



Försättsblad Prov Original

Kurskod	Provkod	Tentamensdatum
D T 1 5 4 G	T 1 0 1	2 0 1 8 - 0 4 - 0 3
Kursnamn	Datateknik GR (B), Nätverksteknik B	
Provnamn	Tentamen P2, delkurs 1	
Ort	Sundsvall	
Termin	V18	
Ämne	Datateknik	

Final Exam - ScN
DT154G Network Technology B

Lennart Franked
lennart.franked@miun.se
Phone: 010 142 8683

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Instructions

Carefully read the questions before you start answering them. Note the time limit of the exam and plan your answers accordingly. Only answer the question. The questions are *not* sorted by difficulty. Clearly show which answer you are giving your solution to. *Always motivate your answers and show your calculations.*

Time 2.5 hours.

Exam Aids Dictionary.

Maximum points 18

Questions 6

Preliminary grades

The following grading criteria applies: $E \geq 9p$, $D \geq 10p$, $C \geq 12p$, $B \geq 14p$, $A \geq 16p$. Scoring will be based on level of depth shown in your answer. To pass this exam you must have shown proficient knowledge in all the intended learning outcomes (ILO) covered in this exam. Each questions ILO affiliation is shown as (ILO: #). The grade limit given is preliminary per ILO. Final grade is set based on your performance on each individual ILO.

Covered ILO

This exam covers the following Intended Learning Outcomes (ILO)

- ILO: 1 – Förstå, konfigurera och felsöka de protokoll som möjliggör redundans i ett switchat ethernet-nätverk
- ILO: 2 – Förstå, konfigurera och felsöka trådlösa nätverk
- ILO: 3 – Konfigurera och felsöka routrar i IPv4 och IPv6 nätverk
- ILO: 4 – Designa nätverk inom ett AS

Questions

The questions below are not given in any particular order.

- (3p) 1. *(ILO: 1)* In legacy STP, discuss the implications of the loss of a bridge.
- (3p) 2. *(ILO: 1)* In a network that is running both RSTP and Legacy STP, how is the compatibility between the two versions of the protocol handled?
3. *(ILO: 2)*
 - (1p) (a) What is the advantage and disadvantage of using the 8PSK-modulation (with 8 symbols), instead of 2PSK-modulation (with 2 symbols)?
 - (1p) (b) How many times higher data rate will one of the methods give compared to the other, using the same bandwidth in Hertz?
 - (1p) (c) With the help of a figure or an example, explain the principle difference between the two modulation techniques.
- (3p) 4. *(ILO: 3)* How have they solved the compatibility issues with different types of layer 3 protocols in EIGRP design?
- (3p) 5. *(ILO: 3)* Compare the metric calculations of OSPF and EIGRP.
- (3p) 6. *(ILO: 4)* Discuss the different roles an OSPF-router can take in a multiarea-OSPF network.