

# HYDRAULIC AND PNEUMATIC SYSTEMS

Q. ID: ITISKILL6895NY

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Question Paper

Duration: 60 Mins

Total Marks: 26

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Student Name: \_\_\_\_\_ Roll No: \_\_\_\_\_

1. What is the effect if the unloader valve is in open position?
- A) Continuously allow the air to the atmosphere  
B) Release the air to the brake valve  
C) Maintain the required air pressure  
D) Allow the air in to the air tank
2. Which part operates the brake shoe in the hydraulic brake system?
- A) Break pedal  
B) Wheel cylinder  
C) Break drum  
D) Master cylinder
3. Which is the power source of pneumatic system?
- A) Air Service unit  
B) Control valve  
C) Actuator  
D) Air Compressor
4. Which law is applied in hydraulic brake system?
- A) Boyle's law  
B) Charles law  
C) Pascal's law  
D) Newton's law
5. Which valve safe guards the hydraulics jack?
- A) Shut off valve  
B) Relief valve  
C) Non return valve 2  
D) Non return valve 1
6. Which device converts hydraulic energy into mechanical energy?
- A) Compressor  
B) Regulator  
C) Control Valve  
D) Actuator
7. Which device transmit the pressure equally to all wheel cylinders in hydraulic brake?
- A) Servo cylinder  
B) Slave cylinder  
C) Booster cylinder  
D) Master cylinder
8. What is the direction of driven gear in an external gear pump?
- A) Same direction  
B) Opposite direction  
C) Inclined direction  
D) Perpendicular direction
9. Which device converts mechanical energy into pneumatic energy?
- A) Generator  
B) Compressor  
C) Actuator  
D) Alternator
10. Which service unit act as filter, regulator and lubricator in the pneumatic system?
- A) Air service unit  
B) Compressor unit  
C) Actuator unit  
D) Valve unit
11. How many switching position in 4/2 directional control valve?
- A) Four  
B) Two  
C) One  
D) Three
12. Which type of pump used in the hydraulic jack?
- A) Vane pump  
B) Internal gear pump  
C) Gear pump  
D) Plunger pump
13. Which valve save the pneumatic brake components against damage?
- A) Brake valve  
B) Relay valve  
C) Check valve  
D) Unloader valve
14. Which measure the liquid's resistance of flow?
- A) Quality  
B) Viscosity  
C) Elasticity  
D) Gravity
15. What is the reason for pneumatic brake failure?
- A) Defective unloader valve  
B) More pedal play  
C) Less pedal play  
D) Defective front wheel slack adjuster
16. Which law states that the pressure intensity of a static liquid equal in all direction?
- A) Newton's law  
B) Charle's law  
C) Boyle's law  
D) Pascal's law
17. What is the type of inner drive gear used in the internal gear oil pump?

- A) Spur gear
- B) Spiral gear
- C) Rotor gear
- D) Helical gear

18. Which unit supplies a fine mist of oil in pneumatic system?

- A) Pressure relief valve
- B) Control valve
- C) Actuator
- D) Air service unit

19. Which valve regulate the flow rate in hydraulic system?

- A) Pressure relief
- B) Delivery
- C) Non return
- D) By pass

20. Which part in the internal gear pump act as seal?

- A) Gasket
- B) Sealing ring
- C) Crescent-shaped spacer
- D) Gears

21. What is the power flow of pneumatic system?

- A) Control valve - Compressor - Actuator
- B) Compressor - Control valve - Actuator
- C) Compressor - Actuator - Control valve
- D) Actuator - Control valve - Compressor

22. What is the working media in pneumatic system?

- A) Air
- B) Steam
- C) Diesel
- D) Oil

23. Which act as a seal in the external gear pump?

- A) Housing
- B) Gear meshing
- C) Drive gear
- D) Driven gear

24. What is the function of hydraulic oil in hydraulic system?

- A) Transmit power
- B) Increase the volume
- C) Reduce the pressure
- D) Increase the heat

25. Which component of air brake system converts pneumatic into mechanical energy?

- A) Reservoir
- B) Compressor
- C) Brake chamber
- D) Brake valve

26. Which valve is to be closed before lifting the load with hydraulic jack?

- A) Non return valve-2
- B) Shut of valve
- C) Non return valve-1
- D) Relief valve