

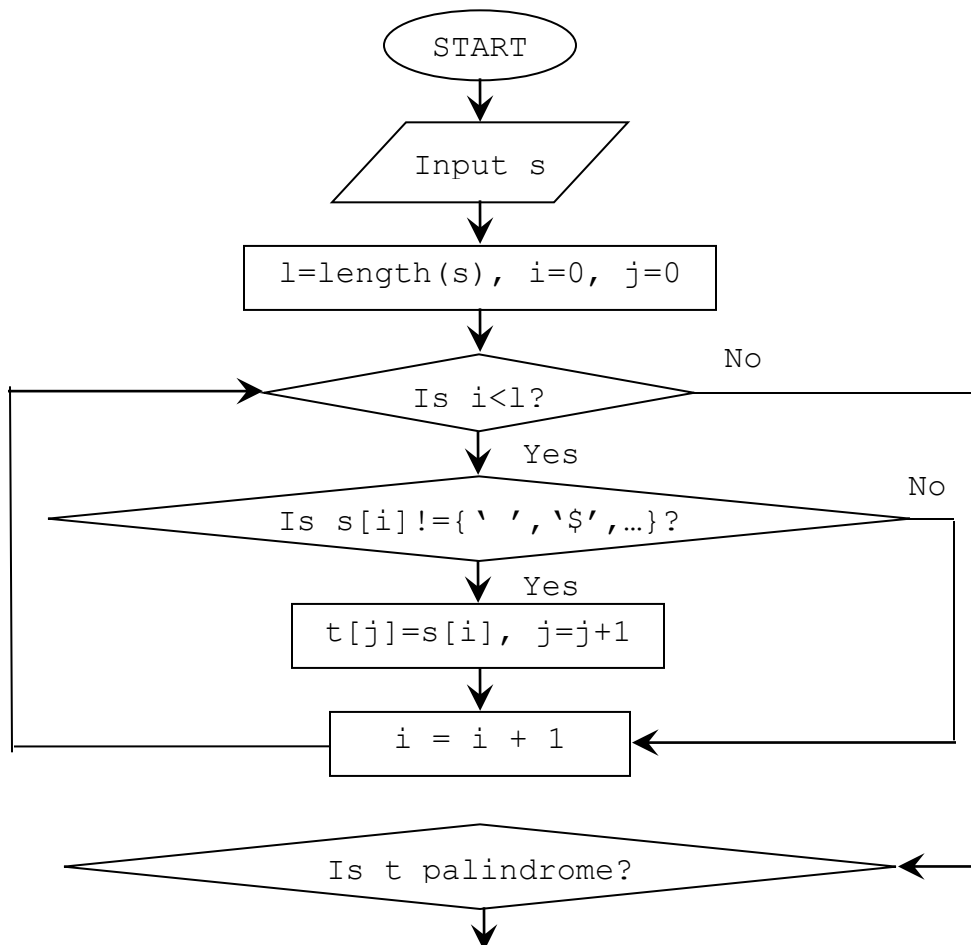
Indian Statistical Institute

BSDS, First Year, Mid-Sem of First Semester Examination, 2025-26

Introduction to Computing

Answer Keys

1. (i) 1 – (any order of 2, 3, 4, 5) – 6 – 7, 1 – 6 – 3 – 2 – 4 – 5 – 7, 1 – 6 – 3 – 2 – 5 – 4 – 7, 1 – 6 – 5 – 4 – 3 – 2 – 7
(ii) 1 – 6 – 5 – 4 – 2 – 3 – 7, 1 – 6 – 2 – 5 – 4 – 3 – 7, 1 – 2 – 4 – 5 – 6 – 3 – 7
(iii) 1 – 6 – 2 – 3 – 5 – 4 – 7
(iv) 1 – 6 – 3 – 4 – 2 – 5 – 7
(v) 1 – 6 – 3 – 4 – 5 – 2 – 7
(vi) 1 – 6 – 2 – 3 – 4 – 5 – 7
2. (a) Prove
(b) Prove
(c) Disprove
(d) Prove
(e) Prove
3. (a) Here follows the flowchart.



```

(b) def NearestLarger(ls, i):
    n = len(ls)
    target = ls[i]
    loc = 1
    while (i - loc >= 0) or (i + loc < n):
        if i + loc < n and ls[i + loc] > target:
            return ls[i + loc]
        if i - loc >= 0 and ls[i - loc] > target:
            return ls[i - loc]
        loc += 1
    return None
4.(a) return False
    (b) rev = rev * 10 + digit
    (c) found = str[i]

```