ASM TUITION ACADEMY

PHYSICS

YEAR 7

TOPIC: What Is Speed?

TEST QUESTIONS

TOTAL MARKS: 55

TIME: 45 MINUTES

SECTION A: MULTIPLE CHOICE QUESTIONS (10 MARKS)

Q1. What is speed? [1]

A. The mass of an object
B. How fast an object is moving
C. The temperature of an object
D. The distance travelled by an object

Q2. Which instrument shows the actual speed of a car? [1]

A. Thermometer
B. Stopwatch
C. Speedometer
D. Measuring cylinder

Q3. What does a car's speedometer show when the driver looks at it? [1]

A. Average speed of the whole journey
B. Actual speed at that instant
C. Total distance travelled
D. Total time taken

Q4. Which of the following is a unit of speed? [1]

A. Kilogram
B. Metre
C. Second
D. Metres per second

Q5. A model train travels at 20 cm/s. How far does it travel in one second? [1]

A. 2 cm
B. 10 cm

C. 20 cm
D. 200 cm

Q6. A car travels at 55 mph. How far would it travel in one hour if its speed remained constant? [1]

A. 5 miles
B. 55 miles
C. 88 miles
D. 100 miles

Q7. Which equation is used to calculate speed? [1]

A. Speed = time ÷ distance
B. Speed = distance × time
C. Speed = distance ÷ time
D. Speed = distance + time

Q8. How many seconds are there in 5 minutes? [1]

A. 60 seconds
B. 100 seconds
C. 300 seconds
D. 500 seconds

Q9. Average speed applies to: [1]

A. One instant only
B. The whole journey or race
C. Only the fastest part
D. Only the slowest part

Q10. A speed of 88 km/h is approximately equal to: [1]

A. 20 mph
B. 55 mph
C. 88 mph
D. 100 mph

SECTION B: FILL IN THE BLANKS (10 MARKS)

Q11. Speed measures how _____ an object is moving. [1]

Q12. The instrument used to measure a car's speed is called a _____. [1]

Q13. One unit of speed is metres per _____. [1]

Q14. The model train travels at _____ cm/s. [1]

Q15. Speed = distance ÷ _____. [1]

Q16. There are _____ seconds in one minute. [1]

Q17. Five minutes is equal to _____ seconds. [1]

Q18. Speed calculated for the whole journey is called _____ speed. [1]

Q19. A car's speed may change during a _____. [1]

Q20. Actual speed may have different values at different _____ of a journey. [1]

SECTION C: SHORT QUESTIONS (35 MARKS)

Q21. Define speed and state the equation used to calculate it. [3]

Q22. Name three different units used to measure speed. [3]

Q23. A student walks 300 m to school in 5 minutes. Convert the time into seconds and calculate the student's average speed in m/s. Show your working. [4]

Q24. An athlete completes a 100 m race in 10 seconds. Calculate the athlete's average speed. Show your working. [4]

Q25. Explain the difference between actual speed and average speed. [4]

Q26. A model train travels at a constant speed of 20 cm/s. Calculate the distance it travels in 5 seconds. Show your working. [3]

Q27. An athlete's actual speed is 8 m/s two seconds after the start of a race and 11 m/s eight seconds after the start. State both speeds and explain why they may differ from the athlete's average speed. [5]

Q28. A car travels at a constant speed of 60 km/h for 2 hours. Calculate the distance travelled. Show your working. [4]

Q29. Explain why a car's speed may change during a journey. Also explain what a speedometer reading of 55 mph means. [5]

END OF TEST