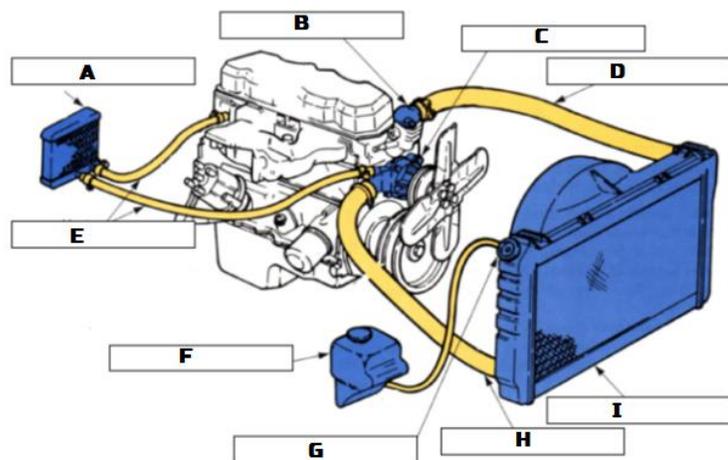


7. VIDEO QUESTION (Donut Media): The heater core, located in the _____ of your car, is really a tiny little _____.
8. VIDEO QUESTION (Donut Media): Why were VW and Porsche “boxer” engines made the way they were?

9. VIDEO QUESTION (Donut Media): Who is Ice Bart taking to the prom?

10. Identify the components in the diagram:



- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.
- i.

11. A radiator is used to dissipate heat. Since black *absorbs* heat (ever worn black clothing in summer?), why do YOU think radiators traditionally been painted black?

12. DESCRIBE, using your own words, HOW a radiator cap works to MAINTAIN system pressure

13. VIDEO QUESTION (Auto 125): In a recovery system, the hot coolant flows out into an _____ container.

14. VIDEO QUESTION: What stops atmospheric pressure from collapsing the radiator hoses?

15. A water pump circulates engine coolant through what three components?

a.

b.

16. Identify the components in the diagram shown here:

a.

b.

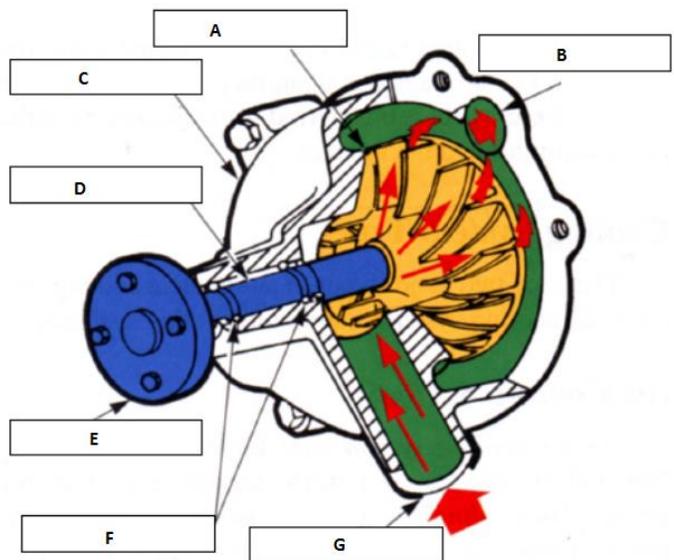
c.

d.

e.

f.

g.



17. How can you check to see if a water pump is any good?

18. A core-plug is improperly referred to as a “frost plug”

a. Why are they called “core plugs?”

b. Why are they called “frost plugs?”

19. How do you remove a frost plug?

20. When installing frost plugs, what should you use to seal them?

21. A massively overheated engine can blow headgaskets as the head expands between the headbolts and “unclamps” the head gasket. What is one way of telling if your head gasket is blown and letting combustion gasses into the cooling system?

22. VIDEO QUESTION (Kit Masters Inc): Describe in your own words how a Viscous Fan Clutch works?

23. Electric Cooling Fans are my favourite. How they know when to turn on and off?

24. What are two ways to diagnose a leaking heater core?

a.

b.

25. VIDEO QUESTION (Mark's Reviews and Tutorials?): What is the most common mixture ratio of Antifreeze to Water used today?

26. VIDEO QUESTION (Mark's Reviews and Tutorials): What happens if the Alkalinity is too high?

27. How often should Engine Coolant be changed?

28. Engine coolant contains Ethylene Glycol. Google a Material Safety Data Sheet (MSDS) and **answer the following questions from the data on the sheet:**

a. What safety equipment should be worn when handling antifreeze?

b. What should you do if you get antifreeze in your eyes?

c. What should you do if you accidentally ingest antifreeze?

d. How much antifreeze will kill a 1Kg Rat? (it's in the MSDS)

29. What is an Antifreeze Tester actually testing? (do not say “it tests Antifreeze”, this is not grade 2):

30. What do you look for when inspecting a radiator?

31. How often should radiator hoses be replaced?

32. VIDEO QUESTION (Supercheap Auto): Describe in your own words how to inspect radiator hoses:

33. VIDEO QUESTION (Supercheap Auto): Describe in your own words how to install new radiator hoses:

34. Why do you suppose *flexible* radiator hoses must be used?

35. VIDEO QUESTION (Scotty Kilmer): Most thermostats today are *designed* to fail in the “open” position. Why do you think they are designed to fail OPEN

36. How often should fan belts (drive belts) be replaced?

37. VIDEO QUESTION (Scotty Kilmer): How can you make it easier to remember how the serpentine belt is routed?

38. What is the risk of running a Coolant “Chemical Flush” through the system?

39. What would be a risk of running a Radiator Stop Leak through the system?

40. VIDEO QUESTION (Easy Fix): Describe in your own words how to “Pressure Test” the radiator and cooling system:

41. VIDEO QUESTION (Thomas Brian): Describe in your own words what to look for in the Radiator Cap:

42. An engine overheats only while sitting in traffic. What is the most likely cause?

43. An engine never heats up. What is the most likely cause?

44. An engine only overheats when pulling a long hill. What is the most likely cause?