



0174-523 MARCH 2019

Level 2 Technical Certificate in Forestry and Arboriculture

Level 2 Forestry and Arboriculture – Theory Exam

Friday 15 March 2019
09:30 – 11:00

You should have the following for this examination

- a multiple-choice answer sheet
- a pen with black or blue ink

This question paper is the property of the City and Guilds of London Institute and is to be returned after the examination.

Read the following notes before you answer any questions

- You **must** use a pen with black or blue ink to complete **all** parts of the answer sheet.
- Check that you have the correct answer sheet for the examination.
- Check that your name and candidate details are printed correctly at the top of your answer sheet.
- Inform the invigilator if your name or examination details are not correct.
- Each question shows **four** possible answers (lettered 'a', 'b', 'c' and 'd'); only **one** is correct.
- Decide which **one** is correct and mark your answer on the **answer sheet** with your pen.

For example if you decide 'a' is correct, mark your answer like this

101	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Cancel	Cancel	Cancel	Cancel

If you want to change your answer, cancel your first choice by filling in the 'cancel' box below the circle like this

101	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Cancel	Cancel	Cancel	

Then mark the answer which you have now decided is correct. For example if you now decide 'c' is correct, mark your answer like this

101	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	Cancel	Cancel	Cancel	

Any other marks on the form may invalidate some of your answers.

- Any calculations or rough working can be done on the question paper.
- Attempt all questions. If you find a question difficult, leave it and return to it later.

This paper contains 40 questions. Answer them using the 'boxes' numbered 1 to 40 on the answer sheet.

- 1 Which of the following organisations operates within the utilities sector?
- Forestry Commission.
 - Environment Agency.
 - National Trust.
 - Network Rail.
- 2 Which of the following **best** describes the role or responsibilities of a Tree Surveyor?
- To support the climber during aerial operations.
 - To collect information on tree stock.
 - To support an argument within a legal context.
 - To manage trees as a crop.
- 3 Which of the following is a form of continuing professional development (CPD)?
- Increased resilience.
 - Attending seminars.
 - Self-assessment.
 - Applying for jobs.
- 4 What is the **main** purpose of a covering letter when applying for a job?
- To prepare questions and answers for interview.
 - To demonstrate your ability to write a CV.
 - To discuss employment details prior to interview.
 - To formally introduce yourself and your application.
- 5 Which of the following measures could be used to maintain a resilient tree stock?
- Quarantine.
 - Population control.
 - Plant passport.
 - Resistant tree species.
- 6 Which of the following control methods would **not** be used to control deer?
- Culling.
 - Fertility control.
 - Sonic nets.
 - Fencing.
- 7 What does AONB stand for?
- Area of Outstanding Natural Beauty.
 - Area of Outstanding Natural Beaches.
 - Area of Outstanding Naturalised Bedrock.
 - Area of Outstanding Naturalised Birch.
- 8 The Forestry Commission is responsible for which of the following?
- Tree Preservation Orders.
 - Conservation areas.
 - Sites of special scientific interest.
 - Felling licenses.
- 9 Which of the following is **not** an effect of flooding?
- Reduced crop yields.
 - Wind-throw risk.
 - Ground saturation.
 - Increased growth rate.
- 10 A large dead tree within a public park overhanging a busy path needs to be managed. Which option would be **most** appropriate to reduce risk and to increase biodiversity on the site?
- Remove tree leaving standing dead stem.
 - Remove tree taking all arisings off-site.
 - Do not remove tree but install a bird box.
 - Do not remove tree and install fence.
- 11 Which soil type would be **most** free draining?
- Sandy-loam.
 - Silt-loam.
 - Sandy-clay.
 - Silt-clay.
- 12 What is the **main** purpose of phloem tissue?
- Water and nutrient uptake.
 - Support and storage.
 - Transport of photosynthates.
 - Gas exchange.
- 13 Which of the following is **not** a primary function of bark?
- Protection.
 - Gas exchange.
 - Water loss.
 - Nutrient uptake.

- 14 A fungi which lives exclusively on dead wood is
- saprophytic
 - parasitic
 - mycorrhizae
 - bacterial.
- 15 What does the following phrase describe: 'void spaces in material'?
- Compaction.
 - Porosity.
 - Nutrient availability.
 - Water availability.
- 16 Undifferentiated cells are known as
- vascular
 - xylem
 - phloem
 - meristematic.
- 17 Beneficial fungal species are classified as
- naturalised
 - parasitic
 - saprophytic
 - mycorrhizal.
- 18 Storage is one of the primary functions of
- roots and bark
 - stem and bark
 - roots and stem
 - stem and leaves.
- 19 Which of the following **best** describes soil amelioration?
- Increasing aeration.
 - Adding materials.
 - Reducing compaction.
 - Improving drainage.
- 20 Why would trapping be appropriate for managing invertebrate pest species?
- To monitor population levels.
 - To reduce population levels.
 - To calculate pesticide ratios.
 - To encourage breeding.
- 21 A woodland has issues with water logging. What is the **most** suitable action to take?
- Add fertiliser.
 - Improve drainage.
 - Clear fell trees and restock.
 - Increase soil organic matter content.
- 22 What is the **best** way of storing bare-root trees on a site prior to planting?
- Rested against a fence.
 - In a locked storage container.
 - Heeled in and watered.
 - Indoors in a warm environment.
- 23 What would be the **most** suitable planting method for a light standard tree?
- Pit planting.
 - Notch planting.
 - Angled planting.
 - Mound planting.
- 24 Which of the following methods of staking and supporting trees would have the **most** visual impact?
- Guying.
 - Stake and tie.
 - Double stake and rail.
 - Underground anchors.
- 25 Which method of protection for newly planted stock would reduce competition for water and nutrients?
- Spiral guard.
 - Mulch mat.
 - Guard.
 - Fencing.
- 26 Which of the following is a method of ground cultivation?
- Litter picking.
 - Fencing.
 - Rotavating.
 - Weed control.

- 27 What does the statement 'the direction something faces' describe?
- Topography.
 - Slope.
 - Aspect.
 - Climate.
- 28 Which of the following tree species is **most** likely selected for timber stock?
- Ilex aquifolium*.
 - Platanus x hispanica*.
 - Picea abies*.
 - Populus nigra* "Italica".
- 29 A shopping centre wants to plant trees for instant impact. Which of the following nursery stocks is **most** suitable?
- Containerised extra heavy standard.
 - Root-balled feathered whip.
 - Bare-root feathered light standard.
 - Cell grown 2+1 transplant.
- 30 Which of the following would **best** manage an aphid infestation on newly planted trees?
- Herbicides.
 - Pesticides.
 - Fungicides.
 - Germicides.

- 31 Which of the following are topographical features?
- Rivers and streams.
 - Livestock.
 - Hills and valleys.
 - Invasive species.
 - Boundary lines.
 - Rain and snow.
- 1, 2 and 3
 - 1, 3 and 5
 - 2, 4 and 6
 - 4, 5 and 6

32 **Statement 1**
Subsoiling should only be undertaken in dry weather.

Statement 2
Rotavating breaks up, churns and ameliorates the soil.

Which of the following is correct for the above statements?

	Statement 1	Statement 2
a	True	True
b	True	False
c	False	True
d	False	False

To answer questions 33-36, refer to scenario 1.

Scenario 1

A forestry worker has been tasked with planting a large area of an exposed site with a fast growing timber stock. A pathogen which affects European larch has been found in the area and deer are also present.

- 33 What would be the **most** appropriate tree stock and planting technique for the site?
- a Standard and pit planting.
 - b Cell-grown and notch planting.
 - c Seedlings and mound planting.
 - d 5 year transplant and angled planting.
- 34 What would the **most** likely aftercare provisions be for these newly planted forestry trees?
- 1 Watering.
 - 2 Mulching.
 - 3 Formative pruning.
 - 4 Pest control.
 - 5 Beating up.
 - 6 Herbicide application.
- a 1, 2 and 3
 - b 1, 3 and 5
 - c 2, 4 and 6
 - d 4, 5 and 6
- 35 Which tree species would be **most** suitable for planting?
- a *Picea sitchensis*.
 - b *Larix decidua*.
 - c *Quercus robur*.
 - d *Sorbus aucuparia*.

36 **Statement 1**

A Tree Preservation Order applies to the site due to the diseased larch being protected.

Statement 2

The Wildlife and Countryside Act protects all nesting birds during the felling operations.

Which one of the following is correct for the above statements?

	Statement 1	Statement 2
a	True	True
b	True	False
c	False	True
d	False	False

To answer questions 37-40, refer to scenario 2.

Scenario 2

A local arborist has been asked to work on a domestic customer's prized garden tree. The customer has explained that it produces large spikey seeds and the compound leaves turn a mottle brown every summer. They believe it has some kind of 'protection' from the Local Authority. The tree is at the bottom of a downward-sloping garden and the ground is very moist underfoot.

37 Based on the customer's description, what kind of tree will be worked on?

- a *Aesculus hippocastanum*.
- b *Fraxinus excelsior*.
- c *Fagus sylvatica*.
- d *Castanea sativa*.

38 It is discovered that the 'protection' the customer mentions is the fact they live in a Conservation Area. What procedure must be followed in order to undertake tree works?

- a Application to the Local Authority detailing information on the works that are intended to be undertaken and no work to be started until permission is granted.
- b Notification sent to the Forestry Commission that work is to be undertaken and allow six weeks for a response before starting.
- c Notification sent to the Local Authority that work is to be undertaken and allow six weeks for a response before starting.
- d Application to the Forestry Commission for a Felling Licence for permission to work on the tree.

39 How could the soil properties be improved for this tree?

- a Introduce mycorrhizae.
- b Test the pH level of the soil.
- c Undertake a hand-texture test.
- d Install appropriate drainage.

40 Based on the customer's description, what pest or disease might the tree be suffering from and how would this be reasonably controlled?

- a Bleeding canker, foliar spray.
- b Leaf minor, destroy fallen leaves.
- c Bleeding canker, root drench.
- d Leaf minor, sanitary felling.

NOW GO BACK AND CHECK YOUR WORK

- IMPORTANT -

Are the details at the top of the answer sheet correct?

Have you filled in your answers in INK in the appropriate boxes on the answer sheet?