38 Lecture - MTH101

Important Mcqs

The formula for work when the force applied is not constant is:

A) W = F(x)dx

B) W = F(x)dy

C) W = F(x)dt

D) W = F(x)ds

Answer: A) W = F(x)dx

The unit of work is:

- A) Joule
- B) Meter
- C) Newton
- D) Watt
- Answer: A) Joule

How do you calculate the work done when the force applied is in the opposite direction of the displacement?

- A) Positive
- B) Negative
- C) Zero
- D) None of the above

Answer: B) Negative

The work done over a small interval of distance is calculated as:

A) dW = F(x)dy

B) dW = F(x)dt

C) dW = F(x)ds

D) dW = F(x)dx

Answer: D) dW = F(x)dx

How do you calculate the work done when the force applied is perpendicular to the displacement?

A) Positive

B) Negative

- C) Zero
- D) None of the above

Answer: C) Zero

What is the formula for work when lifting a weight to a certain height?

A) W = ?[a,b] F(x)dx

B) W = ?[a,b] F(h)dh

C) W = Fd

D) W = mg*h

Answer: B) W = ?[a,b] F(h)dh

What does the definite integral represent in the context of work?

- A) Total force applied
- B) Total distance covered
- C) Total work done
- D) Total displacement

Answer: C) Total work done

How do you find the total work done when the force applied is constant?

A) W = Fd

B) W = ?[a,b] F(h)dh

C) W = ?[a,b] F(x)dx

D) W = mg*h Answer: A) W = F*d

How do you calculate the work done over a small interval of height?

A) dW = F(x)dx

B) dW = F(x)dy

C) dW = F(h)dh

D) dW = F(x)ds

Answer: C) dW = F(h)dh

What is the formula for work when the force applied is in the same direction as the displacement?

A) Positive

B) Negative

C) Zero

D) None of the above

Answer: A) Positive