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Ask the publishers to restore access to 500,000+ books. Transcribed image text: INCREDIBLE JOURNEY A Visualization Exercise for the Cardiovascular System All about you are buge white cords, banging Himply from two Maps of endothelial tissue.... 1 Your journey starts in the pulmonary vein and includes a trip to part of the systemic circulation and a special circulation 2 You ready your equipment and prepare to be miniaturized and injected into your host 3. Almost immediately after injection, you find yourself swept 1. into a gooxd-sized chamber, the (1) However, you do not stop in this chamber but continue to plunge downward into a larger chamber below. You land with a big splash and exam- ine your surroundings All about you are huge white cords, hanging limply from two flaps of endothelial tissue far above you. You report that you are sitting in the (2) chamber of 7 the heart, seeing the flaps of the (3) valve above you. The valve is open, and its anchoring cords, the oare lax. Because this valve is open, you conclude that the heart is in the (5) phase of the cardiac cycle. Gradually you notice that the chamber walls seem to be closing in. You hear a thundering boom. and the whole chamber vibrates as the valve slams shut above you. The cords, now rigid and strained, form a cage about you, and you feel extreme external pressure. Obviously, the heart is in a full-fledged 10 Then, high above on the right, the roof" opens, and you are forced through this (7)_valve. A fraction of a second later, you hear another tremendous boom that sends shock waves through the whole arca. Out of the comer of your eye, you see that the valve below you is closed, and it looks rather like a ple cut into three wedges 8. 9. 10. 11. 12. 13 14. As you are swept along in this huge artery, the(8) you pass several branch-off points but continue to careen along, straight down at a dizzying speed until you approach the (9) artery, feeding the small intestine. After entering this artery and passing through successively smaller and smaller subdivisions of it, you finally reach the capillary bed of the small intestine. You watch with fascination as nutrient molecules move into the blood through the single layer of (10) cells forming the capillary wall. As you move to the opposite shore of the capillary bed, you enter a venule and begin to move superiorly once again. The venules draining the small intestine combine to form the (11) vein, which in tum combines with the (12) vein to form the hepatic portal vein that carries you into the liver. As you enter the liver, you are amazed at the activity there. Six-sided hepatic cells, responsible for storing glucose and making blood proteins, are literally grabbing (13) out of the blood as it percolates slowly past them. Protective_(14) cells are removing bacte- ria from the slowly moving blood. Leaving the liver through the (15) vein, you almost immediately enter the huge (16) which returns blood from the lower part of the body to the (17) of the heart. From here, you move consecutively through the right chambers of the heart into the (18). Soon that vessel splits and you are carried into a (19) artery, which carries you to the capillary beds of the (20) and then back to the left side of the heart once again. After traveling through the left side of the heart again, you leave your host when you are aspirated out of the (21) artery, which extends from the aorta to the axillary artery of the armpit. 15. 16. 17. 18. 19. 20. 21. Transcribed image text: The Incredible Journey: A Visualization Exercise for the Circulatory System All about you are buge wbite cords, banging Imply from two flaps of endothelial issue... 33. Where necessary, complete the statements by inserting the missing word(s) in the answer blanks Your journey starts in the pulmonary vein and includes a trip to part of the systemic circulation and a special circulation. You ready your equipment and prepare to be miniaturized and injected into your host. N. m in Almost immediately after injection, you find yourself swept into a good-sized chamber, the (1). However, you do not stop in this chamber, but continue to plunge downward into a larger chamber below. You land with a large splash and examine your surroundings. All about you are huge white cords, hanging limply from two flaps of endothelial tissue far above you. You report that you are sitting in the (2) chamber of the heart, seeing the flaps of the (3) valve above you. The valve is open and its anchoring cords, the (4), are lax. Since this valve is open, you conclude that the heart is in the (5) phase of the cardiac cycle. > Gradually you notice that the chamber walls seem to be closing in. You hear a thundering boom, and the whole chamber vibrates as the valve slams shut above you. The cords, now rigid and strained, form a cage about you, and you feel extreme external pressure. Obviously, the heart is in a full-fledged . Then, high above on the right, the "roof" opens, and you are forced through this (7) valve. A fraction of a second later, you hear another tremendous boom that sends shock waves through the whole area. Out of the corner of your eye, you see that the valve below you is closed, and it looks rather like a pie cut into three wedges. á As you are swept along in this huge artery, the_(8), you pass several branch-off points, but continue to careen along, straight down at a dizzying speed until you approach the (9) artery, feeding the small intestine. After entering this artery and passing through successively smaller and smaller subdivisions of it, you finally reach the capillary bed of the small intestine. You watch with fascination as nutrient molecules move into the blood through the single layer of (10) cells forming the capillary wall. As you move to the opposite shore of the capillary bed, you enter a venule and begin to move superiorly once again. The venules draining the small intestine combine to form the_(11) vein, which in turn combines with the (12) vein to form the hepatic portal vein that carries you into the liver. As you enter the liver, you are amazed at the activity there. Six-sided hepatic cells, responsible for storing glucose and making blood proteins, are literally grabbing_(13) out of the blood as it percolates slowly past them. Protective (14)_cells are removing bacteria from the slowly moving blood. Leaving the liver through the (15) vein, you almost immediately enter the huge_(16), which returns blood from the lower part of the body to the (17) of the heart. From here, you move consecutively through the right chambers of the heart into the_(18) artery, which carries you to the capillary beds of the (19) and then back to the left side of the heart once again. After traveling through the left side of the heart again, you leave your host when you are aspirated out of the_(20) artery, which extends from the aorta to the axillary artery of the armpit. Jessica Watson completed her solo around-the-world journey on May 15, 2010, when she arrived in Sydney, Australia. She spent 210 days at sea, becoming the youngest person to sail solo, non-stop, and unassisted around the world at the age of 16.