



## Försättsblad Prov Original

Kurskod	Provkod	Tentamensdatum
I V 0 5 6 G	3 0 0 0	2 0 1 8 - 0 6 - 1 1
Kursnamn	Idrottsvetenskap GR (B), Nutrition med inriktning mot idrott	
Provnamn	Moment 3 Tentamen	
Ort	Östersund	
Termin	V18	
Ämne	Idrottsvetenskap	





**Mittuniversitetet**  
MID SWEDEN UNIVERSITY

Kodnr: \_\_\_\_\_

# RE-EXAM, 4HP

VT18

## IDROTTSVETENSKAP GR (B) NUTRITION WITH A FOCUS ON SPORTS IV056G

Date: 2018-06-11

Time: 5 hours

Permitted items: English dictionary (English-Swedish and/or English-German)

Maximum points: 60

*You must score at least 50% on each section in order to pass the whole exam.*

A – Outstanding (90%)	54 p
B – Very good (80%)	48 p
C – Good (70%)	42 p
D – Satisfactory (65%)	39 p
E – Pass (60%)	36 p
Fx – Fail; oral re-exam (57-60%)	34-36 p
F – Fail (< 57%)	< 34 p

### Instructions to students:

- Answer ALL questions
- Use a separate sheet of paper for each new topic (e.g. 'Digestion', 'Macronutrients' and the long question)
- Remember to write your student number on every piece of paper that you use
- Write legibly and concisely
- Take your time and think about each question carefully

Course Leader: Helen Hanstock, 073 060 22 02 / 010 142 8124

**GOOD LUCK!**



## SECTION 1 – SHORT QUESTIONS

### ANSWER ALL QUESTIONS

#### DIGESTION (10p)

ANSWER IN ENGLISH OR SWEDISH

1. Define **absorption** (1p)
2. Define **peristalsis** (1p)
3. Describe the **structure and function of two organs** in the human GI system. (6p)
4. GI activity is regulated in three phases: called the cephalic, gastric and intestinal phases. **What happens** in the cephalic phase and **what are the triggers/events** that stimulate GI activity? (2p)



## MACRONUTRIENTS (10p)

ANSWER IN ENGLISH OR SWEDISH

5. What are glycemic index and glycemic load? (2 p)
6. Explain how endurance training can shift the relative energy contributions from fats and carbohydrates during prolonged exercise at a moderate intensity. (2 p)
7. Explain why a person that has developed diabetes type II should try to avoid carbohydrates in the form of simple sugars like for instance glucose and sucrose as well as carbohydrates in plain flour. (2 p)
8. Explain the main differences in fatty acid composition between butter and olive oil. (1 p)
9. Why is it extra important to eat protein from different food sources if you are reducing your consumption of meat and dairy products? (1 p)
10. Describe why it can be advantageous during a strength training period to be in a state of positive energy balance if the main focus of the training is muscle growth. (2 p)





## VITAMINS, MINERALS & SUPPLEMENTS (10p)

ANSWER IN ENGLISH OR SWEDISH

11. Suggest a reputable source that athletes could use to find up-to-date, evidence-based recommendations regarding the use of dietary supplements. (1p)
12. a) Give an example of two vitamins that we might call 'antioxidants'. (2p)  
b) Describe the main functions of one of the antioxidant vitamins (1p)  
c) Give two dietary sources of antioxidant vitamins (1p)  
d) How might 'megadoses' of antioxidant vitamins affect the way that we adapt to training? (2p)
13. a) Give two functions of calcium in the body (2p)  
a) Suggest one potential cause of calcium insufficiency. (1p)



## HYDRATION (10 p)

ANSWER IN **ENGLISH** OR **SWEDISH**

14. a) Approximately what percentage of blood volume is water? (1p)
- b) Approximately what is the osmolality of blood plasma when well hydrated? Include units in your answer. (2p)
15. Give a brief, physiological explanation of why fluid losses increase when we exercise in the heat compared to exercising in temperate conditions (4p)
16. Explain what we mean by 'ad libitum' drinking. (1p)
17. Name **two hormones** involved in the homeostatic pathways that help to conserve water and Na+. (2p)

## SECTION 2 – LONG QUESTION

ANSWER IN SWEDISH OR ENGLISH

18. With reference to the diagram below discuss how a young, female athlete might end up in the bottom left triangle. Outline the consequences of being in the bottom left triangle and provide practical recommendations for getting her back to the top right triangle. Support your answer with relevant scientific evidence. (20 p)

