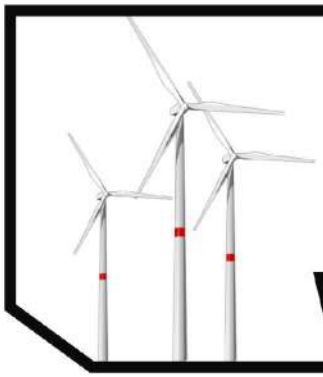

UNIT 6

WORK AND ENERGY

MULTIPLE CHOICE QUESTIONS

1. Product of force and distance covered in the direction of force is:
(a) Acceleration **(b)** Resistance
(c) Work **(d)** Specific heat

2. For work ---------- conditions should be fulfilled:
(a) 1 **(b)** 2
(c) 3 **(d)** 4

3. Work is ---------- quantity:
(a) Scalar **(b)** Vector
(c) Base **(d)** None of above

4. Unit of work is:
(a) N **(b)** Nm
(c) J **(d)** Both b & c

5. Work done will be ---------- if no force act on the body:
(a) Maximum **(b)** Minimum
(c) Zero **(d)** All of above

6. Work done will be maximum if displacement is ---------- to force:
(a) Parallel **(b)** Perpendicular
(c) Tangent **(d)** Normal

7. Work done will be zero if displacement is ---------- to force: **(LHR 2016)**
(a) Parallel **(b)** Perpendicular
(c) Tangent **(d)** Normal

8. Work done will be one ---------- if a force of one Newton acts on the body and it covers the distance of 1 meter in the direction of force:
(a) Watt **(b)** Joule
(c) Newton **(d)** Coulomb

9. One Mega joule is equal to: **(LHR 2011)**
(a) 10^6 J **(b)** 10^3 J
(c) 10^9 J **(d)** 10^2 J

10. What will be the magnitude of work if a force of 25 N pulls a stone through a distance of 5 m in its direction:
(a) 25 J **(b)** 50 J
(c) 75 J **(d)** 125 J

11. Which unit is equal to kgm^2s^{-2} in the units given below:
(a) Joule **(b)** Newton
(c) Watt **(d)** Meter

12. Rate of doing work with respect to time is known as: **(LHR 2016)**
(a) Energy **(b)** Power
(c) Momentum **(d)** None of above

13. Unit of power is:

(a) Watt **(b)** Joule
(c) Newton **(d)** Coulomb

14. How much power is used by a 40 kg athlete by climbing 10m high ladder in 10 s:

(a) 4 W **(b)** 40 W
(c) 400 W **(d)** 4000 W

15. What will be the power of a machine doing 10 J work in 5 seconds?

(a) 2 W **(b)** 10 W
(c) 25 W **(d)** 50 W

16. Ability of a body to do work is known as: (LHR 2011)

(a) Force **(b)** Momentum
(c) Power **(d)** Energy

17. There are ---------- basic kinds of energy:

(a) 1 **(b)** 2
(c) 3 **(d)** 4

18. Energy is --------- quantity:

(a) Vector **(b)** Scalar
(c) Base **(d)** None of above

19. Unit of Energy in System International is:

(a) Watt **(b)** Joule
(c) Newton **(d)** Coulomb

20. Energy possessed by a body due to its motion is called ---------- energy:

(a) Kinetic **(b)** Potential
(c) Mechanical **(d)** All of above

21. A bowler during playing cricket throws a ball of mass 200 g with a velocity of 20 ms^{-1}. Its kinetic energy will be:

(a) 4 J **(b)** 40 J
(c) 400 J **(d)** 4000 J

22. What will be the kinetic energy of a body if its velocity is doubled? (GRW 2011)

(a) Doubled **(b)** Four times
(c) Eight times **(d)** Half

23. What will be the kinetic energy of a body if its mass is doubled?

(a) Doubled **(b)** Four times
(c) Eight times **(d)** Half

24. What will be the kinetic energy of a car of mass 1000 kg moving with a velocity of 20 ms^{-1}?

(a) 2×10^2 J **(b)** 2×10^3 J
(c) 2×10^5 J **(d)** 2×10^7 J

25. Ability of a body to do work due to its position is called --------- energy: (LHR 2011)

(a) Kinetic **(b)** Potential
(c) Mechanical **(d)** All of above

26. Ability of a body to do work due to its height from the surface of earth is called _____energy:

(a) Gravitational Potential **(b)** Elastic Potential
(c) Chemical Potential **(d)** Attraction

27. When a ball is lifted to a height 'h' from the ground, it will posses ------energy:

(a) Kinetic **(b)** Gravitational potential
(c) Elastic potential **(d)** Mechanical

28. Total energy of the system:

(a) Increases **(b)** Decreases
(c) Remains same **(d)** All of above

29. For movement of our body ---------- energy is used:

(a) Heat **(b)** Electrical
(c) Chemical **(d)** Mechanical

30. 1 hp =

(a) 726 W **(b)** 736 W
(c) 746 W **(d)** 756 W

31. For the propagation of signals in our body ---------- energy is used:

(a) Heat **(b)** Electrical
(c) Chemical **(d)** Mechanical

32. For maintaining the body temperature ---------- energy is used:

(a) Heat **(b)** Electrical
(c) Chemical **(d)** Mechanical

33. Increase in K.E is equal to:

(a) Increase in P.E **(b)** Decrease in P.E
(c) No effect **(d)** Both a & b

34. Increase in P.E is equal to:

(a) Increase in K.E **(b)** Decrease in K.E
(c) No effect **(d)** Both a & b

35. Decrease in K.E is equal to:

(a) Increase in P.E **(b)** Decrease in P.E
(c) No effect **(d)** Both a & b

36. Decrease in P.E is equal to:

(a) Increase in K.E **(b)** Decrease in K.E
(c) No effect **(d)** Both a & b

37. A motor lift a weight of 5N up to the height of 2m in 4s. What will be the power of the motor?

(a) 2.5 W **(b)** 5 W
(c) 20 W **(d)** 10 W

38. Energy of the water stored in the dam is: (GRW 2015)

(a) Elastic potential energy **(b)** Gravitational potential energy
(c) Kinetic energy **(d)** Mechanical energy

39. How many types of mechanical energy are?

(a) 1 **(b)** 2
(c) 3 **(d)** 4

ANSWER KEY

Q.	Ans	Q.	Ans	Q.	Ans	Q.	Ans
1	c	11	a	21	b	31	b
2	b	12	b	22	b	32	a
3	a	13	a	23	a	33	b

4	d	14	c	24	c	34	b
5	c	15	a	25	b	35	a
6	a	16	d	26	a	36	a
7	b	17	b	27	b	37	a
8	b	18	b	28	c	38	b
9	a	19	b	29	d	39	b
10	d	20	a	30	c		