

Quiz-3

Course Title: Artificial Intelligence

Time: 30 minutes

1	Knowledge Base (KB): I. $A \rightarrow (B \wedge C)$ II. $(B \rightarrow C) \vee (C \rightarrow B)$ III. $\neg C \rightarrow \neg A$ IV. $A \vee B$ Given Statement: $\alpha = B$ Construct the truth table for A, B, and C. Then determine whether KB entails α.	[8]
3	<pre>graph LR; x1((x1)) -- w1=0.2 --> H4((H4)); x1 -- w2=0.4 --> H6((H6)); x2((x2)) -- w3=0.8 --> H4; x2 -- w4=0.3 --> H6; H4 -- w5=0.9 --> y8((y8)); H4 -- w6=0.2 --> y6((y6)); H6 -- w7=0.8 --> y8; H6 -- w8=0.7 --> y6;</pre> Consider the activation function as sigmoid. Apply a forward pass and find the value of y_8 and y_6.	[7]