

# Test Jot Series

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|               |           |                                                                                   |                |               |
|---------------|-----------|-----------------------------------------------------------------------------------|----------------|---------------|
| Student Name: |           |  | Class:         | 9th           |
| Paper Type:   | Chapter#5 |                                                                                   | Subject:       | Physics (SNC) |
| Paper Time:   | 1 Hour    |                                                                                   | Maximum Marks: | 30            |

**Q1. Choose the correct option.**

**(6X1=6)**

**1. Work done is maximum when the angle between the force  $F$  and the displacement is:**

|               |                |                |                |
|---------------|----------------|----------------|----------------|
| (A) $0^\circ$ | (B) $30^\circ$ | (C) $60^\circ$ | (D) $90^\circ$ |
|---------------|----------------|----------------|----------------|

**2. A joule can also be written as:**

|                          |                         |                                  |                                  |
|--------------------------|-------------------------|----------------------------------|----------------------------------|
| (A) $\text{Kg m s}^{-2}$ | (B) $\text{Kg ms}^{-1}$ | (C) $\text{Kg m}^2\text{s}^{-3}$ | (D) $\text{Kg m}^2\text{s}^{-2}$ |
|--------------------------|-------------------------|----------------------------------|----------------------------------|

**3. SI unit of work done is:**

|           |            |        |           |
|-----------|------------|--------|-----------|
| (A) Weber | (B) Newton | (C) NS | (D) Joule |
|-----------|------------|--------|-----------|

**4. What is the work done by a force of 10N moving an object 5m?**

|         |          |           |           |
|---------|----------|-----------|-----------|
| (A) 50J | (B) 100J | (C) 1200J | (D) 1500J |
|---------|----------|-----------|-----------|

**5. The energy possessed by a body by virtue of its position is:**

|                    |                      |                     |                  |
|--------------------|----------------------|---------------------|------------------|
| (A) kinetic energy | (B) potential energy | (C) chemical energy | (D) solar energy |
|--------------------|----------------------|---------------------|------------------|

**6. The kinetic energy of a body of mass 2kg is 25J. Its speed is:**

|                       |                          |                        |                         |
|-----------------------|--------------------------|------------------------|-------------------------|
| (A) $5\text{ms}^{-1}$ | (B) $12.5\text{ms}^{-1}$ | (C) $25\text{ms}^{-1}$ | (D) $150\text{ms}^{-1}$ |
|-----------------------|--------------------------|------------------------|-------------------------|

**Q2. Write down short answers of following questions.**

**(7X2=14)**

|                                                       |                                                                |
|-------------------------------------------------------|----------------------------------------------------------------|
| [i] Define work and its SI unit.                      | [ii] Define kinetic energy. Write its formula.                 |
| [iii] Define nuclear energy with example.             | [iv] Define energy with example.                               |
| [v] How energy is produced by burning of fossil fuel? | [vi] What are the main advantages of renewable energy sources? |
| [vii] What is power? Define the unit used for it.     |                                                                |

**Q3. Write detailed answers of the following questions. (Answer any 2)**

**(2X5=10)**

|                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. A force of 20N acting at an angle of $60^\circ$ to the horizontal is used to pull a box through a distance of 3 m across a floor. How much work is done? (Numerical Problem) |
| 2. Describe the energy transformation that occurs in a solar panel. Explain how energy is converted from one form to another.                                                   |
| 3. Describe the advantages and disadvantages of biomass-energy production. What are the different types of biomass energy sources.                                              |