The Cardiovascular System: Measuring Blood Pressure

1. Blood flow is generated by the ____________________________. Blood pressure results when that flow encounters ______________ from the vessel walls.

2. Blood pressure is expressed in __________ of mercury and is written as __________.

3. Blood flows in layers within the lumen of blood vessels with the layers in the middle of the lumen flowing fastest. This is known as ______________ flow.

4. Blood pressure fluctuates with each heartbeat. The pulse you feel in your wrist is a ______________ created by the contracting heart ejecting blood.

5. The maximum pressure exerted by blood against the artery wall is known as __________ pressure (SP) and is the result of ventricular ______________.
   
   Normal SP is about ______ mmHg.

6. What does the dicrotic notch represent?
   __________________________________________________________

7. __________ pressure (DP) is the lowest pressure in the artery and is a result of ventricular ______________.
   
   Normal DP is about _____ mmHg.

8. **Pulse pressure** (PP) is the difference between __________ pressure and __________ pressure.

   Write the equation for pulse pressure:  PP = __________

9. **Mean arterial pressure** (MAP) is the calculated average pressure in the arteries. It is closer to the diastolic pressure because the heart spends more time in __________.

   Write the equation for mean arterial pressure:  MAP = __________

10. When taking blood pressure, inflate the cuff so that blood flow is __________ in the blood vessel.
Open the valve slowly, releasing the pressure. The first sound you hear through the stethoscope is recorded as the ______ pressure. The sounds you hear are due to the _________________ of the blood.

When you don’t hear any sounds, this is recorded as the ______ pressure.

For questions 11 and 12, calculate PP and MAP, given SP = 130 mmHg and DP = 70 mmHg (see Quiz section for an example).

11. PP = __________

12. MAP = __________