

NAME:		ROLL NO:		TIME:	10: MIN
SUB:	Physics	Date:		CLASS:	1 st Year
SYLLABUS	Chp. 4 (Work Energy and Power)	T. MARKS	10	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x10=10)

- A 1 kg mass has potential energy of 1 joule relative to the ground when it is at height of:**
(A) 0.102 m (B) 1 m (C) 9.8 m (D) 32 m
- An iron sphere whose mass is 30 kg has the same diameter as an Aluminum sphere whose mass is 10.5 kg. The spheres are simultaneously dropped from a cliff. When they are 10 m from the ground, they have identical:**
(A) Accelerations (B) Momentum (C) Potential energies (D) Kinetic energy
- A body at rest may have:**
(A) Speed (B) Velocity (C) Momentum (D) Energy
- The height above the ground of a child on a swing varies from 0.5 m of this lowest point to 1.5 m at this height point. The maximum speed of the child is approximately:**
(A) 1.5 m s^{-1} (B) 4.4 m s^{-1} (C) 9.8 m s^{-1} (D) Depending upon child's mass
- When a ball is thrown vertically upward and then falls back to the ground, which force can be considered conservative in this scenario:**
(A) Air resistance (B) Gravity
(C) Friction between ball air (D) Contact forces with hand
- According to work-energy principle in linear motion, the work done on body is equal to:**
(A) Change in K.E (B) Change in P.E (C) Zero (D) Sum of K.E and P.E
- Power of a lamp 6 W. How much energy does a lamp give out in 2 min:**
(A) 12 J (B) 20 J (C) 3 J (D) 720 J
- A dry battery can deliver 3000 J of energy to a 2 W small electric motor before the battery is exhausted. For how many minutes does the battery run:**
(A) 1500 min (B) 100 min (C) 50 min (D) 25 min
- The Kinetic energy acquired by a mass m after travelling a fixed distance from rest under the action of a constant force is directly proportional to:**
(A) $\sqrt{m}$ (B) $1 / \sqrt{m}$ (C) $1/m$ (D) Independent of m
- A body moves a distance of 10 m along a straight line under the action of 5 N force. If the work done is 25 J, the angle which the force makes with the direction of motion of the body is:**
(A) 0° (B) 30° (C) 60° (D) 90°

Answer Key

1	A	2	A	3	D	4	B
5	B	6	B	7	D	8	D
9	D	10	C				