

Qualification title: 0174-37 Level 3 Advanced Technical
Extended Diploma in Horticulture (1080)

Test title: 0174-510 Level 3 Horticulture

Version: Sample

Q1	
Name two representative organisations that offer membership to sports turf professionals. (2 marks)	
Answer:	
One mark each, up to a maximum of two marks:	
<ul style="list-style-type: none"> • The British and International Golf Greenkeepers Association (BIGGA) (1) • The Institute of Groundsmanship (IOG) (1) 	
Test spec reference: 310 (AO1) Topic 1.2	Total marks: 2

Q2	
a) Describe two economic benefits of the sports turf industry. (2 marks)	
b) Describe two social benefits of the sports turf industry. (2 marks)	
Answer:	
a) One mark each, up to a maximum of two marks:	
<ul style="list-style-type: none"> • Contributes to Gross Domestic Product (GDP) to improve the country's economy. (1) • Employment for sports turf professionals which contributes to economic growth. (1) • Improved health for players which can save costs to government. (1) 	
b) One mark each, up to a maximum of two marks:	
<ul style="list-style-type: none"> • Improved health for players which can save costs to government. (1) • Reduction in youth crime which positively behaviour. (1) • Increased well-being which adds to the happiness of players. (1) • Community development which can improve quality of life. (1) • Develop self by being able to work abroad. (1) • Have a better understanding of equality and diversity by meeting people from different backgrounds. (1) 	
Test spec reference: 310 (AO2) Topic 1.1	Total marks: 4

Q3

Differentiate the roles and responsibilities of a Golf Course Manager/ Grounds Manager and a Greenkeeper/ Groundsperson. (5 marks)

Answer:

One mark each, up to a maximum of five marks:

Golf Course Manager/Grounds Manager

- A Golf Course Manager/ Grounds Manager will take overall control in managing the day to day running of the sports turf area. (1)
- They will control the budget. (1)
- They will manage the Greenkeeping/Groundsmanship staff. (1)
- Attend meetings with committee/owners/shareholders. (1)

Greenkeeper/Groundsperson

- A Greenkeeper/Groundsperson will carry out routine sports turf maintenance/ repair/ renovation tasks. (1)
- They will be directed by a senior member of staff. (1)
- They will not carry out any managerial tasks. (1)

Test spec reference: 310 (AO2)
Topic 2.3

Total marks: 5

Q4

Explain **two** negative effects caused by poor quality management systems. (4 marks)

Answer:

Up to two marks each, to a maximum of four marks:

- Loss of income (1) leading to lower profitability. (1)
- Waste of resources (1) leading to less efficient business processes. (1)
- Low employee morale (1) which can lead to poor employee performance. (1)
- Bad publicity for the sports turf business (1) leading to potential loss of clients. (1)
- Failure to comply with Equality and Diversity legislation (1) which could lead to prosecution. (1)

Accept any other suitable answer.

Test spec reference: 310 (AO2)
Topic 3.3

Total marks: 4

Q5

- a) Name **four** records that are used in a typical sports turf business. (4 marks)
- b) Summarise **five** ways a business can use financial and physical records to help monitor their performance and progress. (5 marks)

Answer:**a) One mark each, up to a maximum of four marks:**

- Historical resource usage records. (1)
- Vehicle/machinery records/logs. (1)
- Property records i.e. forms of tenure. (1)
- Tool/equipment records. (1)
- Materials records. (1)
- Insurance records for physical resources. (1)
- Chemicals stored. (1)
- Spraying records. (1)

b) One mark each, up to a maximum of five marks:

- Check performance against previous records/periods to identify trends. (1)
- Check financial efficiency against targets. (1)
- Check overall costs against budget. (1)
- Check records of waste and waste transfer notes against purchase costs and usage. (1)
- Cost of overtime against previous years. (1)
- Cost of wages against previous years. (1)

Test spec reference: 310 (AO1 & AO2)
Topic 4.2 & 4.3

Total marks: 9

Q6

State **three** examples of how the carrying capacity of a sports turf area can be adversely impacted. (3 marks)

Answer:**One mark each, up to a maximum of three marks:**

- Prolonged use/over use of the area. (1)
- Inclement weather conditions. (1)
- Poor soil structure. (1)
- Poor drainage of the area. (1)
- Poor turf grass species within the area. (1)
- Length of growing season. (1)

Test spec reference: 314 (AO1)
Topic 1.3

Total marks: 3

Q7

- a) Summarise **three** financial benefits of adopting a sustainable management programme to a sports turf area. (3 marks)
- b) Summarise **two** additional costs that could be incurred in the short term when adopting a sustainable management programme to a sports turf area. (2 marks)

Answer:**a) One mark each, up to a maximum of three marks:**

- There will be less reliance on irrigation (1) / fertilisers (1) / pesticides (1) / high energy use. (1)
- Less maintenance costs on machinery. (1)
- Lower labour costs. (1)

b) One mark each, up to a maximum of two marks:

- More reliance on topdressing. (1)
- More sustainable seeds (1) / turf. (1)
- More man hours will be spent carrying out work. (1)

Test spec reference: 314 (AO2)
Topic 1.5

Total marks: 5

Q8

Explain **two** ways site markings can facilitate operations when carrying out grading works. (4 marks)

Answer:**Up to two marks each, to a maximum of four marks:**

- Workers can refer to markings throughout the job (1) so that they work to the required levels. (1)
- They can apply the correct amount of material (1) so the job is carried out according to plan. (1)
- Services need to be marked on site (1) for health and safety reasons (1) / to help prevent accidents and injuries from hitting services on site. (1)

Accept any other suitable answer.

Test spec reference: 324 (AO2)
Topic 2.1

Total marks: 4

Q9

Evaluate the use of a grid drainage system for a football pitch. (3 marks)

Answer:

One mark each, up to a maximum of three marks:

- The system is fairly easy to install. (1)
- Beneficial for subsequent slitting drainage in the future as slits to be installed at 90 degrees to the laterals. (1)
- They can be prone to silting up at the junctions. (1)
- Eliminates waterlogging. (1)
- Allows for equal hydraulic conductivity across the whole area at the same time. (1)

Test spec reference: 324 (AO2)
Topic 2.2

Total marks: 3

Q10

Describe **two** benefits **each** of using the following methods for land clearance.

- a) Chemical. (2 marks)
- b) Cultural. (2 marks)

Answer:

a) **One mark each, up to a maximum of two marks:**

Chemical

- Chemical methods require less time spent than cultural methods. (1)
- Practical to use on large areas. (1)
- Costs can be saved on man hours. (1)

b) **One mark each, up to a maximum of two marks:**

Cultural

- Cultural methods are effective if completed correctly. (1)
- Less harmful to the environment. (1)
- Less of a health and safety risk to workers. (1)
- Less waste disposal issues/costs. (1)
- Less qualifications needed (e.g. Safe Use and Application of Pesticides). (1)
- Less legal restrictions. (1)
- Can continue with clearance quicker (do not have to wait for herbicide to take effect). (1)

Test spec reference: 324 (AO2)
Topic 3.1

Total marks: 4

Q11

List **two** suitable grass seeds/grass seed mixtures to establish sports turf swards for **each** of the following. (Cultivar names are not required.)

- a) Golf Green. (2 marks)
- b) Football Pitch. (2 marks)

Answer:

- a) **One mark each, up to a maximum of two marks:**

Golf Green

- Chewings Fescue. (1)
- Chewings Fescue, Slender Creeping Red Fescue. (1)
- Chewings Fescue, Browntop Bent. (1)
- Browntop Bent. (1)

Accept any other suitable answer.

- b) **One mark each, up to a maximum of two marks:**

Football Pitch

- Perennial Ryegrass. (1)
- Perennial Ryegrass, Strong Creeping Red Fescue. (1)
- Perennial Ryegrass, Smooth Stalked Meadow Grass. (1)

Accept any other suitable answer.

Test spec reference: 324 (AO1)
Topic 3.2

Total marks: 4

Q12

State **two** factors that affect the suitability of drainage systems. (2 marks)

Answer:

- One mark each, up to a maximum of two marks:**

- Layout/type of drainage system. (1)
- Amount of water to be removed. (1)
- Type of sports turf surface. (1)
- Uses of the sports turf surface. (1)
- Soil structure. (1)
- Topography of land. (1)

Accept any other suitable answer.

Test spec reference: 324 (AO1)
Topic 2.2

Total marks: 2

Q13

List **four** relevant maintenance activities that can be carried out on a sports turf surface. (4 marks)

Answer:

One mark each, up to a maximum of four marks:

- Mowing. (1)
- Irrigation. (1)
- Scarification. (1)
- Verti-cutting. (1)
- Verti-grooming. (1)
- Top dressing. (1)
- Switching/brushing. (1)
- Aeration. (1)
- Edging. (1)
- Feeding. (1)

Test spec reference: 327 (AO1)
Topic 1.1

Total marks: 4

Q14

State two **unsuitable** weather conditions for carrying out maintenance operations on a sports turf area. (2 marks)

Answer:

One mark each, up to a maximum of two marks:

- Wet. (1)
- Frozen. (1)
- Snow covered. (1)

Test spec reference: 327 (AO1)
Topic 1.2

Total marks: 2

Q15

Explain **two** indications a sports turf area needs renovation work. (4 marks)

Answer:

Up to two marks each, to a maximum of four marks:

- When there is damage to grass surface (1) from divots/scrape marks. (1)
- When there is thin grass cover (1) from wear/disease scarring. (1)
- When there is compacted ground (indicated by poor drainage/high weed content/moss/poor grass growth) (1) from excess player/machinery use/lack of aeration. (1)
- When there is signs of damage to grass surface (1) from pests/disease/disorder/damage. (1)

Test spec reference: 327 (AO2)
Topic 2.1

Total marks: 4

Q16

- a) Summarise **four** advantages of using seed to establish a sports turf area. (4 marks)
b) Summarise **two** advantages of using turf to renovate a sports turf area. (2 marks)

Answer:

a) **One mark each, up to a maximum of four marks:**

- Wider range of seed mixtures available.(1)
- Purchase of seed is less expensive than turf. (1)
- Seed can be stored if conditions are inclement. (1)
- Seed is quicker to distribute across the site. (1)
- Less labour intensive. (1)

b) **One mark each, up to a maximum of two marks:**

- Turfing can achieve an instant effect as it can be used during the playing season. (1)
- Turf can be laid at any time of the year providing weather conditions are suitable ideal if the renovation needs to be carried out during the winter months. (1)
- When turfing, there is less likely to be competition from weeds so it will look aesthetically better. (1)
- On site availability matching to site and soil from the turf nursery on site. (1)
- Less preparation of soil needed. (1)

Test spec reference: 327 (AO2)
Topic 4.3

Total marks: 6

Q17

A sustainable approach to sports turf management is appropriate in today's society. Discuss. (15 marks)

Answer:**Band 1: 1-5 marks**

Basic evaluation of a sustainable approach within a sports turf management programme given with few or no technical terms provided.

Band 2: 6-10 marks

An in-depth evaluation of a sustainable approach within a sports turf management programme given with some technical terms provided. Good cultural practices considered, and detail shows a good understanding of the topic.

Band 3: 11-15 marks

A thorough evaluation of a sustainable approach within a sports turf management programme given with consistent use of technical terminology throughout. A clear description of good cultural practices with environmental impacts and physical contributions explored.

Indicative content

- Sustainability.
- Management of material inputs including "reduce, reuse and recycle".
- Environmental impact.
- Playability/The concept of carrying capacity.
- Costs.
- Good cultural practices.
- Benefits and limitations/Advantages and disadvantages.
- Health and safety.
- Physical contribution.
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Test spec reference: Integrated question**Total marks: 15**