

16. Lever and Simple machine

Q. ID: ITISKILL5446HU

May 2026

Govt ITI Beerihundi

Question Paper

Duration: 30 Mins

Total Marks: 14

ID: ITISKILL5446HU

Student Name: _____ Roll No: _____

1. Which order lever is claw hammer?

- A) Curved lever B) 2nd order lever
C) 3rd order lever D) 1st order lever

C) 4

D) 8

2. What effort required to lift a load of 150 kg in a wheel and axle, if the velocity ratio is 2.5 and the efficiency of the machine is 75%?

- A) 100 kg B) 80 kg
C) 90 kg D) 70 kg

8. Which type of levers is bell cranked lever?

- A) 1st order lever B) 3rd order lever
C) Curved lever D) 2nd order lever

3. What is the efficiency of a simple screw jack having velocity ratio is 314.2 and mechanical advantage is 220?

- A) 0.6 B) 0.7
C) 0.65 D) 0.75

9. How much load is lifted if an effort of 25 kg is applied to a simple machine having velocity ratio of 4 and efficiency 75%?

- A) 70 kg B) 80 kg
C) 75 kg D) 65 kg

4. What is the ratio between the distance moved by the effort to the distance moved by the load?

- A) Efficiency B) Velocity ratio
C) Mechanical advantage D) Fulcrum

10. What is the distance of the load from the fulcrum called?

- A) Effort B) Load arm
C) Effort arm D) Power arm

5. What is the name of fixed or supporting point of a lever?

- A) Load B) Effort
C) Fulcrum D) Mechanical advantage

11. Which is example for first order lever?

- A) Lime squeezer B) Fire tongs
C) A pair of scissors D) A wheel barrow

6. What is the velocity ratio of a simple machine of a mass 120 kg is lifted to a height of 5 metres by a force of 60 kg moving 15 metre. Calculate velocity ratio?

- A) 4 B) 3
C) 2 D) 1

12. Which is example for third order lever?

- A) Lime squeezer B) Forceps
C) A pair of scissors D) Common balance

7. What is the mechanical advantage, if a load of 1000 kg is lifted by a simple machine and effort applied is 250 kg?

- A) 6 B) 3

13. What is the velocity ratio of a wheel and axle if the radii of wheel and axle are 375 mm and 75 mm respectively?

- A) 5 B) 4
C) 3 D) 6

14. Which is example for second order lever?

- A) Common balance B) Human forearm
C) Bottle opener D) A pair of scissors