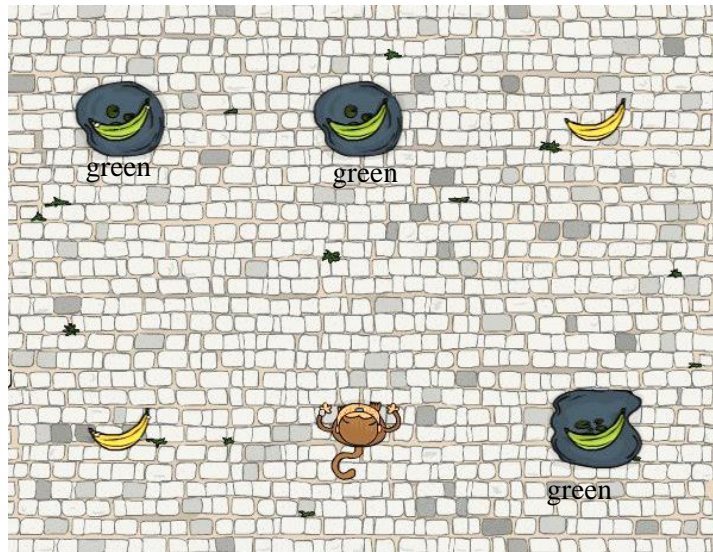


**SECTION A [30 MARKS]**  
**ANSWER ALL QUESTIONS**

**Question 1**

- a) **Direction: For each question, there are FOUR responses: A, B, C and D. Choose the corresponding letter of your response and CIRCLE it neatly. NO score will be awarded if you circle more than one.** [15]
- i. Your English teacher asked you to type an essay on your computer, Which option should you select if you are saving your document for the first time?
- A New
  - B Save
  - C Share
  - D Save as
- ii. Select the correct email address format to successfully send an Email.
- A norbu@education.gov.bt
  - B norbu.education@gov.bt
  - C education.gov.bt@norbu
  - D gov.bt@norbu education
- iii. How would you apply your information literacy skills to determine the accuracy of a Facebook post claiming, “*a new diet can make you lose weight in a week.*”
- A Follow the post without verification.
  - B Share the post in different social media platform.
  - C Avoid the post as social media is not trustworthy.
  - D Seek information from various source and confirm the publication date of the post.
- iv. Which option below best demonstrates an effective use of email in a formal setting?
- A Sending an email with an ambiguous subject line.
  - B Forwarding an email without checking its content.
  - C Using Bcc to secretly include a colleague in an email chain.
  - D Composing an email with clear, concise language and a professional tone.

- v. The codes below use an if statement to help a monkey make the right choice when collecting bananas. Which description correctly matches the codes?



Line	Code
1	<code>for b in bananas</code>
2	<code>    if not b.green()</code>
3	<code>        goto b</code>

- A The monkey avoids all the yellow bananas and collects only the green bananas.
- B The monkey avoids the green bananas and collects only the yellow bananas.
- C The monkey doesn't collect any bananas.
- D The monkey collects all the bananas.
- vi. Palden P Yoezer wants to use a function `add( )` in his program to add the marks for all the subjects in his examination. What action does Karma need to perform to ensure the code inside `add( )` is executed?
- A Calling the function
- B Defining the function
- C Returning the function
- D Importing the function

- vii. Imagine you are developing an interactive game that responds to user actions using the event handlers. You need to ensure that specific functions are executed based on different user interactions. Which **event handler** function should be used to execute predefined instructions whenever a key is pressed on the keyboard?
- A onMouseMove
  - B onScroll
  - C onClick
  - D onKey
- viii. One day, while browsing through the forum, you come across a post that contains offensive language directed towards another member. What should you do if you come across an inappropriate content or behaviour in the online coding community?
- A Report it to the community moderator.
  - B Ignore it and continue using the platform.
  - C Respond with inappropriate content or behaviour as well.
  - D Engage in a debate with the user responsible for the content.
- ix. You are making a fruit-picking robot that determines which bananas are ripened enough to be picked. The robot uses a function `not banana.green()` to check the ripeness of a banana. Study the diagram given below and identify the condition for *if* statement in the code.



Line	Code
1	<code>if not banana.green()</code>
2	<code>    #You can only edit this code:</code>
3	<code>        goto banana</code>

- A If  
 B Goto  
 C `not banana.green()`  
 D you can only edit this code:
- x. Despite its potential for connecting people globally, social media can become risky if users fail to verify information. Which of the statements below best describe verifying information in social media?
- I. The ability to find, evaluate and make good use of information.  
 II. The attitude necessary to use information ethically.  
 III. The necessary skills for life long and self-directed learning.
- A I and II  
 B I and III  
 C II and III  
 D I, II and III
- xi. What does `pos.x` represent in the `onMouseMove` function?
- A The key pressed.  
 B The object clicked.  
 C The x position of the cursor.  
 D The y position of the cursor.
- xii. You have imported an image in paint.NET and want to add a text caption at the top of the image. Which tool from paint.NET would you use to add the caption?
- A Text Tool.  
 B Magic Wand Tool.  
 C Rectangle Select Tool.  
 D Move Selected Pixels Tool

- xiii. What feature in Microsoft Word allows you to combine two or more cells into a single cell when working with tables?
- A Cell Merging.
  - B Cell Formatting.
  - C Column Sorting.
  - D Table Alignment.
- xiv. In the coding adventure, a student encountered a loop labeled '3.times' and the student is not sure of its purpose. What can be the possible purpose of using loop "3.times->" in this coding adventure?
- A collect 3 times.
  - B repeat 3 times.
  - C drop 3 times.
  - D grab 3 times.
- xv. Image editing skills will lead to careers such as graphic designer, photographer and web designer. What is the primary use of paint.NET?
- A Editing and creating image
  - B Editing audio recording
  - C Recording video
  - D Making game

b) Complete the following statements using the most appropriate word/s given in the box below.

landscape	Flowchart	Magic Wand	Algorithm
Attachment	Portrait	Python	CoffeeScript

[5]

i.	There are two types of page orientations; landscape and portrait. The default page orientation in Microsoft word document is _____.
ii.	You have an image with a distracting background that needs to be removed. In Paint.NET, to remove the background, you would use the tool called _____.
iii.	Additional files such as photos or documents that can be sent with an email message are called _____.
iv.	The step-by-step set of instructions for performing a coding task, like outlining the sequence of actions before writing the code, is known as _____.
v.	In the CodeMonkey platform, developers use various programming languages. Among all these languages, the coding language used in Coding Adventure is _____.

- c) **Match the items in column I with the items in column II. Write the letter that matches with the number in column III** [5]

Column I	Column II	Column III
i. The platform that facilitates collaborative work among multiple developers on the same project at the same time.	a. Inbox	i. _____
ii. The values passed to a function when it is called, which serve as placeholders for actual data within the function.	b. Until loops	ii. _____
iii. The email management feature which helps to quickly identify who sent you an email.	c. Disinformation	iii. _____
iv. In a programming context, this loop repeats a block of code again and again until a specified condition is met.	d. Online Coding Community	iv. _____
v. The spreading of false information intentionally passed from one individual to another, aimed at causing harm.	e. Misinformation	v. _____
	f. Parameters	
	g. Sent	

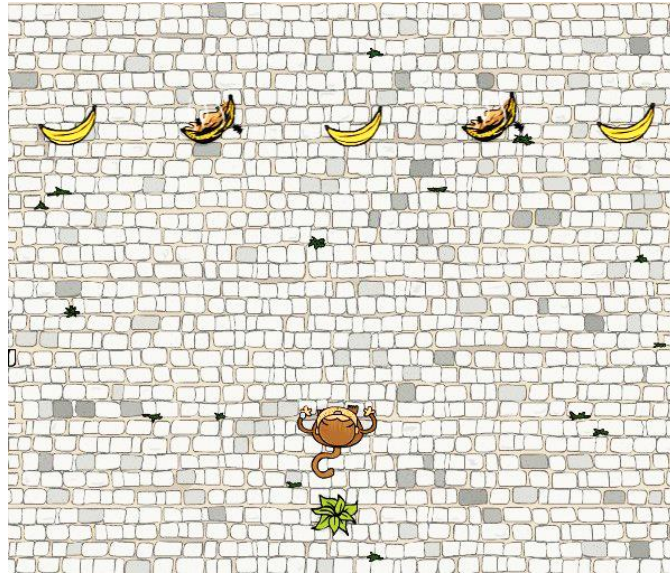
d) State whether the following statements are TRUE or FALSE in the space provided.

[5]

Statements	True/False	
i. The Coder wall is a platform that allows developers to share their projects, skills, and experiences with others in the coding community.		
ii. When a user clicks the mouse, it initiates an event, signalling the program to perform predefined actions.		
iii. While searching information for a school project, you discover an online article that exactly covers your topic. You can directly copy and paste information from the internet for your school project.		
iv. You want to explain about a project management process using a flowchart. Flowchart is visual representation of an algorithm using different shapes to show various steps and arrows to indicate the flow.		
v. Your ICT teacher assigned you to edit an image that requires removing the background. While working on the assignment, your friend said it's impossible to remove backgrounds from images.		



- b) Study the codes for the diagram given below and answer the questions that follow.



Line	Code A	Line	Code B
1	<code>for b in bananas</code>	1	<code>turnTo banana[0]</code>
2	<code>    if not b.rotten()</code>	2	<code>    Step distanceTo banana[0]</code>
3	<code>        goto b</code>	3	<code>    turnTo bush</code>
4	<code>    goto bush</code>	4	<code>    Step distanceTo bush</code>
		5	<code>    turnTo banana[2]</code>
		6	<code>    Step distanceTo banana[2]</code>
		7	<code>    turnTo bush</code>
		8	<code>    Step distanceTo bush</code>
		9	<code>    turnTo banana[4]</code>
		10	<code>    Step distanceTo banana[4]</code>

- i. Which of the two given code options (Code A or Code B) is better to solve the CodeMonkey Challenge mentioned above? Why? [2]


- ii. You are playing a CodeMonkey challenge where the Monkey needs to collect yellow bananas while avoiding rotten bananas scattered across as shown in the diagram above. Write the algorithm to solve the problem in the diagram? [2]

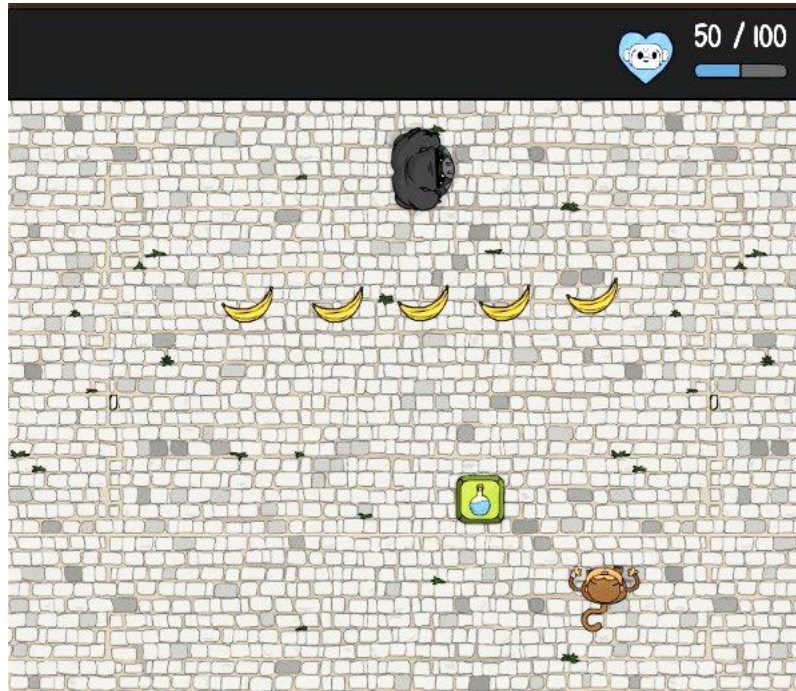
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- c) You are asked to design a poster for annual school concert incorporating related images and slogans in paint.NET. Describe the steps you would take to create the banner. [1]


**Question 3**

- a) Describe any two ways where your knowledge of table formatting can be used in your life. [2]


- b) The following code is designed to gather all the bananas. However, during the banana collection, the gorilla intentionally harms the monkey, affecting its health. To restore the monkey's health, it must regularly visit the healthZone.



Line	Code
1	until health() == 100
2	for b in bananas
3	goto healthZone
4	wait()
5	Goto b

- i. Debug the code given above and write the correct code to resolve this issue. [2]

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- ii. What is the importance of ensuring that health reaches 100 in the provided code? [1]  
`until health()==100`

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- c) After you have finished designing a poster in Paint.NET, your teacher normally asks you saving the image either in PNG or JPEG format. Write any two reasons why saving in these formats is important. [1]

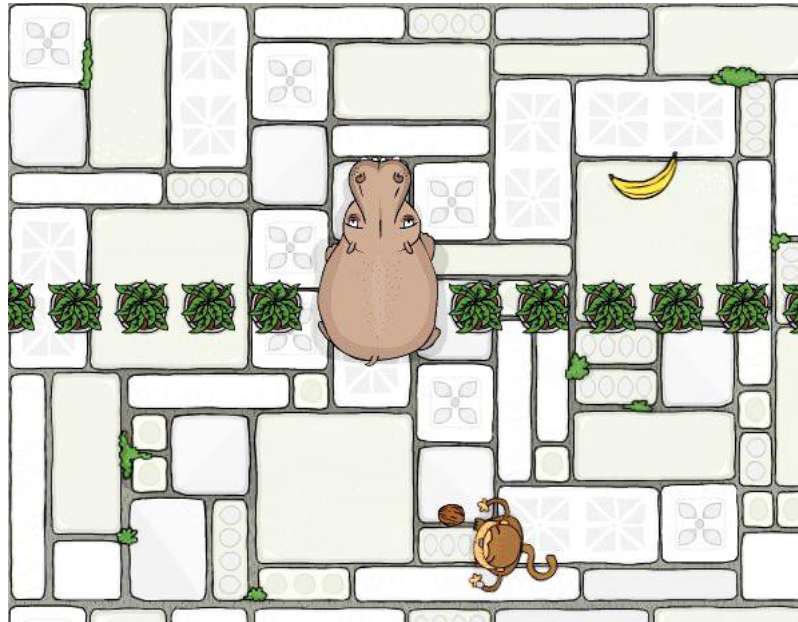

**Question 4**

- a) Based on your understanding of email etiquette and effective communication, write the steps involved in composing an email to request your ICT subject teacher to send you the notes as you are on leave. [2]


- b) A table systematically displays all possible combinations of inputs along with their corresponding outputs. Using the inputs from the table provided below, determine the outputs for "man" and "woman." [2]

Man	Woman	Man And Woman	Man or Woman	Not Woman
Good	Good	Good	.....	Good
Bad	Good	Bad	.....	Bad
Good	Bad	Bad	Good	.....
Bad	Bad	.....	Bad	Good

- c) Examine the diagram below carefully and use the `onKey` function to guide the monkey to the bananas by completing the missing code. Write the correct code in the space against the number in the table. [2]



Line	Code
1	<code>onKey= (key) -&gt;</code>
2	<code>    if key=='g'</code>
3	<code>        Grab()</code>
4	.....
5	.....
6	.....
7	.....
8	.....
9	.....
10	<code>hippo.onClick= ( )-&gt;</code>
11	<code>    monkey.turnTo hippo</code>
12	<code>    monkey.toss()</code>

### Question 5

- a) You are working on a project where you need to analyse different coding techniques. Carefully examine the codes provided below and answer the questions that follow.

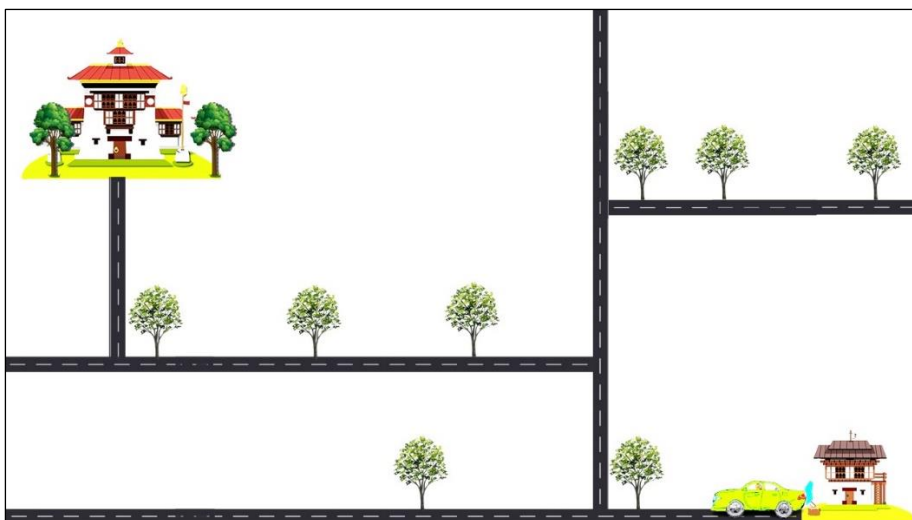
Line	Code
1	<code>onMouseMove= (pos) -&gt;</code>
2	<code>    bat.setX pos.x</code>
3	<code>    bat.setY pos.y</code>
4	<code>onKey = (key) - &gt;</code>
5	<code>    if key == 'g'</code> <code>        bat.grab()</code>

- i. What are the names of the event handlers used in the code? [1]

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- ii. Based on the coding concept given above, how will these skills and knowledge benefit you in your future? Mention any two benefits. [1]


- b) You are developing a simple car game in which you need to drive your car from your home to the monastery as given in the diagram below. Write a code using the `onKey` function to control the car's movement and ensure it reaches the monastery. [3]



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- c) Suppose you are designing a new online coding community platform. What is one unique feature you would implement to set your platform apart from the existing ones? [1]


**Question 6**

- a) You are using information literacy skills to study, “The impact of effective video games on teenagers' brains.”
- i. Which of the following sources would you trust more? Why? [1]
- A Facebook post by an unknown author.
  - A research article published by the Kuensel.


- ii. With reference to the situation reflected above, design any two criteria to evaluate the authenticity of an information. [1]


- b) Utilizing your coding skills, demonstrate how you can optimize the **if** statements code for the diagram to reduce the code length. Provide an explanation of your approach. [2]



Line	Code
1	safe=()->
2	if crow[0].watching()
3	return no
4	if crow[1].watching()
5	return no
6	return yes
7	until safe()
8	say 'boo'
9	goto banana

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- c) i. Explain the differences between `until` loop and `for` loop. [1]


- ii. Write codes using any of the loops reflected above. [1]

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