A. 

B. 

C. 

D. 

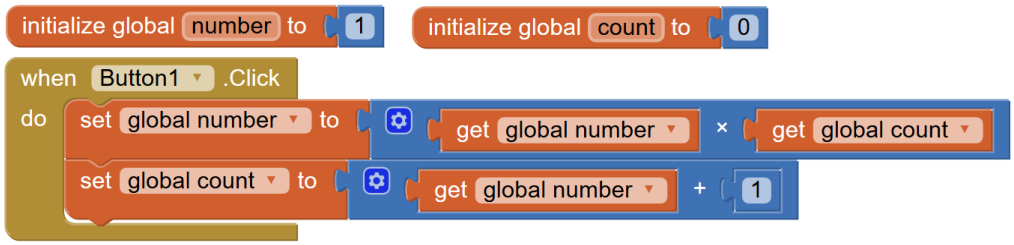
8. Consider the following screen design in App Inventor.



Which types of components should A, B and C be?

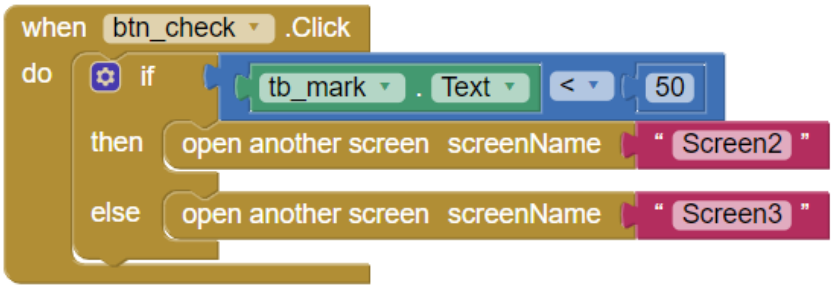
	A	**B**	**C**
A.	Button	Textbox	Label
B.	Label	Button	Textbox
C.	Textbox	Label	Button
D.	Label	Textbox	Button

9. What will the value of "number" after the user clicks "Button1" be?



A. 0
B. 1
C. 3
D. 6

10. Which of the following statements correctly describe the function of the following program blocks?

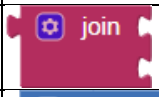
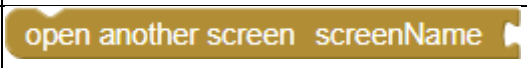


(i) The program blocks above will be invoked when the user clicks btn_check.
(ii) If the number in tb_mark is smaller than 50, the app will go to Screen3.
(iii) If the number in tb_mark is larger than 50, the app will go to Screen3.

A. (i) and (ii) only
B. (i) and (iii) only
C. (ii) and (iii) only
D. (i), (ii) and (iii)

III. Matching (10 marks)

Match the following program block with the appropriate category.

	Program Block
1	
2	
3	
4	
5	

	Category
A	Control
B	Logic
C	Math
D	Text
E	List
F	Variable

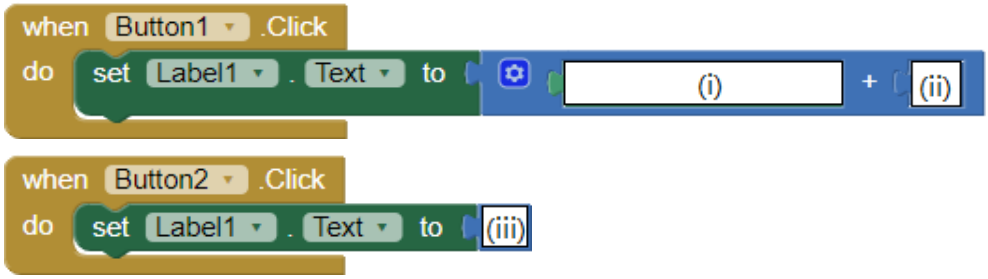
IV. Structured Questions (30 marks)

1. A simple counter is designed to count the number of people entering a supermarket. The screen has the following components arranged from top to bottom.

- Label1: The accumulated count number will be shown.
- Button1: The count number of Label1 will be increased by 1.
- Button2: The count number of Label1 will be reset to 0.

(a) Please briefly draw the layout of the app. (4 marks)

(b) Fill in the blanks with correct blocks or numbers for incrementing the number of people and resetting the counter.



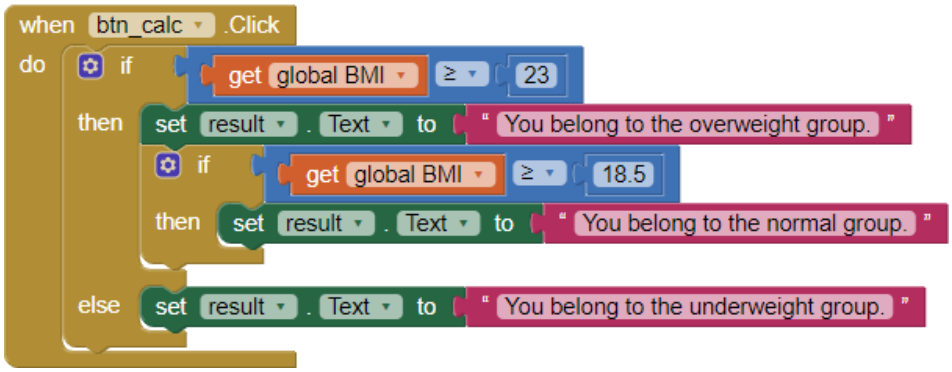
(6 marks)

2. In the program BMI calculator, variables are used to store the values of height, weight and the BMI of the user. Several event handlers and initializers are required to complete the calculations.

(a) The global variable height is initialized to be 1 as shown below. Why does the screen show the height to be 0 instead of 1 at the start of the app?

(4 marks)

(b) The following programming block is used to determine the weight status of the user. The BMI value is already correctly calculated before the button *btn_calc* is clicked.



What are the conditions of the variable BMI for the outputs shown on the label *result* when *btn_calc* is clicked? (Write "In no case" if the output is impossible.)

(i) "You belong to the overweight group."

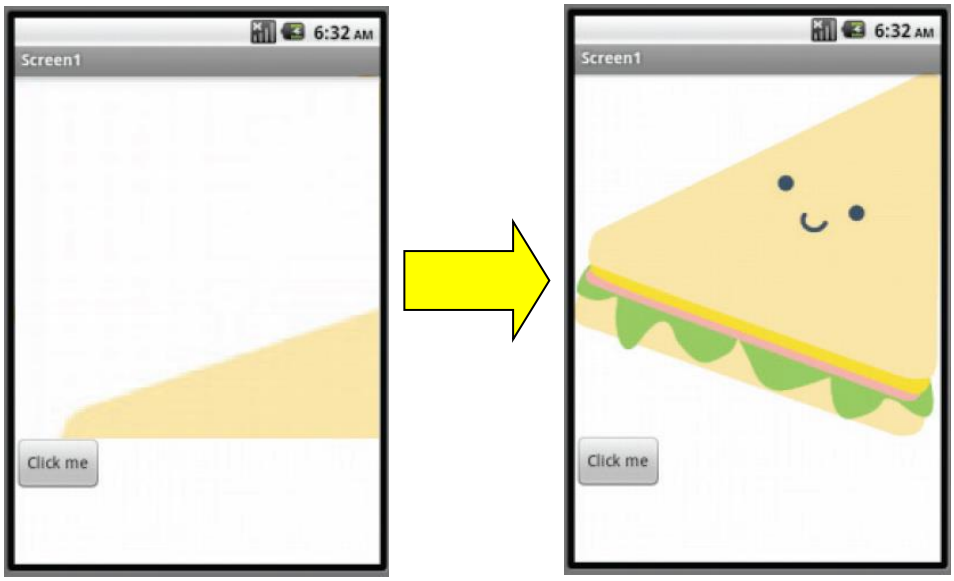
(ii) "You belong to the normal group."

(iii) "You belong to the underweight group."

(9 marks)

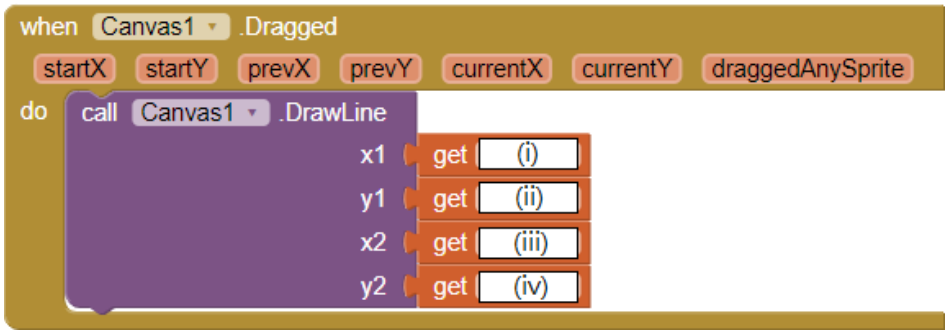
3. A multimedia application is being created.

(a) The image on the screen is too big and has spanned out of the screen. How to scale it down to just fit the screen?



(3 marks)

(b) The following blocks show a drawing board program. Complete the following blocks.



(4 marks)

END OF PAPER