

Pearson BTEC Level 3 Nationals Extended Diploma

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Learner Registration Number

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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.
- A nutritional principles information booklet is supplied.
- 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.

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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.



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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.

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

Personal details

Pete takes part in boxing. He is planning to compete in the lightweight category that has a weight requirement of 57–60kg.

His current nutritional programme represents what he typically consumes during a seven-day period.

Age	24 years old
Gender	Male
Height	1 m 65 cm
Weight	65 kg
BIA result	24%
Activity levels	Moderately active

Performance details

Sports event

Pete is taking part in a boxing event.
The event lasts approximately 40 minutes.

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

Phase of event

Pete is in the 'post-event' phase that is after the boxing match.



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Current typical nutrition programme								
Day	Breakfast 8 am	Lunch 1 pm	Dinner 8 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Monday	2 fried eggs White toast with butter	Hamburger Chips	Spaghetti Bolognese Garlic bread	1 glass of apple juice 2 litres of water 1 can of lemonade	Small bag of sweets 1 bag of crisps	3550 kcs	Carbohydrates 400 g Fat 150 g Protein 150 g	7 am 30-minute run
Tuesday	Small bowl of muesli Full fat milk	Full fat cheese and ham toasted sandwich Apple	Chicken stir fry with mushrooms, onions and peppers Noodles	1 glass of apple juice 2 litres of water 1 can of lemonade	1 bag of crisps Small chocolate bar	2260 kcs	Carbohydrates 250 g Fat 100 g Protein 90 g	
Wednesday	2 fried eggs White toast with butter	Spicy chicken burger Chips Baked beans	Lasagne Garlic bread	1 glass of apple juice 2 litres of water 1 can of lemonade	1 bag of crisps Small bag of sweets	2960 kcs	Carbohydrates 350 g Fat 120 g Protein 120 g	6 pm 1 hour of weight training

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Day	Breakfast 8 am	Lunch 1 pm	Dinner 8 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Thursday	Small bowl of muesli Full fat milk	Full fat cheese and ham toasted sandwich Chips	Fried sausage, fried bacon and scrambled eggs White toast with butter	1 glass of apple juice 2 litres of water 1 can of lemonade	1 bag of crisps 2 chocolate biscuits	2780 kcal	Carbohydrates 270 g Fat 140 g Protein 110 g	6 pm 1 hour of boxing training
Friday	Two fried eggs White toast with butter	Fried chicken Chips	Pepperoni pizza	1 glass of apple juice 2 litres of water 1 can of lemonade	1 bag of crisps Small bag of sweets	3260 kcal	Carbohydrates 390 g Fat 140 g Protein 110 g	
Saturday	1 butter croissant Jam	Full fat cheese sandwich Crisps Apple	Chicken curry Fried rice Naan bread	1 glass of apple juice 2 litres of water 1 can of lemonade	1 slice of chocolate cake	2460 kcal	Carbohydrates 300 g Fat 100 g Protein 90 g	3 pm 1 hour of boxing training
Sunday	1 butter croissant Jam	Roast beef Roast potatoes Boiled carrots, peas and sweetcorn	Full fat cheese and crackers Grapes	1 glass of apple juice 2 litres of water 1 can of lemonade	1 bag of crisps	2760 kcal	Carbohydrates 320 g Fat 120 g Protein 100 g	2 pm 30-minute swim



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

Use the nutritional principles information booklet to support your answer.

(Total for Activity 1 = 20 marks)

Activity 2

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

Use the nutritional principles information booklet to support your answer.

(Total for Activity 2 = 20 marks)

Activity 3

Recommend nutritional guidance for Pete based on his phase of event.

The phase of event is 'post-event'.

(Total for Activity 3 = 10 marks)

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Task and answer booklet

Please do not write answers outside the spaces provided.

You must complete ALL activities in this task and answer booklet.

- 1 Interpret Pete's current nutritional programme in relation to nutritional intake for health and wellbeing.

Use the nutritional principles information booklet to support your answer.

Your answer will focus on the following points:

- (a) food intake
- (b) fluid intake
- (c) factors affecting digestion and absorption of nutrients and fluids.

(20)

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(Total for Activity 1 = 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

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

Food	Food group
Bacon	Meat – processed meat that has salt added
Bolognese	Meat – red meat in a tomato-based sauce
Crackers	Grains – a dry, thin baked food made out of flour and water
Croissant	Grains – a type of bread made with butter
Chicken curry	Meat – chicken in a spicy sauce
Lasagne	Grains – a type of pasta Meat – red meat
Muesli	Grains
Naan bread	Grain – a type of bread
Noodles	Grain – a type of pasta
Pepperoni	Meat – processed meat
Sausage	Meat – processed meat
Stir fry	Fruit and vegetables – fried vegetables

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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