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Level 2 Technical Certificate in Painting and Decorating
Level 2 Painting and Decorating – Theory exam

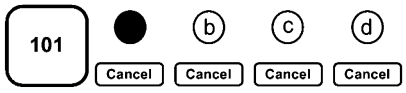
Tuesday 19 June 2018
09:30 – 11:30

You should have the following for this examination
- a multiple-choice answer sheet
- a pen with black or blue ink

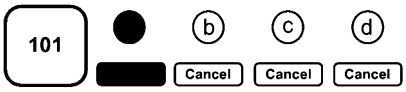
This question paper is the property of City & Guilds Limited and is to be returned after the examination.

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.

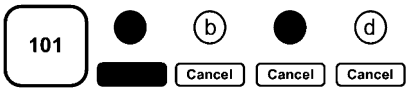
For example if you decide 'a' is correct, mark your answer like this



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



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



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 60 questions. Answer them using the 'boxes' numbered 1 to 60 on the answer sheet.

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1 What is included in an application for planning permission?

a Proposed building's appearance.
b Conservation of energy resources.
c Disabled persons' access.
d Personal safety for users.

2 What type of foundation would a steel-frame building be constructed on?

a Narrow strip.
b Raft.
c Pad.
d Wide strip.

3 Which legislative document requires employers to keep records of work related accidents?

a WAHR
b COSHH
c CDM
d RIDDOR

4 What item would be installed within a building during first fix?

a Radiator.
b Stud work.
c Architrave.
d Skirting board.

5 What is the advantage of using locally sourced supplies?

a Reduces the carbon foot print as travelling distance is shortened.
b Reduces the packaging cost as less transit protection is required.
c Reduces the packaging quantity as smaller batches are required.
d Reduces the carbon foot print as manufacturing time is shortened.

6 What would cause rising dampness in a solid concrete floor?

a The DPM has been damaged allowing the passage of moisture through the floor.
b The DPC has broken down allowing the passage of moisture through the floor.
c Incorrect insulation has been used, allowing condensation to form in the screed.
d Insulation has not been installed, and is allowing moisture to rise through the floor.

7 What document is required when erecting a proprietary static tower?

a Manufacturer's instructions, as not all systems are the same.
b Risk assessment, as this will identify potential hazards.
c WAHR, which gives the maximum height of the tower.
d Work programme, which details how the tower will be used.

8 What should be the **first** precautionary measure by an operative when erecting an extension ladder?

a Check the angle of the ladder.
b Check for overhead obstacles.
c Ensure the ladder is footed.
d Ensure help is available while erecting.

9 New softwood joinery requires a paint system, with a semi-sheen finish, to be applied within a short timescale.
How should the semi-sheen finish be applied?

a Apply solvent borne undercoat and eggshell by natural bristle brush.
b Apply solvent borne undercoat and gloss by synthetic filament brush.
c Apply acrylic primer and acrylic eggshell by synthetic filament brush.
d Apply acrylic primer and acrylic gloss by natural bristle brush.

10 Renovation work on a listed building is required as part of a major project.
What is a suitable approach to carrying out the project?

a Work with modern materials to keep structure in good state of repair and safe for occupants to use.
b Work using sustainable materials which are locally sourced and readily available.
c Work carried out sensitive to the era of the building and replicating traditional techniques and materials.
d Work carried out to improve damaged components using modern materials and up to date building techniques.

11 When erecting a mobile tower, at what stage should stabilisers be fitted?

a When the working height is reached.
b Immediately after the castors are locked.
c When the working platform is in place.
d At the earliest possible opportunity.

12 What defect can occur when painting bare external joinery with a high moisture content?

a Blooming.
b Blistering.
c Crazing.
d Chalking.

13 What preparation process should be used for removing heavy corrosion from large ornate metal gates?

a Wire brush.
b Emery paper.
c Orbital sander.
d Descaling pistol.

14 What method is used to prepare new plaster prior to painting?

a Dry scrape to remove surface spatters.
b Rub down with abrasive paper to provide good adhesion.
c Wash with sugar soap to keep dust to a minimum.
d Wet abrade to prevent scratching the surface.

15 What material can be used to fill defects in a hardwood that will be finished with varnish?

a Linseed oil putty, as it is inexpensive.
b Fine surface filler, as it is quick setting.
c Cellulose based powder filler, as it is easily prepared.
d Tinted stopper, as it is available in various colours.

16 Which defect would require total removal of the paint coating?

a Loss of gloss.
b Bittiness in the surface.
c Misses in the paint finish.
d Excessive coating thickness.

17 When removing coatings using LPG, what **must** be kept nearby as a precautionary measure?

a Plastic container to collate debris.
b Equipment to extinguish flames.
c Water to neutralise the surface.
d Dust sheet to protect the floor area.

18 The fascia board of a recently replaced flat roof has been finished in solvent borne gloss. After the manufacturer's recommended drying time has passed the solvent borne gloss remains soft and has dis-coloured in certain areas. What is the **most** likely cause?

a Traces of a reversible coating from the roof covering has contaminated the surface.
b Moisture from the leaking roof has softened the new coating.
c Moisture from the leaking roof has affected the solvent-borne finish preventing the paint drying.
d Traces of previous paint coating has contaminated the surface affecting adhesion.

19 One remaining unopened tin of solvent borne gloss required to complete a particular job is hidden away at the back of the shelf. On preparing the material it appears to be thin with a solid lump at the bottom of the tin. How could this have been prevented?

a Inverting the tins regularly.
b Storing tins at a constant temperature.
c Correctly resealing the tins after use.
d Returning the correct material to its original tin.

20 Why are thinners added to a surface coating?

a To make the paint film flexible.
b To increase elasticity of the paint coating.
c To make the paint material easier to apply.
d To extend the open time of the paint material.

See next page

21 What material would be applied to new exterior timber to prevent decay?

a Knotting, as it prevents resin dis-colouring the surface.
b Preservative, as it contains a fungicide which will protect the substrate.
c Acrylic primer, as it is water borne which will dry before it rains.
d Undercoat, as it is high in pigment and will obliterate the grain.

22 What can cause the defect 'flashing' on a flush door?

a Incorrect undercoat used.
b Surface tension.
c Poor application.
d Careless manufacturing.

23 What defect would result from poor 'cutting in' to a skirting board?

a Skid marks.
b Heavy brush marks.
c Excessive bits and nibs.
d Paint on adjacent surfaces.

24 When preparing coatings for use, what should be added to decrease the viscosity?

a Drier.
b Binder.
c Thinner.
d Pigment.

25 When applying eggshell acrylic paints, what type of brush filling would provide the **best** visible finish?

a Natural bristle, as they apply thicker coatings.
b Synthetic filament, as it reduces brush marks.
c Natural bristle, as the serrations aid laying off.
d Synthetic filament, as it provides a higher sheen.

26 After opening the container, what is the next step when preparing paint for application?

a Thin the material to get the correct consistency.
b Searching to remove bits from the paint.
c Decanting from the container into a paint pot.
d Stirring the contents to evenly disperse the ingredients.

27 What timber sheet material commonly has knots as a surface defect?

a MDF.
b Plywood.
c Hardboard.
d Chipboard.

28 Unpainted PVC rainwater down pipes on the exterior of a property require painting. What would be the correct method of preparing and painting this type of substrate?

a Wash with sugar soap, then dry abrade to provide a key before aluminium primer is applied to assist adhesion.
b Prime with solvent-borne gloss paint before aluminium paint is applied to prevent heat penetration from the sun.
c Degrease with white spirit, then prime with solvent-borne gloss before finishing with a second coat of solvent-borne gloss.
d Dry abrade with coarse aluminium oxide, degrease with white spirit, and apply two coats of acrylic gloss finish.

29 An operative is applying an eggshell paint to a flat, broad wall area by brush. When dry, the finished coating appears to have different levels of sheen across the surface of the wall. What has caused this defect?

a Poor technique allowing the colour underneath to show through the top coat.
b Not allowing sufficient drying times between coats causing loss of wet edge.
c Finished coating applied in direct sunlight has led to the solvent evaporating too quickly.
d Very slow application rate has led to solvent evaporating causing loss of wet edge.

30 Who would be responsible for overseeing the construction work and ensuring that it meets the specification?

a Sub-contractor, as they are not directly employed by the Architect.
b Estimator, as they have control of the construction budget.
c Main contractor, as they are employed by the Architect.
d Clerk of works, as they work directly for the client.

31 What type of property would **best** describe a 1990's three bedroom house?

a Domestic.
b Commercial.
c Industrial.
d New build.

32 What is the occupational role of a Quantity Surveyor?

a Technician.
b Professional.
c Skilled Operative.
d General Operative.

33 How should information for decoration be communicated to the contractor by the Architect?

a By sending a text message.
b With the aid of a sketched diagram.
c By sending a written specification.
d With the aid of a CAD drawing.

34 What is required in order to make a change to a construction specification?

a Programme alteration.
b Requisition order.
c Variation order.
d Site meeting.

35 What would be the **most** cost effective method to protect the public when planning a new build site security?

a Metal containers to secure equipment.
b Fencing to enclose the site perimeter.
c ID badges to identify all site personnel.
d 7 day, 24 hour perimeter guard patrols.

36 When **must** scaffold inspection tags be updated?

a After a month.
b After each use.
c Every 7 days.
d Every day.

37 What would be the main consideration when inspecting a mobile tower before use?

a The platforms used should all have a hatch which opens for easy access.
b The scaffold boards do not overhang more than 50 mm to prevent traps.
c The access ladder is tied securely to the tower to comply with WAHR.
d The erection process follows manufacturer's guidelines to ensure stability.

38 What access equipment would be the **most** practical to cut in a 3.0 m long, 2.2 m high interior wall, at the ceiling?

a 6 Tread step ladder as it can be erected quickly for use.
b Mobile tower as it can be positioned and moved easily.
c Trestle scaffold with staging as it can span the whole wall.
d Podium scaffold as it has integrated handrails and toeboards.

39 What primer should be used on Teak skirting board?

a Solvent-borne, as it is hard wearing.
b Water-borne, as it has a low VOC.
c Aluminium, as it prevents bleeding.
d Pink, as it will help coverage of the dark wood.

40 What type of sheet material has a high risk of delamination?

a Plywood.
b Hardboard.
c OSB
d MDF.

See next page

41 What type of material will rust if the necessary prevention is not taken?

a Zinc.
b Iron.
c Lead.
d Copper.

42 How does the defect 'dry out' occur?

a Dry mortar mix causing cracks on brickwork.
b Joints not taped causing shrinkage on plasterboard.
c Rapid evaporation causing crazing on gypsum plaster.
d High alkalinity creating a friable surface on cement render.

43 What initial coating is suited for use on cement render, before the application of a solvent-borne paint system?

a Acrylic primer.
b Stabilising solution.
c Solvent-borne mist coat.
d Alkali resisting primer.

44 How should oil varnishes be removed from a carved wooden surface prior to re-varnishing?

a By using 110 V electric hot air gun to ensure it will not scorch the wood.
b By using caustic based paint remover to ensure it will dissolve the varnish.
c By using solvent based liquid paint remover to ensure it will not damage the wood.
d By using LPG torch as the high temperature will help to remove varnish from crevices.

45 What is the key safety consideration when removing wallpaper using the 'hand soaking' method?

a Protecting the floor.
b Disposing of the waste.
c Isolating the power.
d Ventilating the area.

46 What filling process is used to rectify hairline cracks in plaster?

a Flush.
b Proud.
c Back.
d Caulk.

47 What material should be used to temporarily protect wall lights?

a Fibreglass sheet.
b Polythene sheet.
c Dust sheet.
d Tarpaulin sheet.

48 What type of masking tape is suitable for use on delicate interior surfaces?

a Interior.
b 7-day.
c Low tack.
d UV resistant.

49 What is the **main** purpose of removing door furniture prior to redecoration?

a To reduce cutting in time.
b To speed up paint application.
c To remove the need for masking.
d To protect it from paint splatter.

50 Which chemical processes take place as solvent-borne paints dry?

a Evaporation and Oxidation.
b Evaporation and Coalescence.
c Coalescence and Oxidation.
d Polymerisation and Coalescence.

51 What is the purpose of an emulsifier in a water-borne paint?

a To dilute the paint.
b To produce the cohesive forces.
c To speed up the drying process.
d To prevent settling of the paint particles.

52 What **must** be considered when applying a coating with high VOC content in a confined area?

a Drying time.
b Coverage.
c Ventilation.
d Climate.

53 What floor protection material should be used to safely allow redecoration of a wooden polished staircase?

a Hardboard strips to provide a hardwearing surface.
b Cotton twill dustsheets to provide a moulded fit.
c Lightweight plastic to highlight spillages.
d Self-adhesive plastic to prevent movement.

54 How do traditional lime wash paints differ from water-borne masonry paints?

a They only use natural ingredients, making them more cost effective.
b They provide a breathable finish, making them suitable for damp walls.
c They provide a higher opacity, making them more suited to cover dark colours.
d They can only be applied by airless spray, making application easier and quicker.

55 An old oak front door in sound condition requires re-varnishing, but has been treated over the years using a wax polish.

How should the door be prepared for re-varnishing?

a Wash with a mild solution of detergent to prevent the varnish 'blooming'.
b Abrade using 80 grade aluminium oxide abrasive paper to increase mechanical adhesion.
c Bleach the surface using a mixture of 1:8 bleach to water to prevent the polish reacting with the solvent.
d Scour surface with steel wool and white spirit to enable the varnish to adhere to the surface.

56 A 2nd storey flat above a busy high street shop has a broken window pane which requires replacing.
Who **must** be contacted for permission before work can be carried out?

a HSE.
b Local Authority.
c Store owner.
d Highways Agency.

57 A smooth concrete floor in a cellar requires painting with a 2-pack epoxy product.
What preparation method **must** be used?

a Wash the floor with white spirit to remove contaminates.
b Prime floor with an alkali resisting primer to help adhesion.
c Wash floor with stabilising solution to adhere loose particles.
d Treat floor with an acid etch solution to provide a key.

58 A galvanised garage door is flaking in places and requires redecoration using a solvent-borne finishing system.

How should the door be prepared?

a Dry scrape and abrade to remove loose material and degrease door. Spot prime with zinc phosphate primer.
b Chemically strip door to remove loose material and apply etching primer.
c Burn off door for quick efficient removal of coating and prime with metal primer.
d Wet abrade door to ensure paint has good adhesion. Spot prime with a rust inhibitive primer.

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59 The decorating foreman has not arrived on the site, therefore the decorator must meet with the customer to discuss some extra work that they want done.

How can the decorator demonstrate a professional image whilst talking to the customer?

a Keeping a relaxed posture, take notes and maintain a clear tone of voice.
b Standing with arms folded, avoiding direct eye contact and maintain a calm tone of voice.
c Sitting with legs crossed and facing client using technical terminology to demonstrate their knowledge.
d Keep a strong posture and take some notes with minimal questions asked.

60 A ½ brick wall, 1 m high, is required to provide a garden boundary.
How should the wall be built?

a With a wide strip foundation and English garden bonded wall.
b With a narrow strip foundation and stretcher bonded wall.
c With a pad foundation and Flemish bonded wall.
d With a pile foundation and header bonded wall.

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?