(2½ Hours)

[Total Marks: 75]

N. B.: (1) **All** questions are **compulsory**.
     (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
     (3) Answers to the **same question** must be **written together**.
     (4) Numbers to the **right** indicate **marks**.
     (5) Draw **neat labeled diagrams** wherever **necessary**.
     (6) Use of **Non-programmable** calculators is **allowed**.

1.   **Attempt _any three_ of the following:**   **15**
a.
b.
c.
d.
e.
f.

2.   **Attempt _any three_ of the following:**   **15**
a.
b.
c.
d.
e.
f.

3.   **Attempt _any three_ of the following:**   **15**
a.
b.
c.
d.
e.
f.

4.   **Attempt _any three_ of the following:**   **15**
a
b
c
d
e
f

5.   **Attempt _any three_ of the following:**   **15**
a.
b.
c.
d.
e.
f.

_____