Hydraulic System Diagnosis and Repair

1) A spongy brake pedal may be caused by:
   a. ABS Diagnostic Trouble Code set
   b. Frozen caliper piston
   c. Defective metering valve
   d. Air in hydraulic system

2) This question has the word EXCEPT. For this question, look for the choice that could NOT cause the described situation. Read the entire question carefully before choosing your answer. A vehicle has a very erratic brake pulling concern while applying the brakes. All of the following items could cause this erratic pull EXCEPT:
   a. Excessive tire pressure
   b. Four wheel alignment
   c. Seized caliper piston on the other side
   d. Steering gear problem

3) The brakes are being bled on an older vehicle equipped with a quick take up valve in the master cylinder. Technician A says the quick take up valve must be depressed. Technician B says the brakes on this vehicle cannot be bled. Who is right?
   a. A only
   b. B only
   c. Both A and B
   d. Neither A nor B

4) A power assist brake booster push rod that is too short will cause which of the following?
   a. Excessive brake drag
   b. Brake system to be inoperative
   c. Excessive brake pedal travel
   d. Brake light is illuminated

Drum Brake Diagnosis and Repair

5) A vehicle with disc/drum brakes requires excessive brake pedal effort to stop. The brake pedal is firm when applied. While starting the engine with the brakes applied, the pedal does not go down slightly. Technician A says excessive brake pedal freeplay could be the cause. Technician B says air trapped in the hydraulic system could be the cause. Who is right?
   a. A only
   b. B only
   c. Both A and B
   d. Neither A nor B

6) Which of the following conditions can cause brake pedal fade?
   a. Seized wheel cylinder piston
b. Brake drum machined beyond its limit  
c. Leakage past the master cylinder cups  
d. Air in the hydraulic system

7) The rear brake linings are soaked with axle grease but still have a lot of lining left on them. Which is the correct way to service these brakes?  
a. Replace the brake linings  
b. Wash in hot, soapy water and dry  
c. Clean with approved cleaner and reuse  
d. Repair leak and replace brake linings

8) On a car with a drum/disc system, the front brakes lock up on light pedal application. This problem could be caused by a bad:  
a. Residual check valve  
b. Proportioning valve  
c. Pressure differential switch  
d. Metering valve

Disc Brake Diagnosis and Repair

9) This question has the word EXCEPT. For this question, look for the choice that could NOT cause the described condition. Read the entire question carefully before choosing your answer. All of these would cause a low brake pedal, EXCEPT:  
a. Brake adjustment  
b. Loose wheel bearing  
c. Low brake fluid  
d. Seized caliper piston

10) A spongy brake pedal on a vehicle with 4 wheel disc brakes with a longer than normal travel indicates which of the following?  
a. Air in the hydraulic system  
b. Caliper piston seized  
c. Parking brake out of adjustment  
d. A faulty power booster

11) A vehicle with 4 wheel disc brakes has a brake squeal. Technician A says a defective proportioning valve could be the cause. Technician B says disc brake squeal is often caused by movement of the disc brake pad during braking. Who is right?  
a. A only  
b. B only  
c. Both A and B  
d. Neither A nor B

12) On a car with single piston floating caliper disc brakes, the disc brake pad between the caliper piston and the rotor is badly worn. The other brake pad is only slightly worn. Technician A says excessive rotor run out could be the cause. Technician B says insufficient clearance between the pads and caliper slider could be the cause. Who is right?  
a. A only  
b. B only
c. Both A and B  
d. Neither A nor B

**Power Assist Units Diagnosis and Repair**

13) A vehicle comes in with a complaint of excessive pedal travel before the brakes apply.  Technician A says the master cylinder pushrod adjustment is incorrect.  Technician B says the cause is a faulty residual pressure check valve admitting air.  Who is right?  
   a. A only  
   b. B only  
   c. Both A and B  
   d. Neither A nor B

14) With the brakes applied on a vehicle with power brakes, the pedal moves down slightly when the engine is started.  Technician A says the cause could be a leaking power brake booster diaphragm.  Technician B says the cause could be a stuck closed residual check valve in the hose from the intake manifold to the power brake booster.  Who is right?  
   a. A only  
   b. B only  
   c. Both A and B  
   d. Neither A nor B

15) Technician A says the vacuum supply test involves inspecting the vacuum supply hose for kinks.  Technician B says the test involves checking the level of vacuum supplied by the engine or vacuum pump.  Who is right?  
   a. A only  
   b. B only  
   c. Both A and B  
   d. Neither A nor B

16) When performing a vacuum booster function test, you should begin by pumping the brake pedal several times ____________.  
   a. With the engine off  
   b. With the engine running  
   c. With the vacuum hoses removed  
   d. While driving the vehicle slowly

**Miscellaneous Systems Diagnosis and Repair**

17) On a bearing that has been shock loaded, the race (cup) of the bearing can be dented.  What is this type of bearing failure called?  
   a. Spalling  
   b. Arcing  
   c. Brinelling  
   d. Fluting
18) The component in the figure is involved in what procedure?

- Replacing sealed wheel bearing
- Replacing the front strut
- Replacing a ball joint
- Repacking a front wheel bearing

19) Technician A says a defective wheel or axle bearing can make a growling or rumbling noise. Technician B says a defective wheel displays looseness or excessive play in the steering wheel especially while driving over rough road surfaces. Who is right?

- A only
- B only
- Both A and B
- Neither A nor B

20) The front wheel bearings are being adjusted. Technician A says your torque the adjusting nut to a specified torque and back off the nut until it lines up with the hole and install the cotter pin. Technician B says backing off the castle nut will cause the bearing to overheat. Who is right?

- A only
- B only
- Both A and B
- Neither A nor B

Electronic Brake Control Systems: ABS, TCS and ESC

21) The ABS (antilock brake system) and TRACTION OFF indicator lights remain ON with the engine running. Technician A says to check for ABS or TCS (traction control system) diagnostic trouble codes. Technician B says you can check for ABS or TCS blink codes by connecting two pins of the DLC (data link connector). Who is right?

- A only
22) A wheel speed sensor is being diagnosed using the OEM (original equipment manufacturer) diagnostic scan tool. Technician A says to verify wheel speed sensor operation, compare all four wheel speed sensor outputs to vehicle speed on the data list. Technician B says the wheel’s direction of rotation can be verified by looking at the wheel direction on the scan tool data list. Who is right?
   a. A only
   b. B only
   c. Both A and B
   d. Neither A nor B

23) The front brake rotors and pads are being replaced on a vehicle equipped with a TCS (traction control system) and electronic stability control system (ESC). Technician A says the yaw rate and deceleration sensor should be recalibrated. Technician B says the new rotors should be indexed to the hub using a dial indicator for the least amount of runout. Who is right?
   a. A only
   b. B only
   c. Both A and B
   d. Neither A nor B

24) The ABS (antilock brake system) amber light does not go off after the engine is started. Technician A says a parking brake not fully released could be the cause. Technician B says when this happens the brakes will operate like a normal non-ABS brake system. Who is right?
   a. A only
   b. B only
   c. Both A and B
   d. Neither A nor B
   e.