Date: 30th April, 2020

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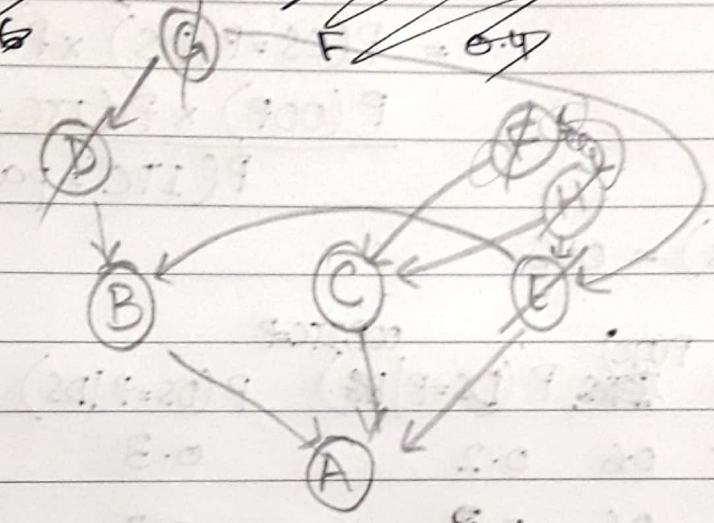
17k-3730.
Section C.

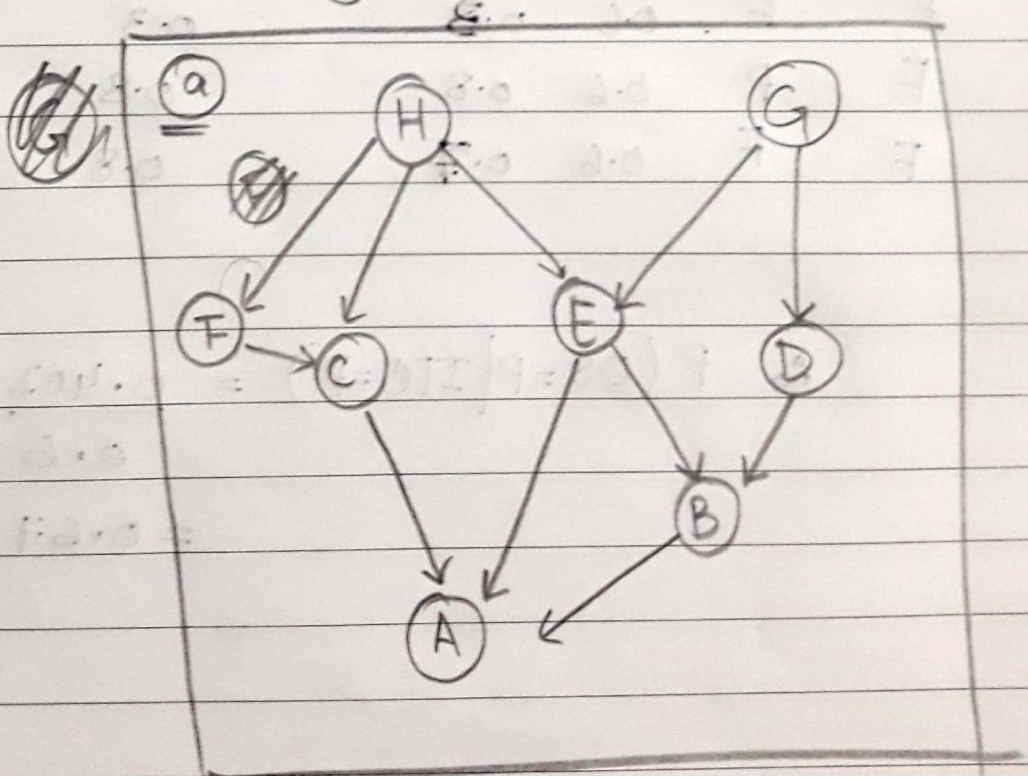
let true = pass
false = fail

P(OOP)
T 0.4
F 0.6

P(ITC)
T 0.6
F 0.4

(a)





$$P(OS = Pass \mid ITC = Pass) = \frac{P(OS \wedge ITC)}{P(ITC = Pass)}$$

$$= \frac{P(OS = P \mid DS) \times P(DS \mid OOP, ITC = P) \times P(OOP) \times P(ITC = pass)}{P(ITC = pass)}$$

$$P(ITC = Pass) = 0.6$$

ITC	OS	DS	OOP	P(ITC)	P(DS=P | OOP, ITC=P)	P(OS=P | DS)	P(OOP)	
P	P	P	P	0.6	0.2	0.3	0.4	= 0.0144
P	P	P	F	0.6	0.8	0.3	0.6	= 0.0324
P	P	F	P	0.6	0.8	0.8	0.4	= 0.1536
P	P	F	F	0.6	0.7	0.8	0.6	= 0.2016
								0.402

$$\therefore P(OS = P \mid ITC = P) = \frac{0.402}{0.6}$$

$$= 0.67 \text{ Ans.}$$