**Upload until : 09:25**

A baseband signal is first frequency up-converted to using a carrier obtained by doubling where =2 and these two carriers are synchronous. carrier is added onto this up-converted signal. The resulting signal is then used to DSB-AM modulate another carrier with frequency to obtain as shown in the figure (one sided spectrums are shown). **Note :** = 10+d where d is the last digit in your student-id and .

9k

*f*

*f*

*f*

Draw the block diagram for conceptual **demodulation** of the final signal. Use only the blocks given below.

*φ*

*f*1, *f*2

adder

multiplier

phase-shift

filter

Put your block diagram **in the** drawing canvas below. **Do not** change anything else except putting your name/id on top of the page.

Upload your answer (word or pdf) before 09:25. **No e-mails** will be accepted.