UNIT-2>>MULTISTAGE AMPLIFIER

CLASS>>II$_{ND}$ YEAR, IV SEM

SUBJECT-ANALOG CIRCUITS

PAPER-CODE>>BT-402

LECTURE-NO>>2.2

TOPIC>>FREQUENCY RESPONSE OF SINGLE STAGE AMPLIFIER

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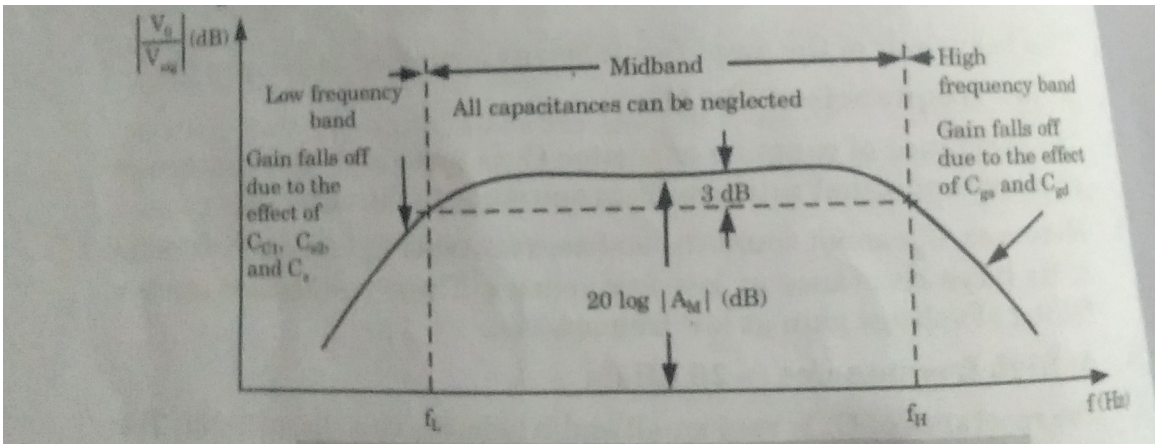
fig a shows the frequency response of single stage.

Here the gains fall off at signal frequencies below and above the midband.The gain falls off in low frequency band is due to the fact that even though all capacitors(C_{c1},C_{c2} and C_{c3}) are large capacitors range as the single frequency is reduced,their impledence increase,and they

have no longer behave as short circuit.

On the other hand, the gain falls off in the high frequency band as a result of C_{gs} and C_{gd} which tough small (in pF),their impedence at high frequency decreases thus can no longer be consider as open circuits.

The amplifier bandwidth is defined as



The figure of merit for the amplifier is its gain bandwidth product which is defined as

$$GB=|A_M|BW$$