ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	A ball is dropped downwards After 1 second another ball is dropped downwards from the same point. What is the distance between them after 3 seconds	A. 25 m B. 20 m C. 50 m D. 9.8 m
2	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above
3	The displacement coincides with the path of the motion when a body moves is a	A. curved line B. straight line C. may be curved or straight D. none of them
4	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes
5	The entity which measures the quantity of motion in a body is called	A. force B. energy C. momentum D. power
6	A certain force gives an acceleration of 2 m/sec2 to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. 0.5 m/sec2 B. 5 m/sec2 C. 1.5 m/sec2 D. 9.8 m/sec2
7	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec⁻¹ B. 2.44 m sec⁻¹ C. 3.42 m sec⁻¹ D. 4.43 m sec⁻¹
8	The magnitude of the force producing an acceleration of 10 m/sec2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
9	If an iron ball and a wooden ball of the same radius was released from a height 'h' in vacuum, then time taken by both of them to reach ground will be	A. Unequal B. Exactly equal C. Roughly equal D. Zero
10	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	A. zero B. negative C. positive D. non-existing
11	A man sitting in a bus travelling in a direction from west to east with a speed of 40 km/h observes that the rain drops are falling vertically down. To the another man standing on ground the rain will appear	A. To fall vertically down B. To fall at an angle going from west to east C. To fall at an angle going from east to west D. The information given is insufficient to decide the direction of rain
12	The velocity of a body at any instant of its motion is known as	A. average velocity B. instantaneous velocity C. uniform velocity D. none of them
13	If the velocity time graph is a straight line parallel to the time-axis, then it means:	A. The body is moving with uniform velocity B. The body is moving with uniform acceleration C. The body is at rest D. None of these
14	If m means mass of gases objected per second from a rocket and v shows the change in velocity, than mv is named as:	A. Force B. Energy C. work D. impulse

15	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
16	The vertical component of velocity of a projectile during its motion is minimum	A. at the time of projection B. at the highest point C. just before hitting the plane of projection D. all of them
17	Bodies which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
18	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
19	The dimension of linear inertia is:	A. MLT² B. ML⁰T⁻² C. ML⁰T⁰ D. MLT⁻¹
20	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1}. A parrot files at a speed of 5 ms^{-1}towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s