

● SA node it is the pacemaker of the heart because it has the highest rhythm (90 beat/min)

- Vagal Tone decreases the rhythm of (SA) from (90-70) impulses/min
it is normal

- Heart beat (HR) (60-100) beat/min
avg (70 beat/min)

- Tachycardic (سريع) more than 100
- Bradycardic (بطيء) less than 60

- cardiac output (CO) 5 L/min

$$CO = SV (\text{stroke volume}) \times HR$$

70 × 70

- stroke volume (SV) (70-90) ml/beat

- Arterial Blood pressure (ABP):

- (100-140) / (60-90) mmHg

- Avg (120/80) mmHg

- systolic Blood pressure (SBP):

- (100-140) mmHg / avg (120) mmHg

- Diastolic Blood pressure (DBP):

(60-90) mmHg avg (70) mmHg

it is normal

- Heart beat (HR) (66-100) beat/min
avg (70 beat/min)

- Tachycardic (عاشق) more than 100
- Bradycardic (عاشق) less than 60

- cardiac output (COP) 5 L/min

$$= \text{COP} = \text{SV (stroke volume)} \times \text{HR}$$

70 x 70

- stroke volume (SV) (70-90) ml/beat

- Arterial Blood pressure (ABP):

- (100-140) / (60-90) mmHg

- Avg (120/80) mmHg

((الضغط المرتبط بالقلب بالجهاز التنفسي))

- Dead space: (the air that does not undergo gas exchange with the blood)

- 150 ml (5L)

- Tidal volume: (500 ml = 5L)

- Respiratory rate: (12 beat/min)

- pulmonary ventilation: (6 L/min)

$$= (\text{Tidal volume} \times \text{Res. rate})$$

- alveolar ventilation =

4200 mL/min

(Dead space - Tidal volu) x Res. rate

- maximum Breathing of Breath =

(60 L/min)

يَأْتِ بِهَا اللَّهُ إِنَّ اللَّهَ لَطِيفٌ خَبِيرٌ