GOVT ITI MANVI

June 2026

WCS

Question Paper

Duration: 60 Mins **Total Marks: 25** **ID: ITISKILL56469Z**

Student Name: _____ Roll No: _____

1. What is equal to tan θ?

A) Adjacent Side/Hypotenuse
B) Opposite Side/Adjacent Side
C) Adjacent side/Opposite side
D) Opposite Side/Hypotenuse

2. What is the S.I unit of heat?

A) Calorie
B) Joule
C) British thermal unit
D) Centigrade heat unit

3. 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

4. Which order lever is claw hammer?

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

5. What is the boiling point of water in fahrenheit scale?

A) 112 Degree F
B) 180 Degree F
C) 212 Degree F
D) 100 Degree F

6. Which is example for second order lever?

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

7. Which type of heat transmission takes place through physical contact?

A) Reflection
B) Convection
C) Conduction
D) Radiation

8. Which is example for third order lever?

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

9. How many degrees is equal to one radian?

A) (180)/(Pi)
B) (Pi)/(180)
C) (Pi)/(360)
D) (360)/(Pi)

10. What is the value of tan θ if sin θ = 4/5 ?

A) (4/3)
B) (5/3)
C) (4/5)
D) (3/4)

11. 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) 65 kg
B) 75 kg
C) 80 kg
D) 70 kg

12. What is the height of the wall where the ladder touches the wall if the ladder is 2.5 m long makes an angle of 60 Degree with the ground?

A) 4.43 m
B) 4.23 m
C) 2.165 m
D) 4.13 m

13. What is the angle of elevation of the top of a light house of 15 m height seen at a point 15 m away from the base?

A) 30 Degree
B) 90 Degree
C) 45 Degree
D) 60 Degree

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

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

15. What is the height of the building if a ladder at 45 Degree touches the building placed 16 m from the base of the building?

A) 15 m
B) 18 m
C) 17 m
D) 16 m

16. 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) 6
C) 3
D) 4

17. Which is example for first order lever?

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

18. Which is equal to sin θ?

A) Hypotenuse/Adjacent side
B) Hypotenuse/Opposite side
C) Adjacent Side/Hypotenuse
D) Opposite Side/Hypotenuse

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

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

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

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

21. 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) 2
B) 4
C) 3
D) 1

22. What is equal to cos θ?

A) Adjacent Side/Hypotenuse
B) Hypotenuse/Adjacent Side
C) Opposite side/Hypotenuse
D) Hypotenuse/Opposite Side

23. 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) 3
B) 4
C) 6
D) 5

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

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

25. Which type of levers is bell cranked lever?

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