## 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]**