

Question 1

[a] $c == a + b \parallel !\text{flag}$

$14 == 6 + 9 \parallel ! 1$

False

[b] $a != 7 \&\& \text{flag} \parallel c >= 6$

$6 != 7 \&\& 1 \parallel 14 >= 6$

True

[c] $!(b <= 12) \&\& a \% 2 == 0$

$!(9 <= 12) \&\& 6 \% 2 == 0$

False

[d] $!(a > 5 \parallel c < a + b)$

$!(6 > 5 \parallel 14 < 6 + 9)$

False

Question 2

[a] $\text{age} >= 18 \text{ and } \text{age} <= 21$

$\text{age} >= 18 \&\& \text{age} <= 21$

[b] $\text{water level} > 0.1 \text{ and } \text{water level} < 1.5$

$\text{water level} > 0.1 \&\& \text{water level} < 1.5$

[c] $\text{year}/4 = \text{True}$

$\text{year} \% 4 == 0$

[e] $y > x \text{ and } y < z$

$y > x \&\& y < z$

[d] $\text{speed} < 55$

$!(\text{speed} > 55)$

[f] $w = 6 \text{ or } w < 3$

$w = 6 \parallel w < 3$

Question 3

fingerprint = F

Retinal Scan = R

Card = C

$(F \ \&\& \ R) \parallel (F \ \&\& \ C) \parallel (C \ \&\& \ R) \parallel (F \ \&\& \ R \ \&\& \ C)$

Question 4

Section 1- s1

Section 2 – s2

Section 3 – s3

Average mark – AVG

$(s1 > 70 \ \&\& \ s2 > 70 \ \&\& \ s3 > 70) \ \&\& \ ((s1+s2+s3)/3 > 75)$