Work and Energy: Transformation and Conservation, 10-question test — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A mass of 3 kilograms is 10 metres high, with g equals 10 metres per second squared. Its gravitational potential energy, in joules, is**

Question 1

A force of 15 newtons pushes an object 12 metres in the direction of the force. The work done, in joules, is

ANSWER

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2 **Work of 150 joules is done in 5 seconds. The power, in watts, is**

Question 2

A mass of 6 kilograms moves at 3 metres per second. Its kinetic energy, in joules, is

ANSWER

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3 **Work of 400 joules is done in 8 seconds. The power, in watts, is**

Question 3

Work of 150 joules is done in 5 seconds. The power, in watts, is

ANSWER

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4 **The unit of energy is the**

Question 4

A mass *of* 8 kilograms *is* 5 metres high , with $g = 10$ metres *per* second squared . *Its* gravitational potential energy , *in* joules , *is*

A watt

B newton

C kilogram

D joule

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5 The unit of power is the

Question 5

A force of 40 newtons pushes an object 3 metres in the direction of the force. The work done, in joules, is

A watt

B joule

C newton

D metre

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6

As a falling object loses height, its potential energy is transformed mainly into

Question 6

A mass of 5 kilograms moves at 2 metres per second. Its kinetic energy, in joules, is

A chemical energy

B kinetic energy

C nuclear energy

D sound only

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7 **Elastic potential energy is stored in a**

Question 7

Work of 400 joules is done in 8 seconds. The power, in watts, is

A moving car

B hot object

C stretched spring

D battery only

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8 **A machine takes in 500 joules and gives 400 joules of useful output. Its efficiency, in percent, is**

Question 8

A force of 25 newtons pushes an object 4 metres in the direction of the force. The work done, in joules, is

ANSWER _____

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9 **Work of 600 joules is done in 12 seconds. The power, in watts, is**

Question 9

A mass of 2 kilograms moves at 6 metres per second. Its kinetic energy, in joules, is

ANSWER

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10 **A mass of 8 kilograms is 5 metres high, with g equals 10 metres per second squared. Its gravitational potential energy, in joules, is**

Question 10

Work of 600 joules is done in 12 seconds. The power, in watts, is

ANSWER

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ANSWER KEY

1. 300
2. 30
3. 50
4. D
5. A
6. B
7. C
8. 80
9. 50
10. 400

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