$$f'(x) = af(x-2h) + bf(x-h) + cf(x+h) + df(x+2h)$$

$$= a\left(f(x) - 2hf'(x) + 2h^2 f''(x) - \frac{8h^3}{6} f'''(x)\right) +$$

$$b\left(f(x) - hf'(x) + h^2 f''(x) - \frac{h^3}{6} f'''(x)\right) +$$

$$c\left(f(x) + hf'(x) + h^2 f''(x) + \frac{h^3}{6} f'''(x)\right) +$$

$$d\left(f(x) + 2hf'(x) + 2h^2 f''(x) + \frac{8h^3}{6} f'''(x)\right) + O(h^4)$$

$$= (a+b+c+d)f(x) + h(-2a-b+c+2d)f'(x) +$$

$$h^2(2a+b+c+2d)f''(x) + \frac{h^3}{6}(-8a-b+c+8d)f'''(x)$$

$$+ O(h^4)$$

$a+b+c+d = 0$ —— (A)

$h(-2a-b+c+2d) = 1$ —— (B)

$a+4b+4c+d = 0$ —— (C)

$-8a-b+c+8d = 0$ —— (D)

(C) − (A) $\Rightarrow$ $b = -c$

$\therefore$ $a = -d$ using (A) again

Using above & (D), $c = -8d$

$\therefore$ $b = 8d$

Using (B), $d = -\frac{1}{12h}$

$\therefore$ $a = \frac{1}{12h}$, $b = -\frac{8}{12h}$, $c = \frac{8}{12h}$