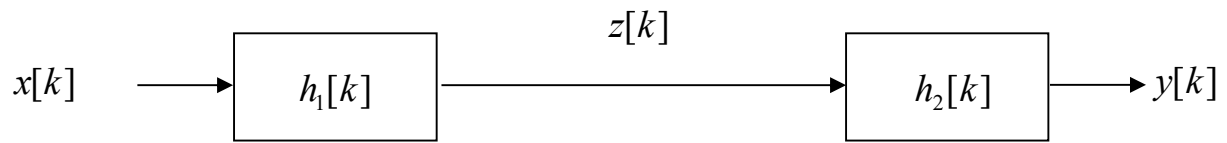
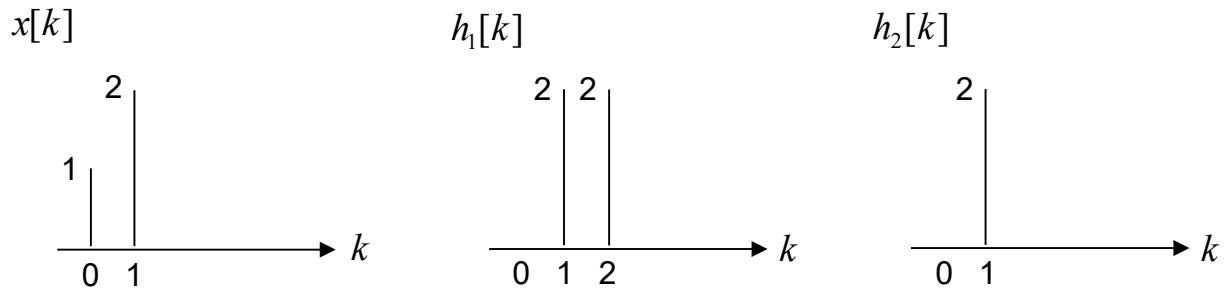


- a) This question is about discrete-time convolution. Use the **Table Method** to solve this question. For the following system

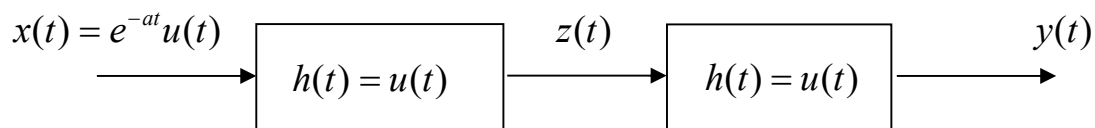


where



- (i) Determine the intermediate signal $z[k]$. **[6 marks]**
- (ii) Plot the intermediate signal $z_1[k]$. **[2 marks]**
- (iii) Determine the output signal $y[k]$. **[6 marks]**
- (iv) Plot the output signal $y[k]$. **[2 marks]**

- b) This question is about continuous-time convolution. For the following system



- (i) Determine the intermediate signal $z(t)$. **[4 marks]**
- (ii) Determine the output signal $y(t)$. **[5 marks]**