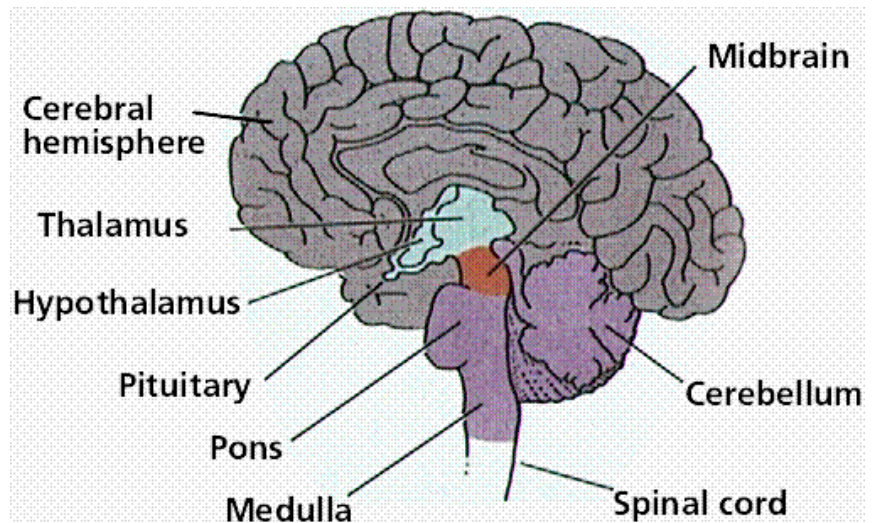


**2008 ANATOMY (B)**  
**Sample Tournament**  
 by Karen L. Lancour

**Station A**

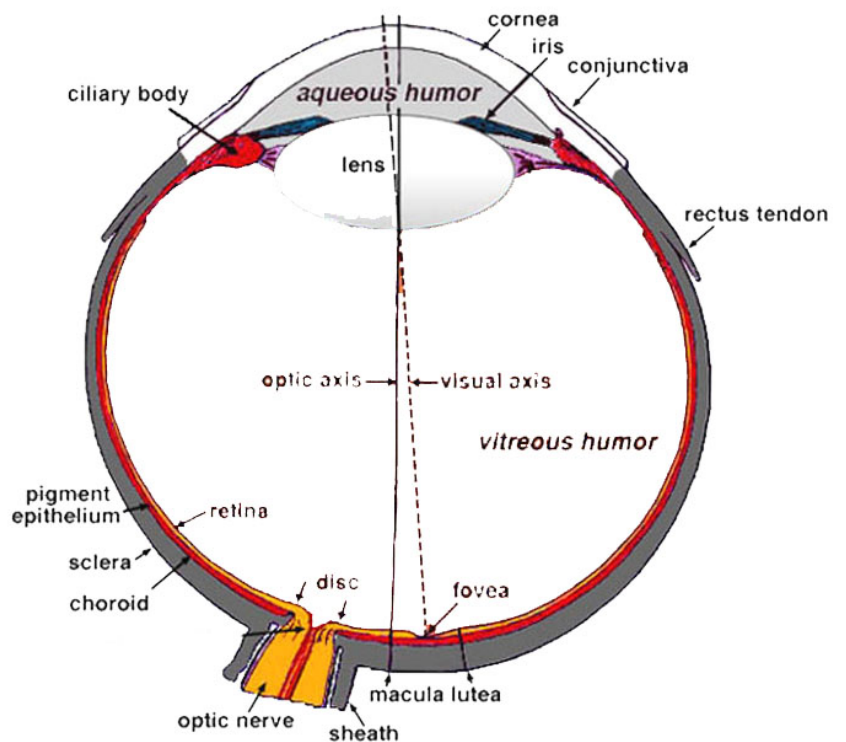
1. What is the function of the cerebellum?
2. What is the function of the cerebrum?
3. What is the function of the thalamus?
4. What is the function of the medulla?
5. Which parts make up the brainstem?



**Station B**

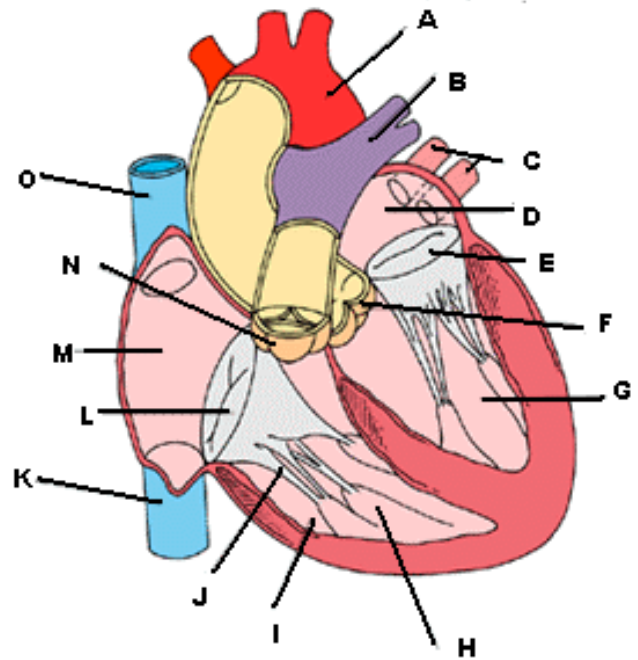
Use the names from the diagram to assist in answering the questions.

6. Where are the rods and cones located?
7. Which layer has dark pigment to absorb extra light and keep the inside of the eye dark?
8. What part has the pigment for eye color?
9. What substance keep the eye from collapsing?
10. What type of eye disorder is caused by the eyeball being too long? (nearsightedness or farsightedness)



### Station C: Parts of the Brain

11. Give the name and function of the part indicated by the letter **A**.
12. Give the name and function of the part indicated by the letter **K**.
13. Give the name and function of the part indicated by the letter **G**.
14. Give the name and function of the part indicated by the letter **M**.
15. Give the name and function of the part indicated by the letter **E**.



### Station D:

16. – 20 Describe the pathway of blood through the heart and the rest of the body beginning with the vena cava.

### Station E For each of the following diseases, explain the cause and symptoms

21. Glaucoma
22. Pink eye
23. Shingles
24. High blood pressure
25. Arterial Sclerosis

## **Station G Heart Rate and Blood Pressure**

**For questions 26 & 27** – Use the formulas to solve the following problems.

26. If systolic pressure is 122 and diastolic pressure is 84, what are the pulse pressure and the Mean Arterial Pressure?
27. Mrs. Jones has a heart rate of 85, a systolic pressure of 140 and diastolic pressure of 60, and an end diastolic volume of 110 and end systolic volume of 40. What is her cardiac output?
28. How does nicotine consumption affect a person's heart rate and blood pressure?
29. How does caffeine consumption affect a person's heart rate and blood pressure?
30. How does the deposit of plaque in the blood vessels affect blood pressure?

**Tie Breaker Question:** Diagram a cross section of an artery, vein and capillary and explain the differences in their structures. What structure is present in a vein that is not present in the others and why is it so important?

### **Practice Exercise:**

Develop questions and formulate answers for the effects of alcohol, caffeine, nicotine And marijuana upon the nervous and circulatory system.

## 2007 ANATOMY (B) - Sample Tournament – Answer Key

### Station A

1. Muscle coordination, balance, muscle tone
2. Conscious activity
3. Brain's switchboard
4. Vital reflexes as heart beat, respiration
5. Medulla, pons, and midbrain

### Station B

6. Retina
7. Choroid
8. Iris
9. Vitreous humor
10. nearsightedness – Myopia

### Station C

11. Aorta – carries oxygenated blood from heart to body
12. Vena cava – brings blood back to heart from body
13. Left ventricle – pumps blood through aorta to body
14. Right Atrium – collects blood coming in from vena cava
15. Mitrial valve - keeps blood from sloshing back into left atrium

### Station D

16. – 20.

vena cava → right atrium → tricuspid valve → right ventricle → pulmonary valve → pulmonary artery → pulmonary capillary bed → pulmonary veins → left atrium → bicuspid (mitrial valve) → left ventricle → aortic valve → aorta → arteries → arterioles → tissue capillaries → venules → veins → vena cava

### Station E

21. Glaucoma – increased pressure inside eyeball from excess aqueous and/or vitreous humor
22. Pink eye – infection of the conjunctiva – red irritated eye (very contagious)
23. Shingles – infection of the nerve endings caused by virus herpes zoster (also causes chicken pox)
24. High blood pressure – hypertension , plaque in arteries, high salt diets, diet, disease, drugs or alcohol, excess weight
25. Arterial Sclerosis – Hardening or thickening of the artery walls. Can lead to heart attack or stroke. Hyperlipidemia also accelerates arterial sclerosis

### Station F

26. pp = 38 hg of Mercury and MAP = 96.7 rounded to 97
- 27 CO = 5950 mL/min
- 28 increases heart rate and blood pressure
- 29 increases heart rate and blood pressure
30. increases blood pressure because it narrows the opening in the blood vessels