

16. A signal of 5 kHz frequency is amplitude modulated on a carrier wave of frequency 2 MHz. The frequencies of the resultant signal is/are :

(1) 2005 kHz, 2000 kHz and 1995 kHz

correct

(2) 2000 kHz and 1995 kHz

(3) 2 MHz only

(4) 2005 kHz, and 1995 kHz

For AM wave, the frequencies

are $f_c - f_s$, f_c , $f_c + f_s$

f_c - carrier wave frequency

f_s - signal frequency

\therefore (1) is correct