

# P3 Revision Questions

## Part 1

# Question 1 .... of 50

- What is a kilometre?

# Answer 1 .... of 50

- 1000metres

# Question 2 .... of 50

- What is meant by an average speed?

# Answer 2 .... of 50

- The average distance covered per second

# Question 3 .... of 50

- How do speed cameras work?

# Answer 3 .... of 50

- They take two photos, the time between the photos is known, the lines on the road can measure the distance the car has travelled

# Question 4 .... of 50

- What does a sloped straight line mean on a distance time graph?



# Answer 4 .... of 50

- Moving at constant speed

# Question 5 .... of 50

- What does a horizontal line mean on a distance time graph?

# Answer 5 .... of 50

- At rest (speed = 0m/s)

# Question 6 .... of 50

- How can you calculate the speed from a distance time graph?

# Answer 6 .... of 50

- Measure the gradient

# Question 7 .... of 50

- How can you tell if one part of a journey on a distance-time graph is greater than another

# Answer 7 .... of 50

- The line is steeper with a greater speed

# Question 8 .... of 50

- What does a curved line mean on a distance-time graph?



# Answer 8 .... of 50

- Non-uniform acceleration

# Question 9 .... of 50

- What is the equation to calculate speed?

# Answer 9 .... of 50

- Speed= distance/time

# Question 10 .... of 50

- How do you calculate the gradient of a line on a graph?

# Answer 10 .... of 50

- Change in y axis / change in x axis

# Question 11 .... of 50

- What does a horizontal line mean on a speed time graph?

# Answer 11 .... of 50

- Constant speed

# Question 12 .... of 50

- How can you tell an object is not moving from a speed-time graph?



# Answer 12 .... of 50

- Line is at 0m/s

# Question 13 .... of 50

- What does a straight positive line represent on a speed time graph?

# Answer 13 .... of 50

- Constant acceleration

# Question 14 .... of 50

- What does a straight negative line represent on a speed time graph?

# Answer 14 .... of 50

- Constant deceleration

# Question 15 .... of 50

- How could you calculate the distance travelled on a speed time graph?

# Answer 15 .... of 50

- Calculate the area underneath the graph

# Question 16 .... of 50

- How could you calculate the acceleration from a speed time graph?



# Answer 16 .... of 50

- Measure the gradient

# Question 17 .... of 50

- What is acceleration? What is it measured in?

# Answer 17 .... of 50

- Rate of change of speed.  $\text{m/s}^2$

# Question 18 .... of 50

- What is speed? What is it measured in?

# Answer 18 .... of 50

- Rate of change of distance/ how fast something is moving. m/s

# Question 19 .... of 50

- What is deceleration?

# Answer 19 .... of 50

- When a cars' speed decreases

# Question 20 .... of 50

- How can you tell if an object is accelerating more on a speed time graph?



# Answer 20 .... of 50

- It has a positive sloped line

# Question 21 .... of 50

- What is velocity? What is it measured in?

# Answer 21 .... of 50

- Speed in a certain direction. m/s

# Question 22 .... of 50

- What three things could change if an object is accelerating?

# Answer 22 .... of 50

- Speed, direction, speed and direction

# Question 23 .... of 50

- What three things can a force change?

# Answer 23 .... of 50

- Speed, direction, shape

# Question 24 .... of 50

- What is the equation for force? What is force measured in?



# Answer 24 .... of 50

- Force = mass x acceleration
  - Newtons

# Question 25 .... of 50

- What is mass? What is it measured in?

# Answer 25 .... of 50

- Amount of matter in an object. kg

# Question 26 .... of 50

- What is the thinking distance?

# Answer 26 .... of 50

- The distance travelled whilst the driver reacts before braking

# Question 27 .... of 50

- What is the braking distance?

# Answer 27 .... of 50

- The distance travelled whilst a car is braking

# Question 28 .... of 50

- What is the total stopping distance?



# Answer 28 .... of 50

- Braking distance + thinking distance

# Question 29 .... of 50

- What happens if the forces acting on an object are balanced?

# Answer 29 .... of 50

- They are at rest or moving at constant speed

# Question 30 .... of 50

- What happens if the forces acting on an object are unbalanced?

# Answer 30 .... of 50

- They accelerate or decelerate

# Question 31 .... of 50

- Why is it important we know the total stopping distances of cars?

# Answer 31 .... of 50

- So we know what a safe distance is to travel behind other cars

# Question 32 .... of 50

- What 4 things can increase a persons' thinking distance?



# Answer 32 .... of 50

- Tiredness, drugs/ alcohol, distractions, speed

# Question 33 .... of 50

- Name 4 things that can increase braking distance

# Answer 33 .... of 50

- Road conditions, brakes, tyre condition, greater speed

# Question 34 .... of 50

- What are the implications of stopping distances in road safety?

# Answer 34 .... of 50

- Speed limits, road conditions

# Question 35 .... of 50

- What is friction?

# Answer 35 .... of 50

- A force that acts against the movement of an object. Caused by a surface

# Question 36 .... of 50

- What is the relationship between force, mass and acceleration?



# Answer 36 .... of 50

- Force = mass x acceleration

# Question 37 .... of 50

- What happens to the thinking distance if the speed of a car doubles?

# Answer 37 .... of 50

- It doubles

# Question 38 .... of 50

- What happens to the braking distance if the speed of a car doubles?

# Answer 38 .... of 50

- It quadruples

# Question 39 .... of 50

- What is meant by work done? What is it measured in?

# Answer 39 .... of 50

- The amount of energy transferred by a force acting on an object. Joules

# Question 40 .... of 50

- Give an example of work being done



# Answer 40 .... of 50

- Brakes on a car, pulling a sledge

# Question 41 .... of 50

- What is the equation for work done?

# Answer 41 .... of 50

- Work done = Force x distance

# Question 42 .... of 50

- What is power? What is it measured in?

# Answer 42 .... of 50

- The rate that work is done, measured in watts

# Question 43 .... of 50

- How does a car's engine size and power rating relate to its fuel consumption?

# Answer 43 .... of 50

- More powerful and larger the car, greater the fuel consumption

# Question 44 .... of 50

- What is weight?



# Answer 44 .... of 50

- The force caused by the acceleration due to gravity

# Question 45 .... of 50

- How do you calculate weight?

# Answer 45 .... of 50

- Weight = mass x gravitational strength

# Question 46 .... of 50

- What is the equation for power?

# Answer 46 .... of 50

- Power = work done/ time

# Question 47 .... of 50

- What is kinetic energy?

# Answer 47 .... of 50

- The amount of energy an object has because its moving

# Question 48 .... of 50

- What are 5 different ways to power a car?



# Answer 48 .... of 50

- Biofuel, solar, battery, diesel, petrol

# Question 49 .... of 50

- What 4 things can affect a car's fuel consumption and top speed?

# Answer 49 .... of 50

- Weight, shape, driving with windows open, deflectors

# Question 50 .... of 50

- Why does increasing speed increase braking distance?

# Answer 50 .... of 50

- Car has more kinetic energy to lose