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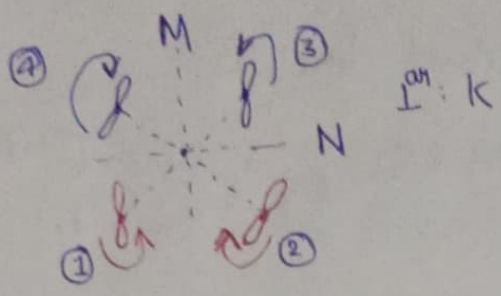
# QUADCOPTER




C : 2, 4
AC : 1, 3

## Type of motion :-

① Thrust :- • Speed of all motors.

② Yaw :- Movement about axis :-

Ex :- Slow ① and ③ & increase ② and ④,

so thrust = const.
Angular torque ≠ 0.
And will be in +k̂ direction.

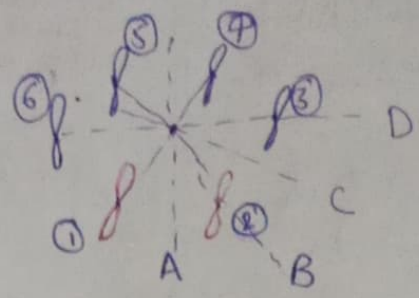
③ Roll :- Movement about center line. (M)

Ex :- Inc, ①&④
dec ②&③

Thrust = const. Ang tor. = 0

But, due to difference in ~~torque~~ thrust applied in left & right side; there will be a rotation.

# HEXACOPTER.




C : ①, ③, ⑤
AC : ②, ④, ⑥

## Type of motion :-

① Thrust :- • Pressure due to rotation of motor
• depends on motor's speed.

② Yaw :- Movement about axis :-

Ex :- Slow → clockwise motor and Fast → anti-clock " to produce anti-clock rotation.

thrust = const. ; torque ≠ 0.

③ Roll about A :-

Ex :- Inc → clockwise speed
Dec → Anticlockwise; this will cause a clockwise motion when seen from out;

Torq due to ① + ⑤ > Torq (③) which will cause rotation.

④ Pitch:- Movement (Rotation) about line 'N'.

Ex:- Inc ① and ② & dec ③ and ④.

Thrust = const.

Angular torque = 0.

But thrust applied by ① & ② ~~over~~ > ③ & ④

This leads to rotation about N.

④ Roll about B:-

Rotation about line 'B'.

Ex:- Inc → ① & ⑥ } speed of ② & ⑤ same
Dec → ③ & ④

Thrust = const.

Torque will make the hexacopter to execute rotation.

⑤ Roll about C:-

Rotation about line 'C'.

Ex:- Inc → ②, ⑥ & ④
Dec → ①, ③, ⑤.

Cause:- Clockwise rotation along line C when seen from out.

Thrust = const; Torque about C ≠ 0.

⑥ Roll about D:-

Rotation about line 'D'.

Ex:- Inc :- speed of ① & ②
Dec :- speed of ④ & ⑤

Thrust = const.
Torque about D ≠ 0.

This will cause clockwise rotation when seen from out.
w.r.t. line D.