## Programming Questions **MORSE CODE**

MARKS **/50**

**These questions refer to the preliminary material and require you to load the skeleton program, but do not require any additional programming.**

1. State the name of an identifier for:

a) A string constant (or variable used as a constant) **[1]**

b) A subroutine with two parameters **[1]**

c) A subroutine that returns a tuple (more than one value) **[1]**

d) A Boolean variable **[1]**

e) A parameter that is a list **[1]**

f) An integer list **[1]**

g) A built-in function called from within the GetMenuOption subroutine **[1]**

h) The identifier for a user-defined function called from the GetNextLetter subroutine **[1]**

2. State the purpose of each of the following lines in the GetTransmission subroutine: **[4]**

FileName = input("Enter file name: ")

...

FileHandle = open(FileName, 'r')

Transmission = FileHandle.readline(0029

FileHandle.close()

...

3. Describe the purpose of the While loop within the SendReceiveMessages subroutine. **[2]**

4. Describe the nature and purpose of the Dash data structure in SendReceiveMessages. **[3]**

5. Look at the subroutine StripLeadingSpaces. Describe the purpose and use of the variable FirstSignal. **[2]**

6. Describe each of the following lines of code, taken from the StripTrailingSpaces subroutine: **[6]**

LastChar = len(Transmission) - 1

while Transmission[LastChar] == SPACE:

LastChar -= 1

Transmission = Transmission[:-1]

return Transmission

7. Describe the function of the following line from the SendMorseCode subroutine: **[3]**

Index = ord(PlainTextLetter) - ord('A') + 1

8. Describe the purpose of the except: block in the GetTransmission subroutine.

State one situation in which the code in the except: block would be executed. **[2]**

9. The skeleton program begins with a number of constants (or variables used as constants by convention).

State two benefits of the program being written in this way. **[2]**

10. The StripLeadingSpaces subroutine uses the [1:] operation.

Describe the purpose of the [1:] operation and explain how it is used in StripLeadingSpaces. **[3]**

11. Describe each of the circumstances that would lead to the subroutine ReportError being called. **[5]**

12. Describe fully the operation of the Decode subroutine if the value of CodedLetter is -..- **[10]**