

16. Lever and Simple machine

Q. ID: ITISKILL5446HU

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Answer Key

Duration: 30 Mins

Total Marks: 14

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

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

Answer: C) Load arm

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

- A) 8
- B) 3
- C) 6
- D) 4

Answer: D) 4

3. 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) 2
- C) 1
- D) 3

Answer: D) 3

4. 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) 80 kg
- B) 100 kg
- C) 70 kg
- D) 90 kg

Answer: A) 80 kg

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

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

Answer: A) 0.7

6. Which is example for first order lever?

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

Answer: D) A pair of scissors

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

- A) Fulcrum
- B) Efficiency

C) Mechanical advantage D) Velocity ratio

Answer: D) Velocity ratio

8. Which type of levers is bell cranked lever?

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

Answer: A) Curved lever

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) 65 kg
- D) 75 kg

Answer: D) 75 kg

10. Which is example for second order lever?

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

Answer: A) Bottle opener

11. Which is example for third order lever?

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

Answer: B) Forceps

12. 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) 4
- B) 3
- C) 5
- D) 6

Answer: C) 5

13. Which order lever is claw hammer?

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

Answer: B) 1st order lever

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

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

Answer: A) Fulcrum