Hurley: 13th edition, 6.3 Part II #1-15

1.

~	D	v	B	~	(D	·	~	B)
F	T	T	T	T	T	F	F	T
F	T	F	F	F	T	T	T	F
T	F	T	T	T	F	F	F	T
T	F	T	F	T	F	F	T	F

Consistent and logically equivalent

2.

F	·	M	~	(F	v	M)
T	T	T	F	T	T	T
T	F	F	F	T	T	F
F	F	T	F	F	T	T
F	F	F	T	F	F	F

Inconsistent

3.

~	K	⊃	L	K	⊃	~	L
F	T	T	T	T	F	F	T
F	T	T	F	T	T	T	F
T	F	T	T	F	T	F	T
T	F	F	F	F	F	T	F

Consistent

4.

R	v	~	S	S	·	~	R
T	T	F	T	T	F	F	T
T	T	T	F	F	F	F	T
F	F	F	T	T	T	T	F
F	T	T	F	F	F	T	F

Inconsistent and contradictory

5.

~	A	≡	X	(X	·	~	A)	v	(A	·	~	X)
F	T	F	T	T	F	F	T	F	T	F	F	T
F	T	T	F	F	F	F	T	T	T	T	T	F
T	F	T	T	T	T	T	F	T	F	F	F	T
T	F	F	F	F	F	T	F	F	F	F	T	F

Consistent and logically equivalent

6.

H	≡	~	G	(G	·	H)	v	(~	G	·	~	H)
T	F	F	T	T	T	T	T	F	T	F	F	T
T	T	T	F	F	F	T	F	T	F	F	F	T
F	T	F	T	T	F	F	F	F	T	F	T	F
F	F	T	F	F	F	F	T	T	F	T	T	F

Contradictory

7.

(E	⊃	C)	⊃	L	E	⊃	(C	⊃	L)
T	T	T	T	T	T	T	T	T	T
T	T	T	F	F	T	F	T	F	F
T	F	F	T	T	T	T	F	T	T
T	F	F	T	F	T	T	F	T	F
F	T	T	T	T	F	T	T	T	T
F	T	T	F	F	F	T	T	F	F
F	T	F	T	T	F	T	F	T	T
F	T	F	F	F	F	T	F	T	F

Consistent

8.

N	·	(A	v	~	E)	~	A	·	(E	v	~	N)
T	T	T	T	F	T	F	T	F	T	T	F	T
T	T	T	T	T	F	F	T	F	F	F	F	T
T	F	F	F	F	T	T	F	T	T	T	F	T
T	T	F	T	T	F	T	F	F	F	F	F	T
F	F	T	T	F	T	F	T	F	T	T	T	F
F	F	T	T	T	F	F	T	F	F	T	T	F
F	F	F	F	F	T	T	F	T	T	T	T	F
F	F	F	T	T	F	T	F	T	F	T	T	F

Inconsistent

9.

M	⊃	(K	⊃	P)	(K	·	M)	⊃	P
T	T	T	T	T	T	T	T	T	T
T	F	T	F	F	T	T	T	F	F
T	T	F	T	T	F	F	T	T	T
T	T	F	T	F	F	F	T	T	F
F	T	T	T	T	T	F	F	T	T
F	T	T	F	F	T	F	F	T	F
F	T	F	T	T	F	F	F	T	T
F	T	F	T	F	F	F	F	T	F

Consistent and logically equivalent

10.

W	≡	(B	·	T)	W	·	(T	⊃	~	B)
T	T	T	T	T	T	F	T	F	F	T
T	F	T	F	F	T	T	F	T	F	T
T	F	F	F	T	T	T	T	T	T	F
T	F	F	F	F	T	T	F	T	T	F
F	F	T	T	T	F	F	T	F	F	T
F	T	T	F	F	F	F	F	T	F	T
F	T	F	F	T	F	F	T	T	T	F
F	T	F	F	F	F	F	F	T	T	F

Inconsistent

11.

G	·	(E	v	P)	~	(G	·	E)	·	~	(G	·	P)
T	T	T	T	T	F	T	T	T	F	F	T	T	T
T	T	T	T	F	F	T	T	T	F	T	T	F	F
T	T	F	T	T	T	T	F	F	F	F	T	T	T
T	F	F	F	F	T	T	F	F	T	T	T	F	F
F	F	T	T	T	T	F	F	T	T	T	F	F	T
F	F	T	T	F	T	F	F	T	T	T	F	F	F
F	F	F	T	T	T	F	F	F	T	T	F	F	T
F	F	F	F	F	T	F	F	F	T	T	F	F	F

Contradictory

12.

R	·	(Q	v	S)	(S	v	R)	·	(Q	v	R)
T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	F	F	T	T	T	T	T	T
T	T	F	T	T	T	T	T	T	F	T	T
T	F	F	F	F	F	T	T	T	F	T	T
F	F	T	T	T	T	T	F	T	T	T	F
F	F	T	T	F	F	F	F	F	T	T	F
F	F	F	T	T	T	T	F	F	F	F	F
F	F	F	F	F	F	F	F	F	F	F	F

Consistent

13.

H	·	(K	v	J)	(J	·	H)	v	(H	·	K)
T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	F	F	F	T	T	T	T	T
T	T	F	T	T	T	T	T	T	T	F	F
T	F	F	F	F	F	F	T	F	T	F	F
F	F	T	T	T	T	F	F	F	F	F	T
F	F	T	T	F	F	F	F	F	F	F	T
F	F	F	T	T	T	F	F	F	F	F	F
F	F	F	F	F	F	F	F	F	F	F	F

Consistent and logically equivalent

14.

Z	·	(C	≡	P)	C	≡	(Z	·	~	P)
T	T	T	T	T	T	F	T	F	F	T
T	F	T	F	F	T	T	T	T	T	F
T	F	F	F	T	F	T	T	F	F	T
T	T	F	T	F	F	F	T	T	T	F
F	F	T	T	T	T	F	F	F	F	T
F	F	T	F	F	T	F	F	F	T	F
F	F	F	F	T	F	T	F	F	F	T
F	F	F	T	F	F	T	F	F	T	F

Inconsistent

15.

Q	⊃	~	(K	v	F)	(K	·	Q)	v	(F	·	Q)
T	F	F	T	T	T	T	T	T	T	T	T	T
T	F	F	T	T	F	T	T	T	T	F	F	T
T	F	F	F	T	T	F	F	T	T	T	T	T
T	T	T	F	F	F	F	F	T	F	F	F	T
F	T	F	T	T	T	T	F	F	F	T	F	F
F	T	F	T	T	F	T	F	F	F	F	F	F
F	T	F	F	T	T	F	F	F	F	T	F	F
F	T	T	F	F	F	F	F	F	F	F	F	F

Contradictory