Mechanic Questions

1) Explain how you can keep your car in good condition?

Ans: Regular check-up of parts like

- Check battery
- Tyres and brakes
- Fluid levels (Coolant, Washer fluid, Brake fluid, Oil, Power steering, etc.)
- Fuel filters and Injectors
- Belts and hoses
- Alternator
- Lubrication of wheel
- Bearing and ball joints

2) How often does a car require services?

Ans: Car requires services yearly and major maintenance at 6,000 miles.

3) Before buying a used car what things you should look for?

Ans:

- Any leakage of oil underneath the car
- Check any leakage of coolant water from the radiator
- Check battery condition
- Check whether car emits blue-gray, dense smoke or a normal smoke from the exhaust pipe
- Watch out for engine noises, some vibrations, lack of power or any other issues
- Check for any burning smells when opening the hood
- Check steering wheel, driver's seat and inner door
- Check tyres (Edge should not be worn out, no bulge on the sidewall, no cuts, enough groves to hold the road)
- Check all meter work fine when you start the car
- Auto Mechanic

4) Explain how timing belt works?

Ans: Timing belt rests on the crankshaft pulley and either one or two camshaft pulley; they are all aligned through the timing belt. The closing and opening of engine valves are controlled by camshaft to let in air and fuel mixture or exhaust gas, if you do not have a timing belt or

damaged timing, it will directly affect the timing of opening and closing of engine valves. This is the reason it is called the timing belt and if not in a good position, it will damage your engine.

5) Explain what is the difference between Crankshaft and Camshaft?

Ans: Crankshaft: It is linked to the pistons by the connecting rods, the force produced by the fuel-air mixture is transmitted to the crankshaft and converted to rotary motion as the crankshaft turns.

Camshaft: It controls the intake and exhaust valves. It is linked with crankshaft either by the timing chain or belt and it turns one rotation for every two rotations of the crankshaft, for each valve it operates- the cam opens each valve at the correct time to draw fuel and air mixture or expel the exhaust gas

6) What may cause engine overheat?

Ans: The engine gets overheat when

- Coolant leaks
- Cooling system clogged
- Weak radiator cap
- Thermostat stuck shut
- Inoperative electric cooling fan
- Bad fan clutch, slipping fan belt, missing fan shroud
- Too high or low concentration of antifreeze
- Collapsed radiator hose or debris in the radiator
- Restricted exhaust system

7) What is an automotive charging system is made up of?

Ans: The automotive charging system is made up of

- Battery
- Voltage Regulator
- Alternator

8) What is the standard reading in voltmeter for the functional battery?

Ans: For the functional battery, the standard reading for voltmeter is 14-15 which is normal, but if reading shows 13 or less then, there is a problem with the battery.

9) How can you judge whether the problem is due to the alternator and not due to battery?

Ans: To judge the problem for an alternator, there are few steps you can try

- Run your car and unplug the positive connection of the battery, if the car stops then it is more likely there is a problem with the alternator
- Another way of checking alternator is by checking interior lights, usually, an alternator charges your car battery when the car is on. If the interior lights come on brightly and fade away slowly, it indicates that the alternator cannot keep a charge when the car is running. It means there is a problem with the alternator.

You can also check by racing your car with headlights on if the light brighten up when you race the car and lose power when you slow it down, indicates a problem with the alternator

10) Explain what are the components of the alternator and how it works?

Ans: An alternator consists of the stator, rotor and copper wiring. The rotor and stator are belt driven magnets encased in copper wiring, which creates a magnetic field. This belt is connected to the engine, so when the engine starts it rotates the rotor and generates a magnetic field. Stator converts this magnetic field into the voltage that flows to the diode. The diode assembly converts the AC electricity to DC, which is used by the car battery.

11) What are the important components of the Engine lubrication system?

Ans: Important components of engine lubrication system includes

- Oil pan: It is a container where engine oil settles down when the car is not running
- Pickup tube: When the engine starts oil to get sucked up through the pickup tube
- Oil pump: The pump will help to slide up oil into the tube against the gravity
- Pressure relief valve: It relieves the pressure on oil
- Oil filter: It removes dirt and debris from the oil
- Spurt holes and galleries: These are the holes in the crankshaft or other parts of the engine through which oil streams and make them lubricated
- Sump: Once it has lubrication job is done it will go back again into oil pan or sump

12) Explain what is kingpin offset?

Ans: Kingpin offsets the part, which is usually used as a pivot in the steering of the vehicle.

13) What do you mean by CC when mentioning car efficiency?

Ans: CC stands for Cubic Centimetres; it tells the total volume of the engine cylinder. It indicates that the automobile with more CC produces more power than the other engines.

14) How is the petrol engine different than the diesel engine?

Ans:

Petrol engine: Petrol engine works on the principle of Intake (fuel + air), Compression, Power, and Exhaust. It means the fuel, and air will enter the combustion chamber, piston comes upwards and compress the fuel. The compressed fuel comes in contact with spark plug and produces a spark that pushes the piston down

Diesel Engine: In the diesel engine, the phenomenon is slightly different, there is no spark plug in the diesel engine. In here only air enters in the burning chamber, when the piston is pushed up by the motor, it will compress the air in the chamber, making it hot. Now valve opens and inject diesel, because of compressed air, the diesel blasts and push the piston down

15) Explain the clutch system works?

Ans: Clutch system is made up of two metal plates adjacent to the engine. When you press the clutch pedal down the plates come apart separating the engine from the drive wheels allowing the drivers to change the gear, and re-engage the plates again with the engine once the gear is changed

16) Explain what is the benefit of dual clutch transmission?

Ans: The dual-clutch transmission allows gears to be pre-selected before they are changed, so one clutch selects the second gear while the second clutch selects the third gear. There are usually seen in race cars

17) Explain what do you mean by independent suspension?

Ans: Independent suspension is referred to the mounting of the wheel on a separate axle. So, that road shocks affect only the particular wheel.

18) Mention the injector pressure in the heavy vehicle?

Ans: Injector pressure in the heavy vehicle is about 220 kg/cm square.