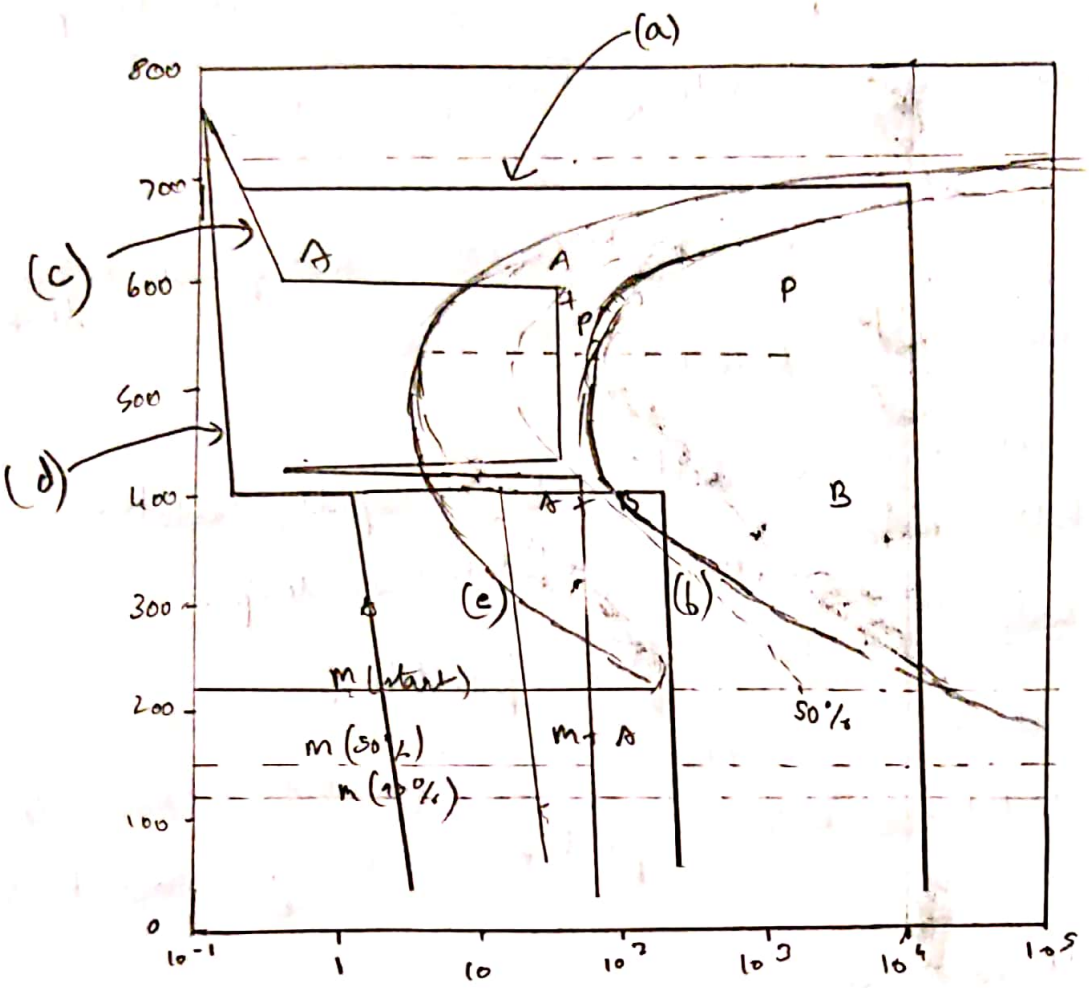
Q3)



a.) Cooling rapidly to 700°C, held for 10^4 sec, quenched to room temp :

→ After cooling till 700°C and holding for 10^4 sec, 50% specimen is coarse pearlite, upon cooling to room temp remaining 50% becomes martensite. finally we have 50% pearlite, 50% martensite

b) Reheating to 700°C for 20h :

→ We will have 100% spheroidite

c) Rapidly cooled to 600°C, held for 4 sec, rapidly to 450°C, held for 10 sec

→ We have 50% pearlite, 25% bainite & 25% martensite

d) Rapidly cooled to 400°C, held for 2 sec, then quenched

→ We have 100% martensite

e) Cooled to 400°C, held for 20 sec, then quenched to room temp

→ We have 40% bainite & 60% martensite

b) Cool rapidly to 400°C, hold for 200 s, then quench to room temp.

→ We have 100% bainite

g) Rapidly cooled to 575°C, held for 20 s, rapidly cooled to 350°C held for 100 s, then quenched to room temp.

→ We will have 100% fine pearlite.

(h) Rapidly cool to 250°C, held for 100 s, quenched to room temp in water, Reheated to 315°C for 1 h and slowly cooled to room temp

→ We will have 100% tempered ~~nat~~ martensite