**Assignment for Viva**

**Course Title: Human Physiology II**

**Rad 2nd semester section A**

**Instructor: Dr. M .Shahzeb khan (PT)**

   **Marks: 100**

**Note:**

**VIVA MARKS WILL BE GIVEN ON BASIS OF THIS ASSIGNMENT**

**Q1:** (A) What is blood pressure? Explain systolic, diastolic, Normal and Abnormal Blood pressure

(B) How will you measure Blood pressure?

# ALL THE STUDENTS ARE REQUESTED TO UPLOAD YOUR ASSINGMENT BEFORE FINAL SATURDAY.

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16155

# What is the blood pressure? Explain the systolic ,diastolic , normal and abnormal blood pressure

**Def**

blood pressure is the force exerted by the blood against the wall of the blood vessel

 or

the pressure of the blood within the blood it is produced primarily by the contraction of the heart muscles .

# Systolic blood pressure

**Def**

Maximum blood pressure in the arteries attainable during systole.

It is the blood pressure when the heart beats while the heart muscles is contracting and pumping oxygen – rich blood into the blood vessles.

Is the pressure when the heartbeats

* Normal 120+ 20 mm Hg .

This is mainly contributed by

1. Force of heartbeat
2. Normal blood volume
3. Cardiac output.

Normal range

90-140 mm Hg

# Diastolic blood pressure

**Def**

The minimum pressure that is obtained at the end of ventricular diastole.

It is the blood pressure on the blood vessels when the heart muscle is relaxes . the diastolic pressure is always lower lower than the systolic pressure.

Normal range 60-90 mm Hg .

1. It represents a constant load on the atrial walls with little or no fluctuation at all .
2. It is the index to the peripheral resistance and decides the filling of the coronary system.

# Normal blood pressure

In average adult the normal blood pressure is 120/80 +/-15

A normal blood pressure is systolic blood pressure that is less than 120 mmHg and diastolic blood pressure is less than 80 mmHg.

Prehypertension is define as systolic reading between 120 and 129 and diastolic reading is lower than the 80

**Function**

* Maintain the sufficient pressure to keep the blood flowing.
* To provide for the motivte force of filtration at the capillary bed thus ensuring supplies to all cells and tissues .

Normal blood pressure according to age

Age Female male

18 120/80 120/80

19-24 120/79 120/79

25-29 120/80 121/80

# Abnormal blood pressure

Systemic hypertension is usually considered sustained elevations of diastolic BP greater than 90 to 95 mm Hg or a systolic BP greater than 140 to 160 mm Hg .

* In this term high and low blood pressure is involved

**High blood pressure :** when a person with elevated high blood pressure is at risk for developing stage 1 or stage 2

**Stage 1:** it means that your blood pressure is between 130 to 139mmHg and diastolic blood pressure is between 80 to 80 mmHg.

**Stage 2 :** it means that your systolic blood pressure is higher than the 140 or diastolic pressure is higher than the 90 mmHg .

**Symptoms and complications**

 It is referred as silent killer because it has no symptoms is complications are

* Heart attack or failure
* Stroke
* Kidney injury

**Low blood pressure**

it is called hypotension and hypotension is define as a systolic blood pressure that is less than the 90mmHg

* there are several causes of hypotension such as pregnancy , underlying the heart conditions , certain medication , sock and infections.

**Symptoms**

* Breathing fast
* Thirst
* Fatigue
* Blurry vision

# Q2 How will you measure the blood pressure ?

* **Office BP measurement** **:**

Two readings , 5 minutes apart , sitting .

* **Ambulatory BP monitoring :**

 for white coat hypertension.

* **Self – measurement of BP**

Information on response to therapy , may improve adherence to therapy.

* Arterial blood pressure
* A direct method –a canula is place directly in to lumen of a exposed artery. Other end is inserted into U shaped mercury manometer.
* **Systolic blood pressure** : is force exerted by arterial walls during systole it is the maximum pressure during ventricle contraction.
* **Diastolic blood pressure :** is the force that is exerted by blood against atrial wall during diastole . it is the maximum pressure when ventricles are relaxed .
* Unit of measuring blood pressure is (mm Hg) millimeters of mercury.

