Eksamen i EXFAC03-FIL, Exfac03-Filosofivarianten, Høsten 2008
Fredag 12.desember kl. 9.00-13.00 (4 timer)

Ingen hjelpemidler tillatt

Oppgavesettet består av 7 sider

Del 1

Gjør kort rede for hvorfor det i følge Nagel er et spenningsforhold mellom et subjektivt og et objektivt perspektiv på verden.

Del 2

There are four main sections

Part I: Sentential translation

Part II: Predicate translations

Part III: Sentential derivations

Part IV: Predicate derivations

PART I

Translate each of the following statements into the language of sentential logic. Assign letters to each atomic statement; write down what atomic statement each letter stands for. Letters should stand for positively stated sentences, not negatively stated ones; for example, the negative sentence 'I am not hungry' should be symbolized as '~ H' using H to stand for 'I am hungry'. Identify logical connectives.

For example:
"*Although* it is raining I will jog"
It is raining.: A
I will jogg.: B
A & B

'not' ('ikke'): ~
'and' ('og'): &
'or'/ 'either … or' ('eller' / 'enten … eller'): 'v'
'if … then' ('hvis .. da'): ⊃
'If and only if' (hvis og bare hvis': ≡

1. I am tired and I don't want to go out.
2. Tom and Garry are good friends.
3. Tom and Garry are good in logic.
4. If I am tired I will stay at home and go to bed.
5. It is necessary to have oblig approved in order to take the exam.
6. I will graduate this semester only if I pass intro logic.
7. Kay will attend the party only if Jay does not.
8. If neither Jay nor Kay is home this weekend, we will go to the beach; other wise, we will stay home.
9. If I am not feeling well this weekend, I will not go out unless it is warm and sunny.
10. If you concentrate only if you are threatened, then you will not pass unless you are threatened – provided that concentrating is a necessary condition for passing.

PART II

1. Symbolize the following sentences in PL using the given symbolization key.

UD: {humans}
Lxy: x loves y
Txy: x is attracted to y
Mx: x is a man
Wx: x is a women
Ax: x is powerful
Bx: is beautiful
a: Agatha
b: Bertram
c: Charles

a. Agatha loves Bertram but she is attracted to Charles.

b. Agatha loves Bertram and is she is loved by him.

c. Bertram and Charles are attracted to Agatha but they don't love her.

d. If Agatha is beautiful then all men are attracted to her.

e. All women are beautiful.

f. If it is not the case that all women are beautiful then some women are not beautiful

g. Men are attracted to beautiful and powerful women.

h. All men and women are beautiful and powerful

i. Men are attracted to beautiful women but don not love powerful ones.

PART III

All derivations in this section are in SD (NOT SD+). The complete set of rules for derivations is on the last page

1. Choose a) or b)

a) Derive (S V G) & (B v F)

1. S ⊃ B A
2. S & M A
3.
4.

b) Derive (D v S) & ~ N

1. ~N A
2. (D ≡ ~N) A
3.

2. Choose a) or b)

a) Derive ~U

1. (U&M) ⊃ S A
2. M & ~S A
3.

b) Derive (H ⊃ (K ⊃ L))

1. (K v G) ⊃ (S & L) A
2.

3.

a) Derive (~Q ⊃ P) ⊃ (~P ⊃ R)

1. (~P & Q) ⊃ R A
2.

PART IV

All derivations are in PD (NOT in PD+). The complete set of allowed rules is on the last page.

1. Choose a), b) or c)

a) Derive (∀x)(Fx & Gx)

1. (∀x) Fx & (∀x) Gx A
2.

b) Derive (∃x)(Gx & Hx)

1. (∀x) (Fx ⊃ Gx)
2. (∀x) (Gx ⊃ Hx)
3. Fa A
4.

c) Derive (∀x)(∀y) Fyx

1. (∀x)(∀y) Fxy A
2.

2. Choose a) or b)

a) Derive (∀x) Fx ⊃ (∀x) Gx

1. (∀x)(Fx ⊃ Gx) A
2.

b) Derive (∀x)(Fx ⊃ Hx)

1. (∀x)(Fx ⊃ Gx)
2. (∀x)(Gx ⊃ Hx) A
3.

3. Choose a) or b)

a) Derive (∃x)(Gx & Hx)

1. (∀x)(Fx ⊃ Hx) A
2. (∃x)(Fx & Gx) A
3.

b) Derive (∃x)Gx

1. (∃x)Fx v (∃x)Gx A
2. (∀x)~Fx A

Derivation Rules for SD

Conjunction Introduction &I

P
Q
→P & Q

Conjunction Elimination &E

P & Q
→P

P & Q
→Q

Disjunction Introduction vI

P
→ P v Q

Q
→ P v Q

Disjunction Elimination vE

P v Q
P | A
R

Q | A
R
→ R

Conditional introduction ⊃E

P | A
Q
→ P ⊃ Q

Conditional Elimination ⊃I

P ⊃ Q
P
→ Q

Negation Introduction ~I

P | A
Q
~Q
→ ~P

Negation Elimination ~E

~P | A
Q
~Q
→ P

Biconditional Introduction ≡I

P | A
Q

Q | A
P
→ P ≡ Q

Biconditional Elimination ≡E

P ≡ Q
Q
→ P

P ≡ Q
P
→ Q

Derivation Rules for PD

Universal Introduction ∀I

P(a/x)
→ (∀x) P

Provided
i) a does not occur in an undischarged premise
ii) a does not occur in (∀x) P

Universal Elimination ∀E

(∀x) P
→ P(a/x)

Existential introduction ∃I

P(a/x)
→ (∃x) P

Existential elimination ∃E

(∃x) P
P(a/x) A
Q
Q

Provided
i) a does not occur in an undischarged premise
ii) a does not occur in (∃x) P
iii) a does not occur in Q