KEY

Questions 1-4 refer to the velocity-time graph of a car's motion: b 12 1. In which section is the car (m/s) С accelerating from rest? <u>a</u> 8 d а > 2. In which section is the car's 4 acceleration negative? <u>c</u> 0 2 4 6 8 0 10 12 14 3. How far does the car travel t (s) during section "b"?  $\frac{60}{10}$  m  $(12 \text{ m/s} \times 5 \text{ s})$ 

4. What is the acceleration of the car in each section? acceleration = slope of linea <u> $3m/s^2$ </u> b <u> $0m/s^2$ </u> c <u> $-3m/s^2$ </u> d <u> $1m/s^2$ </u>

Questions 5-10 refer to displacement-time graph of a carts motion:



- 5. In which section(s) is the cart accelerating? *b-c; d-e*
- In which section(s) is the cart not moving? <u>a-b; e-f</u>
- 7. In which section(s) is the cart moving backwards? <u>f-g</u>
- 8. In which section(s) is the cart's instantaneous velocity at any time equal to its average velocity? <u>c-d; f-g</u> (also a-b; e-f)
- 9. What is the velocity of the cart in these sections? velocity = slope of line
  a-b <u>0 m/s</u> c-d <u>0.7 m/s</u> e-f <u>0 m/s</u> f-g <u>-3 m/s</u>
  10. How far does the cart move in section b-c? <u>30 m</u> e-f? <u>0 m</u> PHYSICSFundamentals