

TALEEMI DUNYA

Test Syllabus: Unit # 4

St. Name		Test	physics	T. Marks	30	Time	60 Min
F. Name		Class	11 th	T. Code	U#4	T. Date	

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that Question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question. **6.**

1	Area under the curve of force displacement graph is equal to:						
(a)	Displacement	(b)	Work	(c)	Power	(d)	Energy
2	Slop of work time graph is equal to:						
(a)	Displacement	(b)	Acceleration	(c)	Power	(d)	Energy
3	Work done will be maximum if the angle between the force F and displacement d is						
(a)	45°	(b)	90°	(c)	180°	(d)	0°
4	A field is conservative when work done						
(a)	By centripetal force is zero	(b)	By a friction force is negative	(c)	By force perpendicular displacement is zero	(d)	In a closed path is zero
5	A field in which the work done in moving a body along closed path is zero is called:						
(a)	Electric field	(b)	Conservative field	(c)	Electromagnetic field	(d)	Maximum
6	Which of the following is not conservative						
(a)	Friction	(b)	Electric	(c)	Gravitational	(d)	Magnetic

Q.2 Write short answers of the following questions.

(8x2=16)

1. A person holds a bag of groceries while standing still talking to a friend. A car is stationary with its engine running from the stand point of work, how are these two situations similar?	2. Calculate the work done in kilojoules in lifting a mass of 10 kg (at a steady velocity) through a vertical height of 10m.
3. In which case is more work done? When a 50 kg bag of 1000kg is lifted through 50cm, or when a 50kg crate is pushed through 2m across the floor with a force of 50N?	4. When a rocket re-enters the atmosphere, its nose cone becomes very hot. Where does this heat energy come from?
5. A girl drops a cup from a certain height which breaks into pieces. What energy changes are involved?	6. A brick of mass 2.0 kg is dropped from a rest position 5.0 m above the ground. What is its velocity at a height of 8.0m above the ground?
7. A 70kg man runs upon long flight of stairs in 4.05. The vertical height of the stairs is 4.5 m. Calculate his power and its formula.	8. Define power and its formula

NOTE: Attempt the long questions.

(4+4=8)

3(a) Explain conservation of energy?

(b) . A man pushes a lawn mower with a 40 N force directed at an angle of 20° downwards from the horizontal. Find the work done by the man as he cuts a strip of grass 20m long.