

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Learner Registration Number

Pearson BTEC
Level 3 Nationals
Extended Diploma

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Wednesday 15 May 2019

Morning (Time: 3 hours)

Paper Reference **31824H**

Sport and Exercise Science

Unit 13: Nutrition for Sport and Exercise Performance

Part S

You must have:

A calculator

Nutritional principles information booklet

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** activities.
- Answer the activities in the spaces provided – *there may be more space than you need.*
- This booklet contains material for the completion of the set task under supervised conditions.
- This booklet is specific to each series and this material must only be issued to learners who have been entered to undertake the task in the relevant series.
- This booklet must be kept securely until the start of the 3-hour supervised assessment session.

Information

- The total mark for this paper is 50.
- An information booklet is supplied on nutrition values.
- The marks for **each** activity are shown in brackets – *use this as a guide as to how much time to spend on each activity.*

Advice

- Read each activity carefully before you start to answer it.
- Try to answer every activity.
- Check your answers if you have time at the end.

Turn over ►

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Instructions to Teachers/Tutors

The set task should be completed during the three-hour session as timetabled by Pearson.

The set task must be carried out under supervised conditions.

Learners must complete this set task in the task and answer booklet.

Teachers/tutors should note that they are responsible for maintaining security and for reporting issues to Pearson. In particular:

- only permitted materials for the set task can be brought into the supervised environment
- during any permitted break and at the end of the session, materials must be kept securely and no items removed from the supervised environment.

Maintaining security

- During supervised assessment sessions, the assessment areas must only be accessible to the individual learners and to named members of staff.
- Learners can only access their work under supervision.
- Any work learners produce under supervision must be kept securely.
- Learners are not permitted to have access to the internet or other resources during the supervised assessment period.

After the session, the teacher/tutor will confirm that all learner work was completed independently as part of the authentication sheet submitted to Pearson.

This paper must be read in conjunction with the unit information in the specification and the BTEC Nationals Instructions for Conducting External Assessments (ICEA) document.

See the Pearson website for details.

Outcomes for submission

Each learner must submit:

- a completed task and answer booklet.

Learners must complete a declaration that the work they submit is their own.

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Guidance for Learners

Read the set task information carefully.

In this booklet you will be asked to carry out specific activities using the information given.

The supervised assessment task must be taken in a single session of three hours. You may be provided with a supervised break during the assessment in addition to the specified hours.

You must plan your time and work independently throughout the three-hour supervised assessment period.

You will complete the activities within the set task under supervision and your work will be kept securely during any breaks taken.

You must work independently and must not share your work with other learners.

Your teacher/tutor may clarify the wording that appears in this task but cannot provide any guidance on completion of the task.

Outcomes for submission

You must submit:

- a completed task and answer booklet.

You must complete a declaration that the work you submit is your own.



Set task information

You should read the case study carefully looking at the client's personal information, their current typical nutritional programme and how these relate to each other.

You will need to spend at least **30 minutes** on this before you start the activities in the Set Task Brief.

The nutritional principles information booklet gives extra information on nutritional values that will help you with Activities 1 and 2. You should study this carefully.

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Client information

Steve is a weightlifter. This is a strength sport that consists of lifting maximal weight.

His nutritional programme shows what he eats and drinks, and the activities he does each day.

Personal details

Age	25 years old
Gender	Male
Height	1 m 65 cm
Weight	75 kg
BIA result	9%
Activity levels	Very active

Performance details

Sports event
Steve is a weightlifter. Weightlifting is a strength sport.
Phase of training
Steve has taken part in a weightlifting event, so he is now in the 'after event' phase.



Current typical nutrition programme								
Day	Breakfast 7.00 am	Lunch 1.30 pm	Dinner 8.00 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Monday	Large bowl of oats with skimmed milk and honey	4 slices of brown bread with tuna and mayonnaise with tomato and lettuce	Lamb, potatoes and couscous with tomato salad	1 glass of tomato juice 2 glasses of orange juice 1 can of lemonade 0.5 litres of water	1 banana 2 oranges 1 bagel with jam 1 large bag of crisps	2730 kcal	Carbohydrates 450 g Fat 50 g Protein 120 g	5 pm 2 hours of weight training
Tuesday	4 slices of brown bread toasted with peanut butter	4 slices of pizza Salad Carrot sticks	Barbequed chicken breast with green beans and brown rice	3 glasses of orange juice 1 small milkshake 1 can of cola 0.5 litres of water	1 bagel with jam 1 box of raisins 1 small bowl of grapes 1 large bag of crisps	2630 kcal	Carbohydrates 400 g Fat 70 g Protein 100 g	5 pm 2 hours of weight training
Wednesday	Large bowl of oats with skimmed milk and honey	2 bagels with cheese Chips	Pan fried cod, brown rice, asparagus, peas and boiled potatoes	2 glasses of orange juice 1 small milkshake 1 can of cola 0.5 litres of water	1 apple 1 banana 1 pot of yogurt 1 blueberry muffin 1 large bag of crisps	3000 kcal	Carbohydrates 500 g Fat 60 g Protein 115 g	5 pm 2 hours of weight training

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Day	Breakfast 7.00 am	Lunch 1.30 pm	Dinner 8.00 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Thursday	4 slices of brown bread toasted with peanut butter	Large jacket potato with cheese and sweetcorn	Chicken, tortilla, avocado, black beans, lettuce and salsa Chips	1 glass of tomato juice 2 glasses of orange juice 1 can of lemonade 0.5 litres of water	3 chocolate chip biscuits 1 apple 1 banana 1 large bag of crisps	2610 kcal	Carbohydrates 450 g Fat 50 g Protein 90 g	5 pm 2 hours of weight training
Friday	4 slices of brown bread toasted with peanut butter	Large white baguette with turkey, tomato and lettuce	Vegetable pasta bake with cheese, tomatoes, broccoli and cauliflower	3 glasses of orange juice 1 can of lemonade 2 cans of cola 0.5 litres of water	1 large bag of crisps 1 kiwi fruit 1 small bowl of grapes 1 bagel with jam	2750 kcal	Carbohydrates 450 g Fat 70 g Protein 80 g	5 pm 2 hours of weight training



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Day	Breakfast 7.00 am	Lunch 1.30 pm	Dinner 8.00 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Saturday	2 pancakes with syrup	Grilled cheese and roasted red pepper toasted sandwich – 4 slices of white bread	Pork chop, mashed potatoes, carrots and broccoli	2 glasses of orange juice 1 can of lemonade 0.5 litres of water	1 large bag of crisps 1 chocolate bar 3 crackers and cheese	2510 kcal	Carbohydrates 400 g Fat 70 g Protein 70 g	3 pm 2 hours of weight training
Sunday	Large bowl of oats with skimmed milk and honey	Large white baguette with ham, tomato and lettuce	Vegetable chilli – kidney beans, tomatoes, peppers and mushrooms, with large jacket potato Apple pie	3 glasses of orange juice 2 cans of lemonade 0.5 litres of water	1 small bowl of grapes 1 blueberry muffin 1 large bag of crisps	2790 kcal	Carbohydrates 450 g Fat 70 g Protein 90 g	Rest day



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Set task

You must read the information carefully.

Complete all your work in the task and answer booklet in the space provided.

Activity 1

Interpret Steve's current nutritional programme in relation to nutritional intake for health and wellbeing.

Use the nutritional principles information sheet to support your answer.

(Total for Activity 1 = 20 marks)

Activity 2

Modify the nutritional programme, based on nutritional strategies, in relation to Steve's sports event.

Use the nutritional principles information sheet to support your answer.

(Total for Activity 2 = 20 marks)

Activity 3

Recommend nutritional guidance for Steve based on his phase of training.

The phase of training is 'after event'.

(Total for Activity 3 = 10 marks)

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(Total for Activity 1 = 20 marks)



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(Total for Activity 2 = 20 marks)



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(Total for Activity 3 = 10 marks)

TOTAL FOR TASK = 50 MARKS



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Pearson BTEC Level 3 Nationals Extended Diploma

Wednesday 15 May 2019

Paper Reference **31824H**

Sport and Exercise Science

**Unit 13: Nutrition for Sport and Exercise Performance
Nutritional Principles Information Booklet**

Insert

You do not need any other materials.

Instructions

- You will need the information in this booklet to answer Activities 1 and 2.
- Read the information carefully.
- You must **not** write your answers in this booklet.
- Only your answers given in the task and answer booklet will be marked.

Turn over ►

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Nutritional principles information sheet

Nutritional programme

The table places some of the foods from the nutritional programme into specific food groups.

Food	Food group
Asparagus	Fruit and vegetables – a type of green vegetable
Avocado	Fruits and vegetables – a type of fruit
Bagel	Grains – a type of bread
Baguette	Grains – a type of bread
Black beans	Protein – a type of vegetable that is high in protein
Blueberry muffin	Fats and sugars – a cake that contains blueberry fruits
Cod	Protein – a type of fish
Couscous	Grains – made from ground wheat
Crackers	Grains – a dry thin baked food made out of flour and water
Kidney beans	Protein – a type of vegetable that is high in protein
Kiwi	Fruit and vegetables – a type of fruit
Pancakes	Grains – a type of sweet bread
Peanut butter	Protein – a type of spread made of nuts
Pepper	Fruit and vegetables – a type of vegetable
Salsa	Fruit and vegetables – a type of sauce made from tomatoes
Syrup	Fats and sugars – a type of thick liquid made of sugar
Tortilla	Grains – a flat circular type of bread made from flour
Vegetable chilli	Fruits and vegetables – vegetables in a spicy sauce
Vegetable pasta bake	Fruit and vegetables – a range of vegetables in a sauce Grains – pasta

Energy content of macronutrients

1 g protein provides 4 kcal

1 g carbohydrate provides 4 kcal

1 g of fat provides 9 kcal

Harris Benedict equation to calculate basal metabolic rate (BMR)

Males = $66.5 + (13.75 \times \text{weight in kg}) + (5.003 \times \text{height in cm}) - (6.755 \times \text{age in years})$

Females = $655.1 + (9.563 \times \text{weight in kg}) + (1.85 \times \text{height in cm}) - (4.676 \times \text{age in years})$

Activity levels

Sedentary: BMR x 1.2

Lightly active: BMR x 1.375

Moderately active: BMR x 1.55

Very active: BMR x 1.725

Extra active: BMR x 1.9

Body mass index equation

Body mass index (BMI) = $\frac{\text{Weight in kg}}{\text{Height in m} \times \text{Height in m}}$



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