

**Answers**

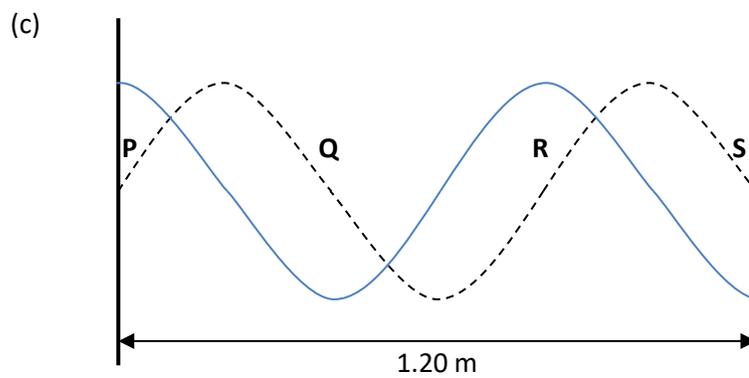
**MCQ**

CCABB BCADB CCBBD

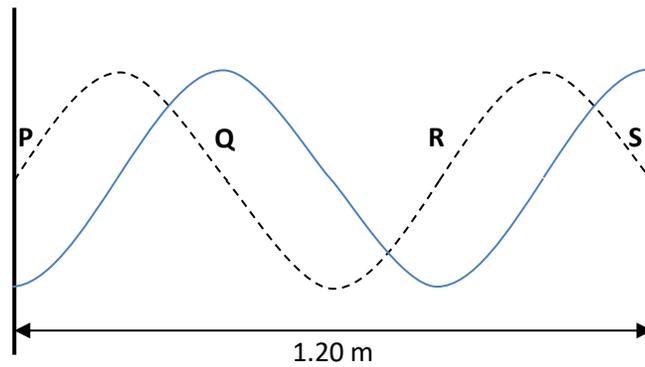
**Structured Questions**

16 (a) 0.80 m

(b) 250 Hz

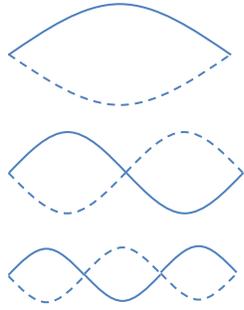


OR



17

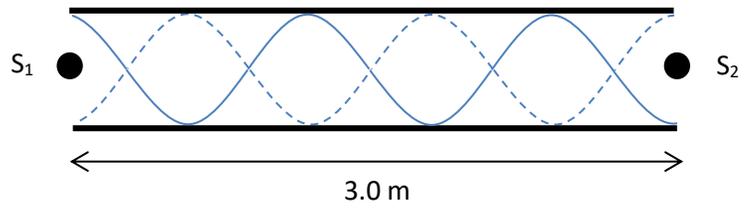
(a)



(b)  $96 \text{ m s}^{-1}$

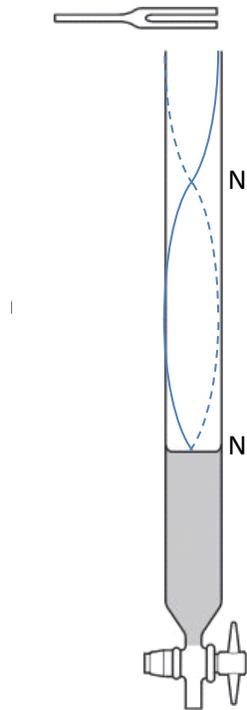
(c) 8 loops

18



19

(a)



(b)  $332 \text{ m s}^{-1}$

- 20 (a) waves reflect at closed end  
incident and reflected waves are in opposite directions, but have the same amplitude and frequency/wavelength  
stationary waves formed if tube length equivalent to  $\lambda / 4, 3 \lambda / 4, \dots$
- (b) (i) 1. stationary  
2. vibrating back and forward with maximum amplitude  
(ii) 0.28 m