

Kanazawa University Graduate School of Law
Jurisprudence, Final examination
26 July 2024, Hidehiko Adachi

Note: In case of any discrepancies between the English and Japanese versions, the Japanese version shall prevail. The English version is provided for reference purposes only.

1. Explain, using truth tables, whether the following reasonings are valid (logically correct). If not, provide counterexamples.

- (a) $\neg A$ therefore $A \rightarrow B$
- (b) $A \rightarrow B, B$ therefore A

2. Explain, using tableaux (truth trees), whether the following reasonings are valid. If not, provide counterexamples.

- (a) $A \vee B, A \rightarrow C, B \rightarrow C$ therefore C
- (b) A therefore $A \rightarrow B$

3. Explain, using a tableau, whether the following logical formula a tautology.

$$((A \rightarrow B) \rightarrow A) \rightarrow A$$

4. Translate the sentences (a)-(d) into

- logical formulae containing the all quantifiers and ‘if’, and
- logical formulae containing the existential quantifiers and ‘and’ and
- write Venn Diagrams.

Let the predicate ‘S’ represent ‘is a law school student’ and the predicate ‘J’ represent ‘is studying jurisprudence’.

- (a) Every law school students are studying Jurisprudence.
- (b) No law school students is studying Jurisprudence.
- (c) There is someone who is a law school student and isn’t studying Jirisprudence.

(d) There is someone who is a law school student and studying Jurisprudence.

5. Are the following statements correct? Write a \bigcirc if it is correct and a \times if it is not. If \times , explain what is wrong and how it can be corrected.

- (a) A proposition is the content of a sentence that has a truth value.
- (b) If two logical formulae A and B are logical equivalent, then the truth values of A and B are the same in any case.
- (c) The inference 'a must compensate b for the damage and is permitted not to compensate b for it' and therefore 'b must be grateful to a' is logically incorrect.
- (d) Inference (Reasoning) that has no counterexample and in which all premises are true is called sound inference.
- (e) \models (therefore) is a logical connective of propositional logic.
- (f) The fact that a set of logical formulae is consistent means that, in any case, all the logical formulae in the set will be true.
- (g) If the inference 'A, therefore B' is valid, then the proposition 'A then B' is a tautology.
- (h) Permission for omission (inaction) implies prohibition of action.
- (i) The impossible is not obligatory.
- (j) The fact that an action is obligatory and its inaction is also obligatory is called non-freedom.
- (k) If it is obligatory not to smoke, it is also obligatory to pay a million yen if you smoke.
- (l) In countries where freedom of speech is not guaranteed (assuming that freedom of speech is explicitly denied by statute or case law), citizens are prohibited from speaking out against the government.
- (m) A non-consistent world is not a possible world.
- (n) In a world where murder is prohibited, no one commits murder.
- (o) 'Whoever kills a person shall be liable to a custodial sentence of not less than five years' is an unconditional general norm.
- (p) According to Gustav Radbruch, the law is the possibility of morals, and for that very reason it is also the possibility of the immoral.

- (q) In countries where there is no freedom to believe in a religion, the state has the right to require its citizens to believe in a religion, as well as the right to require them not to believe in a religion.
- (r) Many of the obligations established by statutory provisions are non-defeasible obligations.
- (s) In the absence of a law prohibiting not learning, it is legally permissible not learning.
- (t) Property rights are freedom-rights of all persons over a certain person.
- (u) Radbruch named the norms that conferred on the first constitution makers in history the power to set up their constitutions as the basic norm (Grundnorm).
- (v) Setting out the rights of citizens in a constitution and prohibiting them from being significantly changed or abolished is known as institutional guarantees.
- (w) The Constitution gives the courts the competence to judge cases, but does not oblige them to exercise this competence.
- (x) A norm that sets out the best situation or action, but does not specify what should be done if that situation or action is not realised, is called a principle.
- (y) Arguments based on the legislator's will are arguments based on the actual will of the current legislator.
- (z) Gaps in the law are exceptional in private law.

6. Fill in the blanks in the following sentences.

- (a) A formula that is always true regardless of the truth value combination of atomic formulae is called (1), a formula that is always false is called (2), and a formula that can be both true and false is called (3).
- (b) Order (duty to act), prohibition and freedom are in a relationship of (1) with each other, non-freedom, permission to act and permission to omit are in a relationship of (2) with each other, order (3) permission to act and non-freedom, prohibition (3) permission to omit and non-freedom, freedom (3) permission to act and permission to omit

7. Explain the following words and phrases.

- (a) freedom
- (b) competence (power)
- (c) commutative justice
- (d) contingent interpretation of law
- (e) contra legem