

Xi'an Jiaotong-Liverpool University

西交利物浦大学

MODULE CODE	EXAMINER	DEPARTMENT	TEL
CPT101		COMPUTER SCIENCE	

1st SEMESTER 2022/23 END TERM EXAMINATIONS

BACHELOR DEGREE – Year 2

COMPUTER SYSTEMS

TIME ALLOWED: 2 Hours

INSTRUCTIONS TO CANDIDATES

- 1. This is an open-book exam.**
- 2. Answer all questions.**
- 3. Answers should be written in the answer booklet(s) provided.**
- 4. No calculator is allowed during the examination.**
- 5. Only answers in English are accepted.**

THIS PAPER MUST NOT BE REMOVED FROM THE EXAM HALL.

28. Supply correct arguments and/or instructions to the missing places (i) to (x) in the following bubble sort program segment that compares two integers and swap them, resulting in a sorted list of integers in ascending order. **(Total 10 marks: each worth 1 mark)**

```
1    int MAX_SZ = 4
2    int intArray[(i)] = {6, 1, 8, 4};
3    (ii){
4        (iii) esi, (iv)    ; load first item's memory address
5        mov    eax, (v)    ; move content of memory address
6        (vi)    [esi+(vii)], eax ; compare adjacent items
7        (viii)    L3        ; jump out to L3
8        (ix) eax, [esi+4]    ; otherwise swap contents
9        (x) [esi], eax    ; continue swapping
10 }
```