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| 1  | Which of the following is not an assertion<br>a) 17 is a prime number<br>b) 27 appears in the Fibonacci sequence<br>c) Generate a sequence of squares of whole numbers.<br>d) $9*3+4-10=6$  |  |
| 2  | Which of the following is false<br>a) $P \wedge Q$ is a WFF<br>b) $P \oplus Q$ is False if $P=1$ and $Q=1$<br>c) $P \Rightarrow Q$ is False if P is true and Q is False<br>d) $(P \Rightarrow Q)$ is same as $(\neg Q \Rightarrow P)$   |  |
| 3  | Which of the following is true<br>A) $P \Leftrightarrow P \wedge P$<br>B) $(P \wedge Q) \Leftrightarrow (Q \vee P)$<br>C) $(P \Rightarrow (Q \Rightarrow R)) \Leftrightarrow ((P \Rightarrow Q) \Rightarrow R)$<br>D) $\neg(P \wedge Q) \Leftrightarrow (\neg P \wedge \neg Q)$ |  |
| 4  | One of the following is a tautology<br>A) $(Q \vee \neg Q)$<br>B) $(Q \wedge \neg Q)$<br>C) $(Q \wedge 0)$<br>D) $(Q \vee 0)$   |  |
| 5  | Let U be set of Integers, then which of the following gives 0 value<br>A) $\forall x [x < x+1]$<br>B) $\exists x [x < x+1]$<br>C) $\exists !x [x < x+1]$<br>D) $\forall !x [x < x+1]$   |  |
| 6  | Match the following<br>A) $\forall x \neg P(x)$ D) $\neg \exists x P(x)$<br>B) $\forall x P(x)$ E) $\exists x P(x)$<br>C) $\exists x \neg P(x)$ F) $\neg \forall x P(x)$  |  |
| 7  | $\exists x P(x) \Rightarrow P(C)$ is called<br>A) Universal Generalization<br>B) Universal instantiation<br>C) Existential Generalization<br>D) Existential Instantiation   |  |
| 8  | One of the following is not a min term<br>A) $P \wedge Q$<br>B) $Q \vee P$<br>C) $P \wedge \neg Q$<br>D) $\neg P \wedge \neg Q$   |  |
| 9  | A Fact is a headed horn clause<br>A) True<br>B) False   |  |
| 10 | $P \wedge Q \wedge \neg R$ can be called as<br>A) Elementary Product<br>B) Sum of products<br>C) Product of sums<br>D) Elementary Sum   |  |