

## [Ashok Leyland Placement Paper](#)

### **Part 1: Engineering Aptitude (50 Questions â€” 25 Minutes)**

**Physics**

**Maths**

**Mechanical Engineering**

**Electrical Basics**

### **Part 2: Mechanical Comprehension (50 Questions â€” 30 Minutes)**



**Basic Production Engineering**  
**Mechanical Figurative Questions**

**Part 3: General Aptitude (60 Questions, 30 Minutes)**

**Analogy**

**Analytical Reasoning**

**Verbal**

**Quantitative Aptitude**

**Figurative Puzzles**

**Alphabetical Puzzles**

### **Part-1: BASED ON 11& 12 FUNDA.**

Electrical circuit

Effect of addition of salt on water (related to solutions)

Over turning of vehicle in circular track (conditions of skidding, etc )

Effect of pressure on boiling

Buoyancy effect

Effect of rubbing glass with silk & rubber with \_\_\_\_\_ (nature of charge produced)

Forces on charges

Time period of pendulum

Body temperature in f, temperature common on both c & f scale

Graphite crystal structure

### Part-2: BASED ON ENGINEERING FUNDA

1. If  $v=220V$ ,  $I=25A$ , power factor=0.8, frequency=400Hz. If the motor runs for 3 hours, what is the power consumed?
2. Symbol of capacitor?
3. Boiling point of mercury?
4. When salt is added to water, what happens to its freezing point?
5. What motor do they use in railway engines for traction?
  1. DC Shunt motor b. DC Series motor
6. What motor is used for running lathe spindle?
7. Type of magnetic material used for small motors.
  0. Diamagnetic b. paramagnetic c. ferromagnetic
8. What types of images do concave and convex lenses produce?
9. What is the speed of 3-phase induction motor?
10. Which gear type does not have axial thrust? Ans: Herringbone
11. Determinant value? Ans: 0
12. Which of the following is not a thermal radiation law? Ans: Lamberts law
13. In which units sound is measured? Ans: Decibels
14. Velocity of sound at sea level?
15. Which of the following is formed due to the attraction between moon and earth? Ans: Tides
16. Instrument used for measurement of high temperatures? Ans: Pyrometer
17. Thread used in lathe leadscrew? Ans: ACME Thread
18. If water is air, air is dust, dust is light, light is sound, and sound is water, where does fish live?
19. If the barometer shows 300mm Hg, what is the absolute pressure?
20. What is the 4-1 process in otto cycle?
21. Power stroke in diesel cycle is what process? Ans: Adiabatic process
22. Which of the following does not form a real image?
  0. Concave b. Convex c. telescope d. microscope
23. At what temperature  $^{\circ}C$  and K are the same?
24. What is the material used in permanent magnet?
25. An object weighs 3kg in air, 2.5kg in water, what is its density?
26. Which material has the highest  $C_p$  value?

0. air b. water c. copper
27. Which of the following has lowest thermal conductivity?
  0. steel b. SS c. Bronze d. copper
28. The crystalline structure of graphite is
  0. a. Simple cubic b. FCC c. BCC d. HCP
29. Which process cannot be used to produce external threads?
  0. forging b. Rolling c. milling d. turning
30. The axial stress on a member which is subjected to a sudden load when compared to load applied gradually is
  0. a. same b. double c. half d. quadruple
31. Silencer reduces noise. It also
  0. gives balance to engine b. increases fuel consumption c. Decreases fuel consumption d. reduces vibrations
32. Unit of kinematic viscosity.
33. Unit of surface tension.
34. Meaning of overdrive
35. Wankel engine
36. Meaning general drill bit angle.
37. Reason of using regenerator & condenser.
38. Cycle used in gas cycles, dual cycle & diesel cycle diagram.
39. Normal value of voltage in spark plug & distributor function.
40. In which case turning will be easy (front wheel driven back wheel steered/\_\_\_/\_\_\_/\_\_\_).
41. Viscous fluid passing through duct of varying cross section & pressure remains unchanged- reason?
42. Differential function
43. Pitch circle diameter & Pressure angle
44. Gear hobbler
45. Gear system in which axial thrust is absent.
46. Force applied on pin joint of truss (connecting 3 bars, middle straight side slant at equal angle)-tension/compression in middle bar?
47. Element added to steel for corrosion resistance.(Ans: Cr)
48. Which has lowest specific heat- water, steam, copper?
49. Which has lowest thermal conductivity- stainless steel, steel, and bronze?
50. Diamond pin function.
51. Relation between stress-gradually applied & suddenly applied.
52. Increasing of water density in range?(0-4 degree)
53. 1 litre, 4 stroke engine, 1600 rpm, mean thermal effective pressure=5 bar, power of engine?
54. Finding rpm of single phase alternator from list of rpm's.
55. Efficiency of carnot engine.
56. Temperature measurement based on which law.
57. Size of lathe(parameters)
58. Thread can be formed by all process except
  0. Forging b. rolling c. Milling d. Turning
59. Thread used in screw jack, lead screw?
60. Which is not related to thermal radiation
  0. planck law b. steffan boltzmann law dc. fourier law
61. Radiator type used in bus.
62. Definitions of normalizing, tempering, quenching, etc.
63. Normal hardness value of cast iron used in lathe bed.(in BHN)
64. Definitions-straddle milling, slab milling, gang milling etc.

65. Questions based on getting final 3-D shape, from sheet showing details where it can be folded.
66. Getting front view, top view, side view of given isometric view.
67. Material is not removed in which process
  0. punching b. coining c. tapping d. embossing

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