# CASE STUDY QUESTION 08

**Read the following and answer any four questions from (i) to (v)**

The force exerted by the blood against the wall of a vessel is called blood pressure. This pressure is much greater in arteries than in veins. The pressure of blood inside the artery during ventricular systole (contraction) is called systolic pressure and pressure in the artery during ventricular diastole (relaxation) is called diastolic pressure.

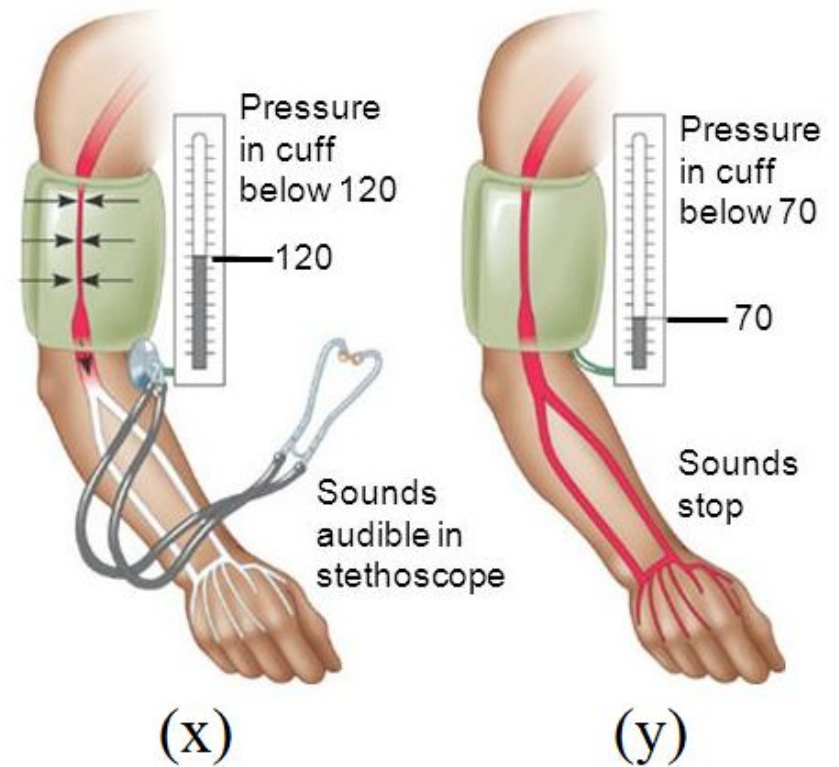(i) Study the table given below and select the row that has incorrect information.

|     |                            | Systolic blood pressure | Diastolic blood pressure |
| --- | -------------------------- | ----------------------- | ------------------------ |
| (a) | Average range              | 90-120mm of Hg          | 60-80mm of Hg            |
| (b) | Reading of blood pressure  | High                    | Low                      |
| (c) | Ventricles of heart        | Contract                | Relaxed                  |
| (d) | Blood pressure in arteries | Minimum                 | Maximum                  |

(d)  Blood pressure in arteries, Minimum, Maximum

(ii) Choose the correct combination to depict the given figure:

(a) x. Systolic pressure, y. Systolic pressure
(b) x. Systolic pressure, y. Diastolic pressure
(c) x. Diastolic pressure, y. Systolic pressure
(d) x. Diastolic pressure, y. Diastolic pressure

**Ans:** (b) x. Systolic pressure, y. Diastolic pressure



Pressure in cuff below 120
—120
Sounds audible in stethoscope
(x)

Pressure in cuff below 70
—70
Sounds stop
(y)

(iii) The characteristics observed in hypertension are:
1. Constriction of arterioles
2. Results in rupture of an artery
3. Causes internal bleeding
4. Increased blood flow
Choose the correct option based on the statements.
(a) 1 and 2       (b) 1, 2 and 3              (c) Only 4                      (d) 2, 3 and 4

**Ans:** (d) 2, 3 and 4

(iv) A person travelling through a public transport suddenly fainted. Upon check-up by a health care provider, it was found that his blood pressure was 152-95. Name the medical condition that the person is going through.
(a) Low blood pressure                    (b) High blood pressure
(c) Low sugar level                          (d) High sugar level

**Ans:** (b) High blood pressure

(v) In the above case, the health care provider used an instrument to check the blood pressure of the patient. Name the instrument used by the health care provider.

(a) Stethoscope
(b) Pulse oximetry
(c) Sphygmomanometer
(d) Otoscope

**Ans:** (c) Sphygmomanometer