Paper: **6314-3**** Paper title: **Core Items**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Number of bank items	%
01 Health and Safety regulations – roles and responsibilities	01.01 Identify key health and safety legislation for construction sites	1	1	1.6
	01.02 Describe the key employer responsibilities under the Health and Safety at Work Act (HASWA) 1974			
	01.03 Describe the key employee responsibilities under HASWA			
	01.04 Explain the role and responsibilities of the Health & Safety Executive			
	01.05 Identify sources of health and safety information			
	01.08 Explain the importance of controlling on site safety inductions and tool box talks			
	01.10 Describe the requirements involved in obtaining a skill card under the CSCS scheme			
02a Fire/Accident/First Aid/Emergency procedures and reporting	02.01 Identify major types of emergencies in the work place	1	2	3.3
	02.03 Describe the types of injuries, diseases and occurrences in the workplace relevant to Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 1985 (RIDDOR)			
	02.04 Identify the main types of accident and emergency records			
	02.05 Explain the importance of accident recording			
02.01b Fire/Accident/First Aid/Emergency procedures and reporting	02.06 Identify the difference between major and minor injuries	1		
	02.10 List of authorised persons including first aiders			
	02.15 Identify methods of fire prevention			
	02.16 Identify different types of fire extinguisher and their uses			

	02.17 State action to be taken on discovering a fire			
03a Identify hazards on Construction sites/Working with electricity	03.01 State the importance of good house keeping	1	2	3.3
	03.02 Identify the purpose of risk assessments			
	03.05 List major types of hazards in the workplace			
	03.06 State the importance of correct storage of combustibles and chemicals on sites			
03.01b Identify hazards on Construction sites/Working with electricity	03.07 Identify precautions to be taken to avoid risk to themselves and others	1		
	03.08 State the dangers associated with electricity			
	03.10 Identify the different voltages to be used			
	03.12 Explain how safe site voltages are achieved			
	03.13 State the importance of correctly storing electrical equipment			
04a Health and hygiene/Safe handling of materials and equipment/Using basic working platforms	04.03 Identify various substances hazardous to health under the control of substances hazardous to health (COSHH) and identify appropriate precautions	1	2	3.3
	04.06 List possible consequences of health risks in the workplace			
	04.07 Describe procedures for safe lifting			
	04.09 Identify the key legislation governing the safe handling of materials and equipment			
	04.10 Describe the importance of waste control procedures in the work place			
04.01b Health and hygiene/Safe handling of materials and equipment/Using basic working platforms	04.11 Identify safe methods of use and appropriate component part of working platforms	1		
	04.12 Identify good practice methods in the use of step ladders, ladders, extension ladders, trestles and proprietary tower scaffolding			

	04.13 Identify component part of ladders and extension ladders, trestles and proprietary tower scaffolding			
	04.14 Identify the dangers of working at height			
05a Use of appropriate Personal Protective Equipment/Signs and notices	05.01 Identify the types of PPE used in the workplace	1	2	3.3
	05.03 Describe the importance of using PPE			
	05.04 State the legislation governing PPE			
05.01b Use of appropriate Personal Protective Equipment/Signs and notices	05.05 Identify the purposes of PPE	1		
	05.06 Describe the possible consequences of not using PPE			
	05.07 List the appropriate safety signs for the work place			
06a Produce Drawn Information	06.01 Compare the advantage of computer aided design (CAD) programs to traditional drawing methods.	1	2	3.3
	06.02 Explain the details required for floor plans in construction drawings.			
	06.03 explain the details required for elevation in construction drawings			
	06.04 Explain the details required for linking specification schedules to drawings.			
06.01b Produce Drawn Information	06.05 Explain the reasons for isometric projection in construction drawings	1		
	06.06 Explain why hatchings and symbols are used in construction drawings			
	06.07 Explain why elevations and details are drawn to different scales.			
07a Estimate quantities and price work	07.01 Analyse resources required for a construction task	1	4	6.6
	07.02 outline the advantages and disadvantages of purchasing or hiring plant and equipment			
07.01b Estimate quantities and price work	07.03 outline the benefits of planning the sequence of materials and labour requirements	1		
	07.04 identify methods used for			

	calculating man hours			
07.01c Estimate quantities and price work	07.05 identify a range of added costs when estimating work	1		
	07.06 build up a price			
07.01d Estimate quantities and price work	07.07 explain factors that affect profitability.	1		
08a Ensure good working relationships	08.01 explain the methods on site used to maintain good working relationships.	1	2	3.3
	08.02 evaluate the need for maintaining the trust/confidence of colleagues.			
08.01b Ensure good working relationships	08.03 explain the need for accurate communication throughout the stages of the construction.	1		
09 New technology and methods used in construction	09.01 Identify a range of modern construction methods which are used in domestic and commercial dwellings	1	1	1.6
	09.02 Identify a range of different types of structures			
	09.03 Compare different structures used in domestic and commercial dwellings			
	09.04 Describe the need for good environmental designs			
10a Energy efficiency in new construction buildings	10.01 Explain the importance of accurate setting out of foundations in domestic and commercial dwellings	1	4	6.6
	10.02 Describe the different methods of construction used to insulate against heat loss and gain in domestic and commercial dwellings			
	10.03 Describe different types of floor construction			
10.01b Energy efficiency in new construction buildings	10.04 Describe different floor components and energy conservation techniques in walls and floors	1		
	10.05 Describe the different types of roofing components and energy conservation methods in roof structures.			
	10.06 Identify the types of material			

	used in external walling			
10.01c Energy efficiency in new construction buildings	10.07 Describe the reasons for using different materials in external walling	1		
	10.08 Compare insulation properties between cavity and timber framed constructions			
	10.09 Identify the types of energy saving materials used in the construction of internal walling			
	10.10 Describe the reasons for using energy saving materials used in the construction of internal walling			
10.01d Energy efficiency in new construction buildings	10.11 Assess the different methods used with damp-proof membrane (DPM) and damp-proof course (DPC)	1		
	10.12 Explain the purpose of classifying load and non-load bearing internal walling			
	Analyse the effects of poor energy and structure efficiency of domestic and commercial dwellings			
11a Sustainable methods and materials in construction work	11.01 investigate different methods and sustainable materials used in the construction of domestic and commercial buildings	1	5	8.3
	11.02 analyse different types of materials used in the construction of domestic and commercial dwellings			
11.01b Sustainable methods and materials in construction work	11.03 describe where different materials that come from sustainable resources are used in domestic and commercial dwellings	1		
	11.04 explain the importance of selecting appropriate materials that are sustainable			
11.01c Sustainable methods and materials in construction work	11.05 define the effects of water on building materials	1		
	11.06 assess the effects of frost on building materials			
11.01d Sustainable methods and materials in construction work	11.07 research the effects of chemicals on building materials	1		
	11.08 describe the long-term effects of heat and fire on building materials			
	11.09 describe the reasons for			

	treating building materials with chemicals to prevent the effects of deterioration			
11.01e Sustainable methods and materials in construction work	11.10 explain the methods used to rectify and prevent material deterioration	1		
	11.11 describe the effects of adverse weather on building materials used in domestic and commercial dwellings.			
	TOTAL	27	27	45

Paper: **6314-301** Paper title: **Painting and Decorating**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome / Section	Underpinning Knowledge	No of Qs in test	Total No of Qs	%
12.01a Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.01 state reasons for the selection of different types of application tool for each surface coating type 12.02 state reasons for and against the stages of surface coating preparation in relation to coatings and conditions 12.10 state the sequence of painting room areas and components and the reasons for it 12.11 explain the causes and remedies of visible defects 12.12 explain the causes and remedies of post-application defects	1	11	18.3
12.01b Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.03 describe the main surface coating types and their components	1		
12.01c Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.04 describe the functions of paint components 12.05 describe drying processes and stages	1		
12.01d Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.06 describe terminology associated with coatings	1		

12.01e Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.07 explain the difference between atmospheric influences and atmospheric conditions and their effect on the drying process of coatings	1		
12.01f Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.08 explain the implications of legislation on Volatile Organic Compounds (VOC) 12.09 state the range of specialist coatings and specify appropriate areas for each	1		
12.01g Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.08 explain the implications of legislation on Volatile Organic Compounds (VOC) 12.09 state the range of specialist coatings and specify appropriate areas for each	1		
12.01h Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.13 describe the reasons for measuring accurate film thickness 12.14 explain colour identification codes and their relationships to organisational systems	1		
12.01i Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.13 describe the reasons for measuring accurate film thickness 12.14 explain colour identification codes and their relationships to organisational systems	1		
12.01j Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.13 describe the reasons for measuring accurate film thickness 12.14 explain colour identification codes and their relationships to organisational systems	1		

12.01k Prepare materials for application and apply water-borne and solvent-borne coatings by brush and roller	12.15 explain the effects of artificial light on colour	1		
13.01a Describe methods used in wallpaper production and the trimming and jointing methods required	13.01 describe methods of production 13.02 describe printing methods 13.03 identify types of patterns 13.04 identify paper types and outline their characteristics 13.05 describe appropriate locations for a range of paper types 13.06 describe methods of trimming for paper types and the tools and equipment required 13.07 describe the importance of accurate trimming when removing a selvedge 13.08 describe methods of jointing for paper types and the tools and equipment required when hanging 13.09 identify international performance symbols	1	1	1.6

15.01a Apply papers to ceilings, walls and complex surfaces	15.01 explain the factors to be considered when planning the positioning of papers 15.02 state the selection criteria for each paper and pattern type in the range 15.03 explain occasions when lining is advisable 15.04 describe the methods of calculating the quantity of paper for the pattern types and areas planned 15.05 explain cutting considerations 15.06 explain the positions, occasions, considerations and methods of marking lines 15.07 describe the faults resulting from careless pasting and describe their prevention and repair 15.08 explain reasons for selection of folds for horizontal and vertical lengths 15.09 describe pasting methods for a range of papers and the reasons for each method 15.10 describe the selection criteria for methods of trimming 15.11 describe each of the hanging processes 15.12 describe working practices relating to health and safety issues 15.13 explain the causes of defects and how they can be prevented 15.14 state the implications of not maintaining the cleanliness and sharpness of paperhanging tools	1	1	1.6
16.01a Hang wide-width vinyls	16.01 explain the reasons for surface suitability 16.02 explain the implications and importance of each stage in the manufacturers' instructions 16.03 state the maintenance and cleaning of wide-width vinyls 16.04 explain the cause(s) of defects and how they can be prevented	1	1	1.6

17.01a Hang specialist papers	17.01 explain the reasons for surface suitability for specialist papers 17.02 compare the advantages and disadvantages for specifying the use of each paper in the range 17.03 state the factors to be considered when planning the positioning of papers 17.04 state the methods of calculating the quantity of paper for the areas planned 17.05 explain cutting considerations 17.06 list faults resulting from careless pasting and describe their prevention and repair 17.07 explain the implications and importance of each stage in the manufacturers' instructions for specialist papers 17.10 explain why trimming techniques for lincrusta differ from techniques used for other specialist papers	1	2	3.3
17.01b Hang specialist papers	17.08 explain the cause(s) of defects that occur with specialist papers and how they can be prevented 17.09 explain the selection of methods of trimming for specialist papers	1		

21.01a Produce replica graining	21.01 explain the importance of ensuring the appropriate ground coat colour is used 21.02 select the appropriate colorant to produce the scumble for the given replica graining 21.03 state the difference between ‘scumble’ and ‘varnish stain’ 21.04 state ingredients used in oil-based scumbles for replica graining 21.05 state the method by which oil-based glazes dry 21.06 state the ingredients of a water graining medium and the commonly used binders 21.07 state materials which will prevent cissing when applying water colour 21.08 state the brushes, tools and equipment required to produce each replica graining effect 21.09 describe the materials from which brushes and tools are made 21.10 outline the purpose of, and effect produced, by brushes and tools 21.11 describe a quick method of producing hear wood effect 21.12 describe the cleaning, maintenance and storage of brushes and tools 21.13 describe how specific cuts in wood dictate the grain pattern 21.14 explain each of the processes in relation to the individual replica graining effects 21.15 describe the sequence of graining structural components 21.16 explain the importance of cleanliness and sharpness when graining	1	1	1.6

22.01a Produce replica marbling	22.01 state the varieties of marbles and describe each variety's main characteristic(s) 22.02 state how veins in marble are naturally formed 22.03 select an appropriate British Standard 4800 colour for the ground coat for replica marbles 22.04 select the appropriate pigment colours for the given replica marbles	1	2	3.3
22.01b Produce replica marbling	22.05 state the brushes, tools and equipment required to produce each replica marble 22.06 describe the materials from which brushes, tools and equipment are made 22.07 describe the cleaning, maintenance and storage of brushes, tools and equipment 22.08 outline the purpose of, and effect produced by, brushes, tools and equipment 22.09 explain each of the processes in relation to each replica marble 22.10 describe the terminology related to marbling	1		
23.01a Apply metal leaf	23.01 explain the suitability of surface conditions to receive gilding 23.02 explain the importance of establishing the correct drying stage 23.03 explain each of the processes 23.04 state the types of damage that may be caused by the processes and how they may be prevented 23.05 describe the importance of correct cleaning and storage of specialist tools	1	1	1.6

25.01a Produce textured finishes using brush, roller and comb	25.01 explain the surface suitability of finishes for the application of texture paint 25.02 explain the selection and suitability of texture designs and surfaces 25.03 identify suitable masking materials 25.04 state advantages and disadvantages of using a ready-mixed texture material 25.05 describe the method of mixing powdered texture materials and the health and safety precautions to be observed at each stage of mixing 25.06 explain the importance consistency of material has in relation to texture designs 25.07 describe finishing processes and explain their purpose and the timing for applying them 25.08 describe the effects of drying conditions when applying texture paint and the wet texture finish 25.09 describe the sequence of work to apply a swirl pattern to a wall 25.10 describe the sequence of work to apply a circle and fan pattern to a ceiling 25.11 state how tools and equipment used for texture paint should be cleaned	1	1	1.6
28.01a Prepare work areas by protecting adjacent surfaces, furniture and fittings	28.01 state factors to consider when preparing the work area in both domestic and commercial environments 28.02 identify types and uses of masking tape 28.03 describe the procedure and sequence for applying and removing masking tapes 28.04 identify types of protective sheeting and their uses 28.05 describe the maintenance and storage requirements for protective sheeting types	1	1	1.6

29.01a Select components and produce a working airless spray unit	29.01 explain why an airless system would be selected preference to, a high volume low pressure (HVLP) system 29.02 state the advantages and disadvantages of using airless equipment 29.03 identify and state the function of each component part	1	3	5
29.01b Select components and produce a working airless spray unit	29.04 describe the assembly sequence of component parts to produce a working unit	1		
29.01c Select components and produce a working airless spray unit	29.05 describe the adjustment procedures to ensure correct spray application 29.06 describe the function of ancillary components 29.07 identify Health and Safety issues when working with airless systems	1		
30.01a Prepare and apply water-borne coatings by airless spray	30.01 explain the importance of material viscosity and how to adjust and check it 30.02 explain the importance of maintaining viscosity of ‘batches’ 30.03 explain problems which may arise from using unstrained paint 30.04 explain the importance of using correct application techniques 30.05 define the terms WFT and DFT and explain how they affect surface protection 30.06 explain the effects of atmospheric conditions on the viscosity and drying process of surface coatings 30.07 identify the appropriate PPE and RPE for applying paint by airless spray	1	1	1.6

31.01a Rectify faults in spray equipment and defects in applied coatings	31.01 identify equipment faults and explain correction and prevention procedures 31.04 describe spray terminology	1	2	3.3
31.01b Rectify faults in spray equipment and defects in applied coatings	31.02 identity material faults and explain correction and prevention procedures 31.03 explain the causes and remedies of defects in applied coatings	1		
32.01a Clean, maintain and store airless spray equipment and materials	32.01 state the safety factors to be observed when operating ‘shutdown procedures’ 32.02 list the correct sequence for cleaning and flushing the airless system being used 32.03 state the requirements for the maintenance and storage of spray equipment 32.04 state legislation sources related to waste disposal	1	1	1.6

33.01a Prepare timbers and timber sheet products ready to receive finishing systems	33.01 identify timbers and timber sheet products 33.02 describe the applications of timbers and timber sheet products 33.03 explain the implications of poor joinery design on the integrity and durability of coating systems 33.04 identify defects in untreated timbers and timber sheet products 33.05 describe the surface properties of timbers and timber sheet products 33.06 describe the physical properties of timbers and timber sheet products 33.07 describe terminology relating to the properties of timber 33.08 explain the implications of excessive moisture content in timbers and compare seasoning methods 33.09 describe the correct process for rectifying defects in untreated timber and timber sheet products 33.10 describe the correct preparation process for untreated timber and timber sheet products 33.11 state the appropriate abrasive and grade for the preparation of untreated timbers and timber sheet products 33.12 state the appropriate primers for timbers and timber sheet products for the finishing systems to be applied 33.13 describe the advantages and disadvantages of each primer	1	1	1.6

34.01a Prepare metal surfaces ready to receive finishing systems	34.01 describe the surface properties of metal types 34.02 describe the physical properties of metal types 34.03 describe the applications of metal types 34.04 describe the atmospheric corrosion process 34.05 describe the electro-chemical corrosion process 34.06 list and explain corrosion factors 34.07 describe the effects of corrosion 34.08 describe terminology relating to the corrosion of metal types 34.10 outline the classification of standards for prepared ferrous metals 34.11 state the primers used on metal types 34.12 state the function that primers perform on metal types 34.13 explain the importance of priming immediately following surface preparation	1	2	3.3
34.01b Prepare metal surfaces ready to receive finishing systems	34.09 describe the preparation processes for untreated ferrous and non-ferrous metals	1		

35.01a Prepare trowelled finishes and plasterboard ready to receive finishing systems	35.01 identify defects associated with surface types 35.02 describe the physical properties of surface types 35.03 describe the chemical properties of surface types 35.04 explain alkalinity tests 35.05 describe the applications of the range of surface types 35.06 describe the applications of the range of surface types 35.07 describe the effects of moisture on surface types 35.08 describe the processes for rectifying surface defects in surface types 35.09 describe the preparation of plasterboard, according to the finish required 35.10 state the primers used on surface types, prior to applying solvent-borne and water-borne paints and paper 35.11 work to current environmental and relevant Health and Safety legislation and regulations	1	1	1.6
	TOTAL	33	33	55

Paper: **6314-302** Paper title: **Site Carpentry**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Erect trussed rafter roofs	12.01 identify different types of truss rafter roofs	1	5	8.3
12.01b Erect trussed rafter roofs	12.02 define the components of a truss rafter roof	1		
12.01c Erect trussed rafter roofs	12.04 explain the procedure for forming openings in truss rafter roofs	1		
12.01d Erect trussed rafter roofs	12.03 analyse working drawings and schedules in order to complete work according programme	1		
	12.05 explain the need to provide lateral restraint			
12.01e Erect trussed rafter roofs	12.06 analyse the implications of constructing truss rafter roofs at ground level	1		
13.01a Construct verge and eaves finishes	13.01 describe the method of finishing verges	1	3	5
13.01b Construct verge and eaves finishes	13.01 describe the method of finishing verges	1		
13.01c Construct verge and eaves finishes	13.02 analyse the need to ventilate and insulate roof spaces	1		
14.01a Form dormer windows	14.01 Identify types of dormer roofs	1	5	8.3
14.01b Form dormer windows	14.01 Identify types of dormer roofs	1		
14.01c Form dormer windows	14.01 Identify types of dormer roofs	1		

14.01d Form dormer windows	14.02 describe the methods of constructing dormer roofs	1		
14.01e Form dormer windows	14.01 Identify types of dormer roofs	1		
15.01a Construct a traditional cut roof with hips and valleys	15.01 identify different types of roof construction	1	5	8.3
15.01b Construct a traditional cut roof with hips and valleys	15.01 identify different types of roof construction	1		
15.01c Construct a traditional cut roof with hips and valleys	15.02 analyse the methods of determining lengths of cuts and angles of cuts	1		
15.01d Construct a traditional cut roof with hips and valleys	15.02 analyse the methods of determining lengths of cuts and angles of cuts	1		
15.01e Construct a traditional cut roof with hips and valleys	15.03 identify the components used to construct a traditional roof	1		
16.01a Maintain joist coverings	16.01 identify damaged floor coverings	1	2	3.3
	16.02 identify damaged roof coverings			
	16.03 describe the method of removing floor coverings			
16.01b Maintain joist coverings	16.04 describe the method of removing roof coverings	1		
	16.05 identify types of floor coverings			
	16.06 identify types of flat roof coverings			
	16.07 identify types of fixings			
17.01a Maintain doors, windows and ironmongery	17.01 analyse types of fungal attacks on timber	1	2	3.3
	17.02 analyse types of insect infestations on timber			
	17.03 describe how to dispose of affected timber			
17.01b Maintain doors, windows and ironmongery	17.04 identify different species of timber	1		
	17.05 describe methods of replacement of ironmongery			
	17.06 describe methods of applying			

	preservatives to timber			
18.01a Maintain structural timbers	18.01 identify structural timbers	1	3	5
18.01b Maintain structural timbers	18.02 identify defects in structural timbers	1		
18.01c Maintain structural timbers	18.03 analyse the effects of fungal attacks on timber	1		
	18.04 analyse the effects of insect infestations on timber			
	18.07 explain how to splice new timber into structural timbers			
	18.08 explain which preservatives are appropriate to treat different structural timbers			
19.01 Replace broken glass	19.01 describe how to remove broken glass safely	1	1	1.6
	19.02 describe how to dispose of broken glass safely			
	19.03 identify types of glass			
	19.04 identify methods of securing glass into frames			
20.01 Maintain surface finishes	20.01 describe the method of preparing old surfaces for remedial work	1	1	1.6
	20.02 describe the method of laying tiles			
	20.03 describe the method of removing old tiles			
21.01a Inspect and maintain power fixed and transportable machinery and equipment	21.01 analyse manufacturers' literature for servicing and maintenance standards relating to machinery	1	3	5
21.01b Inspect and maintain power fixed and transportable machinery and equipment	21.02 interpret regulations applicable to the use of machinery	1		

21.01c Inspect and maintain power fixed and transportable machinery and equipment	21.03 describe good practice	1		
22.01a Use machinery efficiently and safely	22.01 identify safe tooling	1	3	5
	22.02 explain the correct methods of changing tooling			
22.01b Use machinery efficiently and safely	22.03 identify potential hazards inherent to equipment being used	1		
22.01c Use machinery efficiently and safely	22.05 explain the importance of reading and evaluating manufacturers' operating instructions	1		
	TOTAL	33	33	55

Paper: **6314-303** Paper title: **Plastering (Solid)**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome coverage	Knowledge group	No of items	Total No of Qs	%
12.01a Interpret information from drawings and specifications for complex plasterwork	12.01 State the purpose of information systems 12.02 interpret working drawings 12.03 state methods of reporting inaccuracies	1	1	1.6
13.01a Select and prepare materials	13.01 describe the effect of using out-of-date plasters 13.02 indicate the correct method of storing plasters	1	4	6.6
13.01b Select and prepare materials	13.03 state the reasons of storing plasters in date order 13.04 state the purpose of ensuring compatibility of backgrounds, backing plasters and finish plaster to be applied	1		
13.01c Select and prepare materials	13.05 describe the limitations and use of materials 13.06 describe the advantages, purpose and use of expanded metal lathing (EML)	1		
13.01d Select and prepare materials	13.07 state purpose and use of beads and trims 13.08 describe pattern staining	1		
14.01a Apply one, two, and three coat plaster to form complex surfaces	14.01 state how backgrounds are prepared 14.02 describe how to apply and finish one, two and three	1	4	6.6

14.01b Apply one, two, and three coat plaster to form complex surfaces	14.03 coat plasterwork to complex surfaces 14.04 state methods of forming internal and external angles	1		
14.01c Apply one, two, and three coat plaster to form complex surfaces	14.06 state reasons for selection of equipment	1		
14.01d Apply one, two, and three coat plaster to form complex surfaces	14.05 list the correct sequence of mixing plaster materials 14.07 identify setting, curing, drying and hardening times of plasters 14.08 describe pattern staining	1		
15.01a Select materials and equipment	15.01 state how sand is assessed for suitability for external rendering 15.02 describe correct mix proportions for external renderings to ensure compatibility	1	5	8.3
15.01b Select materials and equipment	15.03 describe how to check the quality of materials with site tests as necessary 15.04 describe the use of power and hand tools	1		
15.01c Select materials and equipment	15.05 describe methods used to calculate material quantities 15.06 describe the uses and characteristics of common types of lime	1		
15.01d Select materials and equipment	15.07 outline the use of bonding agents 15.08 state the purpose of additives	1		
15.01e Select materials and equipment	15.09 explain methods used in conversation	1		

16.01a Apply one, two and three coat rendering, texture and imitation finishes to external backgrounds	16.01 state the types and characteristics of materials used for rendering 16.02 state the reasons for site testing of sands	1	5	8.3
16.01b Apply one, two and three coat rendering, texture and imitation finishes to external backgrounds	16.03 describe methods used for site testing of sands 16.04 list types of standard and special beads used 16.05 describe types of decorative and textured finishes	1		
16.01c Apply one, two and three coat rendering, texture and imitation finishes to external backgrounds	16.06 explain background preparation procedures 16.07 state the effects of incomplete background preparation 16.08 state the importance of compatibility between backgrounds and the render system	1		
16.01d Apply one, two and three coat rendering, texture and imitation finishes to external backgrounds	16.09 describe how to produce plain, decorative and textured finishes 16.10 state the reason for the use of fibred and haired mixes	1		
16.01e Apply one, two and three coat rendering, texture and imitation finishes to external backgrounds	16.11 describe the effects of incorrect gauging and mixing 16.12 state the reasons for forming bellcasts 16.13 state the methods for forming bellcasts 16.14 describe how to form external angles in render material and by the use of beads	1		

17.01a Interpret information from specifications for granolithic work	17.01 describe the purpose of location drawings	1	1	1.6
18.01a Select materials, components and equipment	18.01 describe components and equipment used in granolithic work 18.02 list the types of aggregates and cements used in granolithic work 18.03 state the purpose of screed rails 18.04 identify types of damp proof membranes	1	2	3.3
18.01b Select materials, components and equipment	18.05 identify types of drainage outlets 18.06 state the purpose of damp-proof membranes 18.07 describe situations where expansion beads and trims are used	1		
19.01a Form granolithic finishes	19.01 describe how to prepare sub-floor 19.02 state methods used for setting out	1	6	10
19.01b Form granolithic finishes	19.04 state the differences between monolithic, bonded, unbonded and floating	1		
19.01c Form granolithic finishes	19.03 describe how to work from screeds/battens 19.05 state the methods of laying to levels and falls 19.06 state the finishes and materials used for non-slip surfaces	1		
19.01d Form granolithic finishes	19.07 state the reasons for curing finished work 19.08 describe methods used to construct formwork for stairways	1		

19.01e Form granolithic finishes	19.09 describe methods of mixing materials 19.10 state reasons for consistency of mixed material 19.11 state the effects of incorrect materials/mixing 19.12 describe methods of running coved skirtings 19.13 describe methods of transferring levels	1		
19.01f Form granolithic finishes	19.14 describe the use of hand and power tools	1		
20.01a Interpret information from drawings and specifications for moulded work	20.01 explain the purpose of information systems 20.02 explain how working **drawings** aid the process of moulding 20.03 describe methods of reporting inaccuracies 20.04 explain the requirements of conservation work	1	1	1.6
21.01a Select and prepare materials	21.01 state the effect of using out-of-date plasters 21.02 describe the correct storage of plasters 21.03 state the reason for ensuring compatibility of backgrounds, backing and finish plaster to be applied 21.04 describe the limitations and use of materials	1	1	1.6
22.01a Prepare, apply and finish plaster materials to form mouldings	22.01 describe the preparation of backgrounds	1	3	5

22.01b Prepare, apply and finish plaster materials to form mouldings	22.02 explain the purpose of bracketing 22.03 describe how to apply and finish in-situ moulded work 22.04 describe how to form internal and external angles 22.05 describe how to form curved mouldings and raking sections 22.06 state the correct sequence of mixing plaster materials 22.07 describe correct hand tools	1		
22.01c Prepare, apply and finish plaster materials to form mouldings	22.08 describe the equipment used in conjunction with running moulds	1		
	TOTAL	33	33	55

Paper: **6314-304** Paper title: **Bricklaying**

Duration: **90 minutes** Assessment type: **Multiple choice** No. of items: **60**

Outcome / Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Plan and select resources for practical tasks	12.01 Check the drawing and specification for compliance with standards 12.02 describe contract documents 12.03 describe methods of interpreting measurements from drawings 12.04 describe methods of reporting inaccuracies in information sources 12.05 identify the characteristics, quality, uses, limitations, and defects associated with the resources required for structural and decorative walling	1	3	5
12.01b Plan and select resources for practical tasks	12.06 state how defects in resources should be reported 12.07 identify resources required to carry out structural and decorative brickwork 12.08 identify type, size, position of components associated with walling materials, components, tools and equipment	1		
12.01c Plan and select resources for practical tasks	12.09 state the hazards associated with resources and work methods and how they are overcome 12.10 identify ways of carrying out checks on resources, required for structural walling 12.11 describe calculations and formulae required for identifying quantities of materials, components	1		

13.01a Set out and build fireplaces and flues.	13.01 identify methods of cutting and preparing components by hand 13.02 describe methods of provision for services within fireplace construction 13.03 describe methods for the provision of damp roof barriers 13.04 describe methods used to maintain industrial standards when erecting brickwork and blockwork walling 13.05 state methods of forming builders openings in masonry walling	1	4	6.6
13.01b Set out and build fireplaces and flues.	13.01 identify methods of cutting and preparing components by hand 13.02 describe methods of provision for services within fireplace construction 13.03 describe methods for the provision of damp roof barriers 13.04 describe methods used to maintain industrial standards when erecting brickwork and blockwork walling 13.05 state methods of forming builders openings in masonry walling	1		
13.01c Set out and build fireplaces and flues.	13.06 describe methods and purpose of bridging builders openings and forming flues	1		
13.01d Set out and build fireplaces and flues.	13.07 describe construction techniques used to construct fireplaces and flues 13.08 describe the techniques used to construct flues using slue blocks	1		
14.01a Set out and build decorative chimney stacks	14.01 identify the programme of work and how the work is to be carried out within the allocated time 14.03 describe bonds related to chimney stacks	1	3	5

14.01b Set out and build decorative chimney stacks	14.02 identify methods of cutting and preparing components by hand 14.04 state methods used to provide over-sailing and capping to decorative chimney stacks	1		
14.01c Set out and build decorative chimney stacks	14.05 state the types, uses and limitations of jointing 14.06 state method used of applying chemical cleaning agents to remove mortar smudges 14.07 state reasons for carrying out regular checks to confirm that work being undertaken, conforms to working drawing specification	1		
15.01a Select required quantity and quality or resources for the method of work to be carried out	15.01 identify resources required to carry out repairs and maintenance work to brick and block walling and vernacular style structures 15.02 identify and take off type, size, position and potential health hazards associated with walling materials, components, tools and equipment to carry out repairs and maintenance work	1	2	3.3
15.01b Select required quantity and quality or resources for the method of work to be carried out	15.03 identify ways of carrying out checks on resources, required for repairing and maintaining brick and blockwork walling 15.04 describe calculations and formulae required for identifying quantities of materials, components and fixings 15.05 identify tools and equipment required for repairing and maintaining brick and blockwork walling	1		

16.01a Carry out repairs and maintain existing brickwork or vernacular style structures to contractors working instructions	16.01 describe methods for the provision of the replacement and repair of damp proof barriers 16.02 identify need to maintain standard of existing work 16.03 state methods used to temporarily support existing walls and floors allowing repair and maintenance work to be carried out	1	3	5
16.01b Carry out repairs and maintain existing brickwork or vernacular style structures to contractors working instructions	16.04 state methods of forming openings in existing masonry walling 16.05 describe methods used and reasons for replacing lintels to existing walling	1		
16.01c Carry out repairs and maintain existing brickwork or vernacular style structures to contractors working instructions	16.06 identity methods of repair to decorative features in existing brick walling 16.07 state reasons for providing walling extension provision 16.08 state the types, uses and limitations of jointing and pointing, methods used to match existing	1		
17.01a Set out and build arches	17.01 demonstrate a knowledge of arch terminology	1	4	6.6
17.01b Set out and build arches	17.02 identify the process required to set out arches and provide templates to aid construction 17.03 identify methods used to provide temporary support for arches	1		

17.01c Set out and build arches	17.04 identify construction methods used to build arches 17.06 state the correct procedure used to safely remove support from the arches after construction	1		
17.01d Set out and build arches	17.05 state the correct construction procedure for semi-circular segmental arches	1		
18.01a Set out and build brickwork curved on plan	18.01 identify the process required to set out brickwork curved on plan	1	2	3.3
18.01b Set out and build brickwork curved on plan	18.02 identify construction methods used to build brickwork curved on plan 18.03 state the correct construction procedure for brickwork curved on plan	1		
19.01a Set out and build ramped brickwork	19.01 identify the process required to set out ramped brickwork 19.02 identify construction methods used to build curved and straight ramped brickwork	1	2	3.3
19.01b Set out and build ramped brickwork	19.03 state the correct construction procedure for ramped brickwork	1		
20.01a Set out and build reinforced brickwork	20.01 identify the process required to set out reinforced brickwork	1	3	5
20.01b Set out and build reinforced brickwork	20.02 identify construction methods used to build reinforced brickwork	1		
20.01c Set out and build reinforced brickwork	20.03 state the correct construction procedure for reinforced brickwork	1		

21.01a Set out and build obtuse and acute angle quoins	21.01 identify the process required to set out and build obtuse and acute quoins	1	2	3.3
21.01b Set out and build obtuse and acute angle quoins	21.02 identify construction methods used to build obtuse and acute quoins 21.03 state the correct construction procedure to build obtuse and acute quoins	1		
22.01a Set out and build brickwork incorporating features	22.01 identify the process required to set out incorporating features	1	5	8.3
22.01b Set out and build brickwork incorporating features	22.02 identify construction methods used to build brickwork incorporating features	1		
22.01c Set out and build brickwork incorporating features	22.02 identify construction methods used to build brickwork incorporating features	1		
22.01d Set out and build brickwork incorporating features	22.02 identify construction methods used to build brickwork incorporating features	1		
22.01e Set out and build brickwork incorporating features	22.03 state the correct construction procedure for brickwork incorporating features.	1		
	TOTAL	33	33	55

Paper: **6314-305** Paper title: **Bench Joinery**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Inspect and maintain power fixed and transportable machinery and equipment	12.01 analyse manufacturers' literature for servicing and maintenance standards relating to machinery	1	3	5
12.01b Inspect and maintain power fixed and transportable machinery and equipment	12.02 interpret regulations applicable to the use of machinery	1		
12.01c Inspect and maintain power fixed and transportable machinery and equipment	12.03 describe good practice	1		
13.01a Use machinery efficiently and safely	13.01 identify safe tooling	1	6	10
13.01b Use machinery efficiently and safely	13.02 explain the correct methods of changing tooling	1		
13.01c Use machinery efficiently and safely	13.03 identify potential hazards inherent to equipment being used	1		
13.01d Use machinery efficiently and safely	13.04 explain the importance of teamwork required for this type of machinery	1		
13.01e Use machinery efficiently and safely	13.05 explain the importance of reading and evaluating manufacturers' operating instructions	1		

13.01f Use machinery efficiently and safely	13.06 explain the importance of reading and evaluating manufacturers' operating instructions	1		
14.01a Select correct materials	14.01 analyse and evaluate characteristics of timber and materials	1	4	6.6
14.01b Select correct materials	14.02 evaluate tools available for suitability and condition	1		
14.01c Select correct materials	14.03 analyse and evaluate characteristics of timber and materials	1		
14.01d Select correct materials	14.04 evaluate tools available for suitability and condition	1		
15.01a Manufacture complex shaped bench joinery	15.01 explain programmes of work	1	3	5
15.01b Manufacture complex shaped bench joinery	15.02 explain the need for efficient methods of work	1		
15.01c Manufacture complex shaped bench joinery	15.03 explain the need to maintain tools as work progresses	1		
16.01a Interpret information for setting out	16.01 evaluate information used for setting out	1	3	5
16.01b Interpret information for setting out	16.02 calculate dimensions using scales	1		
16.01c Interpret information for setting out	16.03 investigate discrepancies and report them to a supervisor before commencing work	1		
17.01a Select resources for setting out	17.01 evaluate properties of materials	1	6	10
17.01b Select resources for setting out	17.02 describe various defects found in materials, both natural and those caused by conversion and/or seasoning	1		

17.01c Select resources for setting out	17.03 state standard available sizes of materials	1		
17.01d Select resources for setting out	17.04 explain why proper maintenance of marking out tools is essential	1		
17.01e Select resources for setting out	17.05 state standard available sizes of materials	1		
17.01f Select resources for setting out	17.06 explain why proper maintenance of marking out tools is essential	1		
18.01a Set out for complex shaped bench joinery	18.01 evaluate the correct marking out tools for the setting out job in hand	1	8	13.3
18.01b Set out for complex shaped bench joinery	18.02 describe geometric and practical methods of producing curves and complex stair or handrail details	1		
18.01c Set out for complex shaped bench joinery	18.03 explain procedures for organising work in correct sequence with regards to organisational and good practice requirements	1		
18.01d Set out for complex shaped bench joinery	18.04 explain uses of different joints and their proportions	1		
18.01e Set out for complex shaped bench joinery	18.05 identify safe organisational working practices	1		
18.01f Set out for complex shaped bench joinery	18.06 explain procedures for organising work in correct sequence with regards to organisational and good practice requirements	1		
18.01g Set out for complex shaped bench joinery	18.07 explain uses of different joints and their proportions	1		
18.01h Set out for complex shaped bench joinery	18.08 identify safe organisational working practices	1		
	TOTAL	33	33	55

Paper: **6314-306** Paper title: **Shopfitting Bench Joinery**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Inspect and maintain power fixed and transportable machinery and equipment	12.01. analyse manufacturers' literature for servicing and maintenance standards relating to machinery	1	3	5
12.01b Inspect and maintain power fixed and transportable machinery and equipment	12.02. interpret regulations applicable to the use of machinery	1		
12.01c Inspect and maintain power fixed and transportable machinery and equipment	12.03. describe good practice	1		
13.01a Use machinery efficiently and safely	13.01. identify safe tooling	1	6	10
13.01b Use machinery efficiently and safely	13.02. explain the correct methods of changing tooling	1		
13.01c Use machinery efficiently and safely	13.03. identify potential hazards inherent to equipment being used	1		
13.01d Use machinery efficiently and safely	13.04. explain the importance of teamwork required for this type of machinery	1		
13.01e Use machinery efficiently and safely	13.05. explain the importance of reading and evaluating manufacturers' operating instructions	1		
13.01f Use machinery efficiently and safely	13.06. explain the importance of reading and evaluating manufacturers' operating instructions	1		

14.01a Select correct materials	14.01. analyse and evaluate characteristics of timber and materials	1	4	6.6
14.01b Select correct materials	14.02. evaluate tools available for suitability and condition	1		
14.01c Select correct materials	14.03. analyse and evaluate characteristics of timber and materials	1		
14.01d Select correct materials	14.04. evaluate tools available for suitability and condition	1		
15.01a Manufacture complex shaped bench joinery	15.01. explain programmes of work	1	3	5
15.01b Manufacture complex shaped bench joinery	15.02. explain the need for efficient methods of work	1		
15.01c Manufacture complex shaped bench joinery	15.03. explain the need to maintain tools as work progresses	1		
16.01a Interpret information for setting out	16.01. evaluate information used for setting out	1	3	5
16.01b Interpret information for setting out	16.02. calculate dimensions using scales	1		
16.01c Interpret information for setting out	16.03. investigate discrepancies and report them to a supervisor before commencing work	1		
17.01a Select resources for setting out	17.01. evaluate properties of materials	1	6	10
17.01b Select resources for setting out	17.02. describe various defects found in materials, both natural and those caused by conversion and/or seasoning	1		
17.01c Select resources for setting out	17.03. state standard available sizes of materials	1		
17.01d Select resources for setting out	17.04. explain why proper maintenance of marking out tools is essential	1		
17.01e Select resources for setting out	17.05. state standard available sizes of materials	1		

17.01f Select resources for setting out	17.06. explain why proper maintenance of marking out tools is essential	1		
18.01a Set out for complex shaped bench joinery	18.01. evaluate the correct marking out tools for the setting out job in hand	1	8	13.3
18.01b Set out for complex shaped bench joinery	18.02. describe geometric and practical methods of producing curves and complex stair or handrail details	1		
18.01c Set out for complex shaped bench joinery	18.03. explain procedures for organising work in correct sequence with regards to organisational and good practice requirements	1		
18.01d Set out for complex shaped bench joinery	18.04. explain uses of different joints and their proportions	1		
18.01e Set out for complex shaped bench joinery	18.05. identify safe organisational working practices	1		
18.01f Set out for complex shaped bench joinery	18.06. explain procedures for organising work in correct sequence with regards to organisational and good practice requirements	1		
18.01g Set out for complex shaped bench joinery	18.07. explain uses of different joints and their proportions	1		
18.01h Set out for complex shaped bench joinery	18.08. identify safe organisational working practices	1		
	TOTAL	33	33	55

Paper: **6314-307** Paper title: **Roof Slating and Tiling**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Form eaves to mitred valleys and mitred hips	12.01 explain the batten formation to mitred formations 12.02 describe the side-lap and cut formation to mitred eaves 12.03 describe the formula and rake formation used to form the eaves fish-tail soaker 12.04 explain the fish-tail length change to the first and subsequent courses 12.05 explain the grading and sorting processes for this area of the roof	1	1	1.6
13.01a Form and fix fish-tail soakers to mitred valley and mitred hip details	13.01 state the formula used to establish fish-tail soaker length 13.02 draw a detail showing the rake cuts required to fish-tail soakers 13.03 explain the bossing and dressing requirements to form fish-tail soakers	1	1	1.6

14.01a Set out and install natural slates to mitred valleys	14.01 explain why templates are used to form natural slate mitred valleys 14.02 describe why side lap and a ‘backing-on’ cut is used to mitred valley formations 14.03 explain the cut method used to form the mitre 14.04 describe the side-lap requirements to mitred valleys 14.05 explain the process of soaker installation to mitred valleys 14.06 explain the grading and sorting process for this area of the roof	1	1	1.6
15.01a Set out and install natural slates to mitred hips	15.01 explain why templates are used to form natural slate mitred hips 15.02 describe why side lap and a ‘backing-on’ cut is used to mitred hip formations 15.03 explain the cut method used to form the mitre to hips 15.04 describe the side-lap requirements to mitred hips 15.05 explain the process of soaker installation to mitred hips 15.06 explain the grading and sorting process for this area of the roof	1	1	1.6
16.01a Form and finish mitred valleys and hips to roof junctions other than eaves	16.01 explain the side-lap requirements to junctions 16.02 describe the installation finish used to mitred formations at verges 16.03 describe the installation finish used to mitred formations at openings	1	1	1.6

	16.04 explain the grading and sorting process for this area of the roof			
17.01a Set out and fix natural slates to vertical surfaces	17.01 describe the characteristics for eaves fixing position to vertical natural slates 17.02 describe gauging situations to vertical cheeks from top edge to raking junction 17.03 explain formations used to form vertical verge junctions 17.04 explain the grading and sorting process for this area of the roof	1	1	1.6
18.01a Position and fix single-lap fixed gauge tiles to eaves	18.01 explain how to measure single-lap tiles to position eaves batten with fixed gauge principles 18.02 describe the relationship between the main roof gauge and the eaves course fixed position 18.03 describe the situation when additional roof materials may be required to form an alternative eaves formation	1	2	3.3
18.01b Position and fix single-lap fixed gauge tiles to eaves	18.04 describe the terms filled end and dentil slip in relation to the eaves formation 18.05 explain the minimum over-hang required for fixed gauge tiles at the eaves 18.06 describe the relationship between the roof pitch and overhang.	1		
19.01a Install full and cut single-lap fixed gauge tiles to abutments and openings	19.01 explain the requirements for cuts at abutments for single-lap fixed gauge tiles	1	2	3.3
19.01b Install full and cut single-lap fixed gauge tiles to abutments and openings	19.02 describe what wind resistant fixings are used at abutments for fixed gauge tiles	1		

	19.03 explain the reason for checking the product line to abutments and openings			
20.01a Install single-lap fixed gauge tiles to verges	20.01 explain the correct mortar mix used for fixed gauge tiles at verges	1	3	5
20.01b Install single-lap fixed gauge tiles to verges	20.02 describe what additives can be used with mortar 20.03 explain the wetting process required for clay fixed gauge tiles prior to bedding 20.04 name the different types of ‘dry’ verge systems available for single-lap fixed gauge tiles	1		
20.01c Install single-lap fixed gauge tiles to verges	20.05 explain the setting out procedure for wet fixed verge systems to include dentil slips 20.06 explain the setting out procedure for dry fixed verge systems	1		
21.01a Cut and secure single-lap fixed gauge tiles to valley openings	21.01 explain the marking position for the cut fixed gauge tiles 21.02 describe the types of fixings used to secure cuts in valleys	1	3	5
21.01b Cut and secure single-lap fixed gauge tiles to valley openings	21.03 explain how to bed and point the valley ‘face’ and use of slips and breakage	1		
21.01c Cut and secure single-lap fixed gauge tiles to valley openings	21.04 describe the installation of fixed gauge tiles to dry valley systems	1		

22.01a Cut and secure single-lap fixed gauge tiles to hip finishes	22.01 explain the marking position for the cut to fix gauge tiles 22.02 describe the methods used to form hip ridges at eaves and 3-way mitres 22.03 describe the types of fixings used to secure cuts to a hip	1	2	3.3
22.01b Cut and secure single-lap fixed gauge tiles to hip finishes	22.04 explain how to bed and point hip ridges to single-lap fixed gauge tiles 22.05 describe the installation of fixed gauge tiles to dry hip systems	1		
23.01a Install and secure ridge tiles to single-lap fixed gauge tiles	23.01 explain the setting out process for single-lap fixed gauge tiles to the ridge line 23.02 describe the mortar formation to ridges when wet bedding to include use of dentil slips 23.03 explain the location and reason for additional fixings to wet bedding ridges	1	2	3.3
23.01b Install and secure ridge tiles to single-lap fixed gauge tiles	23.04 describe the various types of dry fix ridge system 23.05 describe the installation process for dry fix ridge systems 23.06 describe the methods of finishing ends of ridges	1		
24.01a Position and fix double-lap artificial slates to eaves	24.01 explain the formulae used to establish the eaves and dummy eaves batten 24.02 describe the hole position used to verge and abutment junctions at eaves 24.03 explain the formation of slate and a halves in eaves formations	1	1	1.6

	24.04 explain the reason for using tail rivets in all situations 24.05 describe the relationship between the eaves formations and the first course 24.06 outline the formations used at hip and valley positions to artificial slates			
25.01a Install full and cut double-lap artificial slates to abutments and openings	25.01 explain the formulae used to gain the length and width of soaker 25.02 describe the installation process for abutment artificial slates 25.03 describe the installation process for openings using flashing units	1	1	1.6
26.01a Install double-lap artificial slates to verges	26.01 explain the overhang required to a bedded verge for under-cloak 26.02 describe the formation of slate and slate and a half hole and rivet position to verges using artificial slates 26.03 explain the installation process and formation of slates to verges 26.04 describe the slate formation for the installation of dry verge systems to artificial slates	1	1	1.6
27.01a Cut and secure artificial slates to valley openings	27.01 explain the side-lap and bond requirements to valley openings 27.02 describe the linings used to form the weathering to open valleys 27.03 describe the position of the rivet in valley formations 27.04 describe how artificial slates are prepared at ridge and eaves junctions to open valleys	1	1	1.6

28.01a Cut and secure double-lap artificial slates to hip finishes	28.01 explain the cutting formation of artificial slates to bedded or dry hip finishes 28.02 describe the installation of wet bedded hip ridges to artificial slates 28.03 explain the side lap and slate securing methods required on wet bedded and dry hip ridge systems 28.04 describe how artificial slates are prepared at ridge and eaves junctions at hips	1	1	1.6
29.01a Install and secure ridge tiles to artificial slates	29.01 Describe the gauging requirements and adjustments made to give even spacing 29.02 describe the use of bonding agents to receive ridge tiles 29.03 describe the security and component aspects of a dry ridge system 29.04 explain the air flow requirements for top edge dry ventilated ridge systems	1	1	1.6
30.01a Install double-lap artificial slates to vertical surfaces	30.01 explain the reason for forming a double kicker batten 30.02 describe the rivet position on vertical surfaces 30.03 describe how to gauge to vertical cheeks from the top edge to a raking junction 30.04 explain how the finish is formed to vertical verge junctions 30.05 explain the soaker requirements to vertical abutments	1	1	1.6
31.01a Position and fix random roof slates to eaves	31.01 explain the reason for forming eaves into width sets	1	1	1.6

	31.02 describe the holing position for eaves random slates 31.03 describe the formulae used to establish the eaves and first course battens 31.04 explain the eaves formations used to verge and abutment junctions 31.05 explain the eaves formations used to hip and valley junctions			
32.01a Install full and cut random roof slates to abutments and openings	32.01 explain in sequence the order for installation of random slates at abutments 32.02 describe the types of weathering units that can be used at openings 32.03 describe the importance of nailing pattern and slate width 32.04 describe the grading and sorting process for this area of roof	1	1	1.6
33.01a Install random roof slates to verges	33.01 describe the installation sequence for bedded verges 33.02 explain the finish given to the mortar for random slates 33.03 state the minimum requirements for fixings and slate width to verges 33.04 describe the grading and sorting process for this area of roof	1	1	1.6
34.01a Cut and secure random roof slates to valley openings	34.01 explain the side lap requirements to cut random slates in valleys 34.02 explain the change- over (drop-course) gauging process to set out random slates 34.03 state the types of valley lining used at open valleys with random	1	1	1.6

	slates 34.04 explain the finishes used at eaves and ridge junctions with random slate valleys 34.05 describe the grading and sorting process for this area of roof			
35.01a Cut and secure random roof slates to hip finishes	35.01 explain the cutting formation of random slates to bedded finishes 35.02 describe the installation of wet bedded hip ridges to random slates 35.03 explain the side lap and slate securing methods required on wet bedded ridge systems 35.04 explain the formations used to eaves and ridge junctions with random slates at hips 35.05 describe the grading and sorting process for this area of roof	1	1	1.6
36.01a Install and secure ridge tiles to random roof slates	36.01 explain the top edge batten requirements for random slates 36.02 explain the requirements for preventing up-lift of the top slate 36.03 describe the security component aspects of a dry ridge system 36.04 describe the grading and sorting process for this area of roof	1	1	1.6
	TOTAL	33	33	55

Paper: **6314-308** Paper title: **Stonemasonry**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No or Qs	%
12.01a Interpret information to produce complex templets and moulds	12.01 explain the reason for reporting inaccuracies in information sources	1	2	3.3
12.01b Interpret information to produce complex templets and moulds	12.02 explain the procedure prior to carrying out remedial work	1		
13.01a Produce complex templets and moulds and apply standard information.	13.01 distinguish between Greek and Roman mouldings	1	10	16.6
	13.02 describe complex templet types commonly used in industry			
13.01b Produce complex templets and moulds and apply standard information.	13.03 describe specific stonemasonry categories of work	1		
13.01c Produce complex templets and moulds and apply standard information.	13.04 describe tools used to prepare complex templets	1		
13.01d Produce complex templets and moulds and apply standard information.	13.05 describe the characteristics of materials used for templets	1		

13.01e Produce complex templets and moulds and apply standard information.	13.06 describe methods to check the accuracy of templets and moulds	1		
13.01f Produce complex templets and moulds and apply standard information.	13.07 describe methods of taking dimensions from existing stonework	1		
13.01g Produce complex templets and moulds and apply standard information.	13.08 describe common markings used on complex templets and moulds	1		
13.01h Produce complex templets and moulds and apply standard information.	13.09 describe tracery features	1		
13.01i Produce complex templets and moulds and apply standard information.	13.10 distinguish between Pediment types 13.11 describe Greek and Roman Orders of Architecture	1		
13.01j Produce complex templets and moulds and apply standard information.	13.12 describe the members of the Entablature 13.13 describe safe disposal of zinc waste	1		
15.01a Set out work full size using standard drawing conventions	15.01 describe the terminology relating to the arch	1	6	10

15.01b Set out work full size using standard drawing conventions	15.02 describe traditional masonry features	1		
15.01c Set out work full size using standard drawing conventions	15.03 describe methods of setting out Entasis	1		
15.01d Set out work full size using standard drawing conventions		1		
15.01e Set out work full size using standard drawing conventions	15.04 describe types of developed true shapes	1		
15.01f Set out work full size using standard drawing conventions		1		
16.01a Apply complex templates to mark out the work	16.01 describe tools used to check and mark out the work	1	3	5
16.01b Apply complex templates to mark out the work	16.02 describe defects commonly found in natural stones 16.03 describe the characteristics of materials used for templets	1		
16.01c Apply complex templates to mark out the work	16.04 explain the application of *'lines up, lines down'* in relation to the project information 16.05 describe common markings used on complex templets and moulds	1		

17.01a Cut, shape and apply surface finishes to complex circular stonemasonry components	17.01 explain the classification of stones	1	10	16.6
17.01b Cut, shape and apply surface finishes to complex circular stonemasonry components	17.02 describe the formation of stones	1		
17.01c Cut, shape and apply surface finishes to complex circular stonemasonry components		1		
17.01d Cut, shape and apply surface finishes to complex circular stonemasonry components		1		
17.01e Cut, shape and apply surface finishes to complex circular stonemasonry components		1		
17.01f Cut, shape and apply surface finishes to complex circular stonemasonry components	17.03 describe specialist surface finishes	1		
17.01g Cut, shape and apply surface finishes to complex circular	17.04 identify traditional masonry features	1		

stonemasonry components				
17.01h Cut, shape and apply surface finishes to complex circular stonemasonry components	17.05 describe the Orders of architecture	1		
17.01i Cut, shape and apply surface finishes to complex circular stonemasonry components	17.06 explain which Personal Protective Equipment (PPE) should be used when using pneumatic tools	1		
17.01j Cut, shape and apply surface finishes to complex circular stonemasonry components	17.07 identify current legislation governing vibration and noise at work	1		
19.01a Cut, shape and apply surface finishes to complex developed and enriched stonemasonry components	19.01 describe properties of stones	1	2	3.3
	19.02 describe specific stonemasonry categories of work			
	19.03 describe specialist surface finishes			
	19.04 identify traditional masonry features			
	19.05 describe the Orders of architecture			
19.01b Cut, shape and apply surface finishes to complex developed and enriched stonemasonry components	19.06 explain which Personal Protective Equipment (PPE) should be used when using pneumatic tools	1		
	19.07 identify current legislation governing vibration and noise at work			
	TOTAL	33	33	55

Paper: **6314-309** Paper title: **Plastering (Fibrous)**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome / Section	Underpinning Knowledge	No of items	Total No of Qs	%
14.01a Prepare and apply finish plaster materials to form mouldings	14.01 describe the preparation of backgrounds	1	8	13.3
14.01b Prepare and apply finish plaster materials to form mouldings	14.02 explain the purpose of bracketing	1		
14.01c Prepare and apply finish plaster materials to form mouldings	14.03 describe how to apply and finish in-situ moulded work	1		
14.01d Prepare and apply finish plaster materials to form mouldings	14.03 describe how to apply and finish in-situ moulded work	1		
14.01e Prepare and apply finish plaster materials to form mouldings	14.04 describe how to form internals and external 14.06 state the correct sequence of mixing plaster materials	1		

14.01f Prepare and apply finish plaster materials to form mouldings	14.05 describe how to form curved mouldings and raking sections 14.08 describe the equipment used in conjunction with running moulds.	1		
14.01g Prepare and apply finish plaster materials to form mouldings	14.05 describe how to form curved mouldings and raking sections 14.08 describe the equipment used in conjunction with running moulds.	1		
14.01h Prepare and apply finish plaster materials to form mouldings	14.07 describe correct hand tools	1		
15.01a Select materials and components models/reverse moulds	15.01 state the purpose of tools and their use 15.02 describe the content of technical literature	1	5	8.3
15.01b Select materials and components models/reverse moulds	15.03 describe how communication takes place with work colleagues 15.04 state reasons for the selection of specific mould types	1		
15.01c Select materials and components models/reverse moulds	15.05 state the types and purpose of reinforcement 15.06 state the types and purpose of fixings 15.07 describe where reinforcement is used in models and casts	1		

15.01d Select materials and components models/reverse moulds	15.08 state the purpose and method of use of additives 15.09 list the release agents used in casting and describe situations where they are used. 15.10 describe how correct equipment is selected 15.11 state types of aggregate and reasons for use	1		
15.01e Select materials and components models/reverse moulds	15.12 state types of casting plaster and reasons for use 15.13 state types of materials used for model and reasons for choice 15.14 state reasons for use of additives used in casting	1		
16.01a Produce plasterwork components	16.01 outline methods of casting for a range of moulding sections and features	1	5	8.3
16.01b Produce plasterwork components	16.02 give reasons for specific mix proportions 16.03 state types and purpose of reverse moulds 16.04 state positioning, types and purpose of reinforcements	1		
16.01c Produce plasterwork components	16.02 give reasons for specific mix proportions 16.03 state types and purpose of reverse moulds 16.04 state positioning, types and purpose of reinforcements	1		

16.01d Produce plasterwork components	16.02 give reasons for specific mix proportions 16.03 state types and purpose of reverse moulds 16.04 state positioning, types and purpose of reinforcements	1		
16.01e Produce plasterwork components	16.05 state positioning, types and purpose of fixings 16.06 state purpose and use of additives 16.07 state purpose and use of release agents 16.08 describe methods used for storing and drying casts 16.09 describe methods of maintaining tools and equipment	1		
17.01a Select materials, fixings and components	17.01 describe how to select correct fixings 17.02 state the purpose of tools and their use	1	5	8.3
17.01b Select materials, fixings and components	17.01 describe how to select correct fixings 17.02 state the purpose of tools and their use	1		
17.01c Select materials, fixings and components	17.03 describe how communication takes place with work colleagues 17.05 state the types and purpose of reinforcement	1		

17.01d Select materials, fixings and components	17.04 state reasons for the selection of specific fixing types	1		
17.01e Select materials, fixings and components	17.06 state the types and purpose of fixings 17.07 describe where fixings are placed in casts 17.08 state the purpose and method of use of additives 17.09 describe how correct equipment is selected	1		
18.01a Install fibrous Plaster Components	18.01 state positioning, types and purpose of reinforcements	1	2	3.3
18.01b Install fibrous Plaster Components	18.02 state positioning, types and purpose of fixings 18.03 state purpose and use of additives 18.04 describe the methods of maintaining tools and equipment	1		
19.01a Select materials and components	19.01 describe how to select correct materials for use 19.02 state the purpose of tools and their use	1	3	5

19.01b Select materials and components	19.03 describe the content of technical literature 19.04 Describe how to communication takes place with work colleagues 19.05 State reasons for the selection of specific mould types 19.06 State the purpose and method of use of additives 19.07 List the release agents used in casting and 19.08 describe situations where they are used	1		
19.01c Select materials and components	19.03 describe the content of technical literature 19.04 Describe how to communication takes place with work colleagues 19.05 State reasons for the selection of specific mould types 19.06 State the purpose and method of use of additives 19.07 List the release agents used in casting and 19.08 describe situations where they are used	1		
20.01a Produce Plasterwork components	20.01 outline methods of casting for moulding sections and features 20.02 state materials for reverse moulds and models	1	5	8.3

20.01b Produce Plasterwork components	20.01 outline methods of casting for moulding sections and features 20.02 state materials for reverse moulds and models	1		
20.01c Produce Plasterwork components	20.03 give reasons for specific mix proportions 20.04 state types and purpose of reverse moulds 20.05 state purpose and use of additives 20.06 state purpose and use of release agents 20.07 describe methods used in fixing, making good and sealing models and reverse mouldings	1		
20.01d Produce Plasterwork components	20.03 give reasons for specific mix proportions 20.04 state types and purpose of reverse moulds 20.05 state purpose and use of additives 20.06 state purpose and use of release agents 20.07 describe methods used in fixing, making good and sealing models and reverse mouldings	1		

20.01e Produce Plasterwork components	20.03 give reasons for specific mix proportions 20.04 state types and purpose of reverse moulds 20.05 state purpose and use of additives 20.06 state purpose and use of release agents 20.07 describe methods used in fixing, making good and sealing models and reverse mouldings	1		
	TOTAL	33	33	55

Paper: **6314-310** Paper title: **Wall and floor tiling**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Number of bank items	%
12.01a Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.01 explain the use of assembly, location and component drawings when used in conjunction with the application of finishes to complex surfaces and establishment of focal points to wall and floor areas 12.02 explain the reason why it is necessary to work to schedules when forming complex surfaces	1	9	15
12.01b Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.01 explain the use of assembly, location and component drawings when used in conjunction with the application of finishes to complex surfaces and establishment of focal points to wall and floor areas 12.02 explain the reason why it is necessary to work to schedules when forming complex surfaces	1		
12.01c Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.01 explain the use of assembly, location and component drawings when used in conjunction with the application of finishes to complex surfaces and establishment of focal points to wall and floor areas 12.02 explain the reason why it is necessary to work to schedules when forming complex surfaces	1		
12.01d Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.03 state the type of manufacturers information used to aid the process of forming complex surfaces	1		
12.01e	12.03 state the type of	1		

Know how to interpret information from drawings relating to complex wall and floor tiling finishes	manufacturers information used to aid the process of forming complex surfaces			
12.01f Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.03 state the type of manufacturers information used to aid the process of forming complex surfaces	1		
12.01g Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.03 state the type of manufacturers information used to aid the process of forming complex surfaces	1		
12.01h Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.03 state the type of manufacturers information used to aid the process of forming complex surfaces	1		
12.01i Know how to interpret information from drawings relating to complex wall and floor tiling finishes	12.03 state the type of manufacturers information used to aid the process of forming complex surfaces	1		

13.01a Know how to select the required resources and explain their use	13.01 explain the use of the following hand tools, to include: trowel, level, lines, tile cutter, disc cutters, laser levels, mixing equipment, abraiding materials, grout floats and pointers and explain their use 13.02 explain the use of the following power tools to include: disc cutters, laser levels, mixing equipment and explain their use 13.03 explain the use of the following ancillary equipment to include: types of cement mixer and brushes and describe their use	1	1	1.6
14.01a Know how to minimise damage to the work of surrounding surfaces	14.01 state which materials may be used to protect existing finished surfaces and how these materials may be applied. 14.02 state which materials may be applied to work in progress and completed work to ensure that it is not damaged by traffic or subsequent trades.	1	1	1.6
14.01b Know how to minimise damage to the work of surrounding surfaces	14.03 describe the types of barriers used to prevent unauthorised access to floor and wall areas in order to prevent damage.	1	1	1.6
15.01a Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.01 state the method of establishing line and level to horizontal surfaces 15.02 state methods of setting out horizontal, vertical, raking and curved surfaces forming plain areas, patterns and motifs 15.03 list the procedure in the application and finishing of floor tiles, mosaics and natural stone slabs to	1	10	16.6

	form patterns and motifs			
15.01b Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.01 state the method of establishing line and level to horizontal surfaces 15.02 state methods of setting out horizontal, vertical, raking and curved surfaces forming plain areas, patterns and motifs 15.03 list the procedure in the application and finishing of floor tiles, mosaics and natural stone slabs to form patterns and motifs	1		
15.01c Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.01 state the method of establishing line and level to horizontal surfaces 15.02 state methods of setting out horizontal, vertical, raking and curved surfaces forming plain areas, patterns and motifs 15.03 list the procedure in the application and finishing of floor tiles, mosaics and natural stone slabs to form patterns and motifs	1		
15.01d Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.04 state the procedure for the application and finishing of wall tiles, floor tiles, mosaics and natural stone slabs to inclined surfaces 15.05 state the procedure for the application and finishing of wall tiles, natural stone slabs and mosaics to curved surfaces to form patterns and motifs	1		
15.01e Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.04 state the procedure for the application and finishing of wall tiles, floor tiles, mosaics and natural stone slabs to inclined surfaces 15.05 state the procedure for the	1		

	application and finishing of wall tiles, natural stone slabs and mosaics to curved surfaces to form patterns and motifs			
15.01f Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.04 state the procedure for the application and finishing of wall tiles, floor tiles, mosaics and natural stone slabs to inclined surfaces 15.05 state the procedure for the application and finishing of wall tiles, natural stone slabs and mosaics to curved surfaces to form patterns and motifs	1		
15.01g Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.06 state the procedure for the application and finishing of floor tiles to level surfaces and to falls 15.07 state the method of forming floor channels and outlets 15.08 state methods of forming reveals, sills and soffits 15.09 describe the method of forming tiling natural stone and mosaics to staircases and landings including internal and external angles and arches.	1		
15.01h Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.06 state the procedure for the application and finishing of floor tiles to level surfaces and to falls 15.07 state the method of forming floor channels and outlets 15.08 state methods of forming reveals, sills and soffits 15.09 describe the method of forming tiling natural stone and mosaics to staircases and landings including internal and external	1		

	angles and arches.			
15.01i Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.10 describe methods of finishing natural stone, tiled and mosaic surfaces using sealants, grouts and other specialist surface finishes	1		
15.01j Describe the processors involved in installing tiles, mosaic and stone surface finishes	15.10 describe methods of finishing natural stone, tiled and mosaic surfaces using sealants, grouts and other specialist surface finishes	1		
16.01a Know where to find information from drawings and schedules	16.01 state where information with reference to falls and position of outlets can be found	1	1	1.6
17.01a Explain the use of tools, equipment and materials	17.01 State the use of hand tools to include: level, trowel, hammer, chisel and grouting tools 17.02 State the use of power tools to include: laser level, mixer, tile cutter and disc cutter	1	2	3.3
17.01b Explain the use of tools, equipment and materials	17.03 State the use of equipment to include: buckets, wheelbarrow, rules and storey rods. 17.04 State the function of materials to include waste water fittings, channels, outlets, gullies, fixings and fittings	1		
18.01a Explain how to install drainage outlets	18.01 Describe the procedure in measuring, marking and setting out for channels, outlets and gullies 18.02 Explain the method of finishing surface and joints to channels, outlets and gullies	1	2	3.3
18.01b	18.02 Explain the method of finishing surface and joints to	1		

Explain how to install drainage outlets	channels, outlets and gullies 18.03 Describe the procedure for installation of channels, outlets and gullies.			
19.01a Know how to interpret information for forming backgrounds for tiling external work	19.01 recognise materials from drawings and specifications. 19.02 recognise tiled features from drawing specifications.	1	1	1.6
20.01a Select materials, tools and equipment	20.01 List types of sands used for external rendering including sharp sand, soft sand. 20.02 Explain the effects of selecting incorrect types of sand for internal and external work including poorly graded sand, sea sand, and sand containing impurities. 20.03 Explain the reason for using a well graded sand. 20.04 Describe site tests used on sands (hand, jar).	1	3	5
20.01b Select materials, tools and equipment	20.05 List the types of one coat renders. 20.06 explain the reasons for using waterproofers and plasticisers. 20.07 State types of trims and beads including, expansion strips, external angle bead and stop bead. 20.08 Describe characteristics of components to include binder, aggregate, plasticisers and waterproofers.	1		

20.01c Select materials, tools and equipment	20.09 explain the limitations of sands, and cements. 20.10 List tools used for external rendering to include hawk, trowel, brush, float, plumb rule, featheredge rule, gauging trowel and scratcher 20.11 List equipment required for external rendering to including laser level, cement mixer, mortar mill and access platform	1		
21.01a Describe how to prepare materials and the importance of correct preparation and storage	21.01 Describe how to correctly establish the mix proportions using weight or volume. 21.02 Explain the characteristics of sands and cements used for internal and external work. 21.03 State the importance of quality of water used in internal and external work. 21.04 describe methods used to protect materials from the weather including wind, sunshine, and frost.	1	1	1.6
22.01a Describe the process of applying render to external backgrounds	22.01 Explain the importance of compatibility between backgrounds and render to be applied. 22.02 State the reason for the use of two or more applications of render in sequence. 22.03 State the reason for providing a key between coats. 22.04 Describe methods used to provide a mechanical key including hacking, bonding agent and spatterdash	1	1	1.6

	22.05 List the types of beads for external work to include angle bead, expansion bead and stop bead. 22.06 Explain methods used to fix beads and trims.			
	TOTAL	33	33	55

Paper: **6314-311** Paper title: **Woodmachining**

Duration: **90 minutes** Assessment type: **Multiple Choice** No of items: **60**

Outcome/ Section	Underpinning Knowledge	No of items	Total No of Qs	%
12.01a Know how to set up CNC/NC wood machinery	12.01 describe types, purposes and limitations of CNC/NC machinery. 12.02 explain the importance of checking the compatibility of machinery and materials.	1	4	6.6
12.01b Know how to set up CNC/NC wood machinery	12.03 explain the importance of checking the machinery and equipment for faults.	1		
12.01c Know how to set up CNC/NC wood machinery	12.04 check materials for defects.	1		
12.01d Know how to set up CNC/NC wood machinery	12.05 describe types and purposes of safety equipment, including: fences, pressures, hold downs (ie vacuum, pneumatic, manual), push sticks, push blocks, push spikes.	1		
13.01a Know how to operate CNC/NC machinery	13.01 explain methods of inputting information and tooling data into the machine control unit, including: manual, conversational, direct, computer aided design, external data storage device	1	4	6.6
13.01b Know how to operate CNC/NC machinery	13.02 explain factors influencing the editing process, including: awareness of the programming language used, ISO, propriety manufacturers' software, computer aided design	1		
13.01c Know how to operate CNC/NC machinery	13.03 explain the importance of proving the program prior to the production run 13.04 compare the advantages and disadvantages of processing with CNC/NC machines and conventional machines	1		
13.01d Know how to operate CNC/NC machinery	13.05 describe methods of using CNC/NC machines for cutting and shaping materials 13.06 explain the importance of lubricating machinery	1		
14.01a Know how to maintain CNC/NC machinery	14.01 describe maintenance checks which should be carried out on CNC/NC machinery, including: preparing the wok area, protecting materials within the work area, use of suitable lubrication, suitable and environmentally safe disposal of waste, clean the work area and machinery ready for use.	1	2	3.3

14.01b Know how to maintain CNC/NC machinery	14.02 report faults to authorised person 14.03 complete maintenance records and documentation	1		
16.01a Know how to maintain wood machinery	16.01 explain the difference between machine downtime, planned and unplanned maintenance. 16.02 describe the procedures for maintaining machinery components, including: main frame (ie casting, fabricated and welded), guarding, tables, fences, pressures, guides, drives, spindles, bearings, slides, gears, leadscrews, motors, hand wheels, switchgear, machine control unit	1	3	5
16.01b Know how to maintain wood machinery	16.03 describe lubrication points, types, amounts, and frequency of lubrication for types of machinery 16.04 describe methods of maintaining pneumatic, hydraulic, digital and electrical machinery	1		
16.01c Know how to maintain wood machinery	16.05 explain the types and functions of cut out devices, including: thermal/ mechanical, fuse and digital	1		
18.01a Know how to diagnose problems, faults and defects in materials used in woodmachining operations.	18.01 Explain the importance of selecting the correct materials for the task. 18.02 Describe types of natural, growing and seasoning defects in the materials being processed, including: waney edge, edge, end shakes, surface shakes, knots, cup shakes, twisted fibres, boxed heart, case hardening, honeycombing.	1	4	6.6
18.01b Know how to diagnose problems, faults and defects in materials used in woodmachining operations.	18.03 Describe the effects of distortion due to moisture content or movement, including: cupping, springing, bow, twist, diamonding. 18.04 Describe defects due to inherent disease, insect attack or growth damage, including: Burr, Blue stain, bore holes.	1		

18.01c Know how to diagnose problems, faults and defects in materials used in woodmachining operations.	18.05 Describe defects caused by current or previous sawing, including: excessive and predominate saw marks, excessive breakout, saw cut not straight/square.	1		
18.01d Know how to diagnose problems, faults and defects in materials used in woodmachining operations.	18.06 Describe planning, profiling and jointing defects, including: irregular cutter mark pitch, raised grain, loosened grain, transverse burn marks, bruise marks, woolly grain, torn grain/pick up, cutter dips in the end of the machined timber, uneven machined surface or the surface not fully planed along its length, indentations on the surface or and edges/scratched surface/edges, poor fit, positioning or matching.	1		
19.01a Know how to diagnose problems during woodmachine tooling operations	19.01 Identify problems caused by blunt or incorrectly sharpened tooling. 19.02 Describe the hazards associated with using blunt tooling.	1	3	5
19.01b Know how to diagnose problems during woodmachine tooling operations	19.03 Explain the importance of selecting the correct tooling for the type of material being processed, to include: grinding angles, cutting edge, profile, joint fit or position.	1		
19.01c Know how to diagnose problems during woodmachine tooling operations	19.04 Explain the importance of correct type of tool data input to the machine control.	1		
20.01a Know how to diagnose problems during woodmachining processes	20.01 Describe causes of problems relating to incorrect machine processing, including: calibration, feeding. 20.02 Describe problems or defects arising from incorrect fence, table, feed or pressure alignment.	1	4	6.6

20.01b Know how to diagnose problems during woodmachining processes	20.03 Explain how to maximise machine productivity to meet targets, including: by relating batch sizes to setting up times, maintaining a logical machine processing sequence, offloading and positioning material. 20.04 Explain how to ensure that waste material is disposed of correctly and to comply with legislation.	1		
20.01c Know how to diagnose problems during woodmachining processes	20.05 Explain problems relating to insufficient machine maintenance, including: downtime, lost production time, breach of safety and legislative requirements.	1		
20.01d Know how to diagnose problems during woodmachining processes	20.06 Describe problems relating to incorrect component holding, including the use of safety aids, jigs and holders, saddles and supports.	1		
21.01 Know how to implement solutions to woodmachining problems	21.01 Identify suitable courses of action to rectify problems with the supply and use of materials tooling machinery and equipment. 21.02 State the importance of maintaining machining tooling to prevent sawing, planing, profiling, jointing boring and sanding defects 21.03 State the importance of setting the machine tables and/or fences, pressures, in the correct relationship and free from debris to avoid incorrect or substandard quality work 21.04 State the importance selecting the correct machine loadings to maximise feed speeds. Economical batch sizes to reduce machine setting times and achieve the maximum productivity 21.05 State the importance of using modern quality control systems to ensure that quality standards are achieved 21.06 State the importance of regular checks on machinery equipment, machine tooling to avoid breakdowns resulting in lost production, sub standard products and or increased safety risks	1	1	1.6

23.01a Know how to set up vertical spindle moulders	23.01 describe types, purposes and limitations of vertical spindle moulders used to produce curved wood and wood based products 23.02 explain the importance of checking the compatibility of machinery and materials for the tasks 23.03 explain the importance of checking the machinery and equipment for faults, including: damage, DIY repair, badly fitted or blunt cutters, badly fitted or missing guards, poor wiring, lack of maintenance, inadequate or blocked extraction, unsafe work area.	1	2	3.3
23.01b Know how to set up vertical spindle moulders	23.04 check materials for defects, including: waney edge, end shakes, surface shakes, knots, cup shakes, twisted fibres, boxed heart, case hardening, honeycombing, distortion due to moisture content and movement, cupping, springing, bow. Twist. Diamonding. (Distortion on manufactured boards), defects, due to inherent disease, insect attack or growth damage. Burr, Blue stain, bore holes. 23.05 describe types and purposes of safety equipment, including: straight fences, face boards, ring fences, jigs, templates and saddles, Shaw, cage bonnet guards, side pressures, push sticks, push blocks, push spikes. 23.06 state the meaning of “suitability of machines” for the task as stated under current legislation and approved code of practice	1		
24.01 Know how to operate vertical spindle moulders	24.01 describe methods of cutting materials to size and shape, using machinery, including: positive location cutters (ie pin and serrated back), disposable cutters, high speed steel, tungsten carbide, polycrystalline and diamond cutting edges 24.02 describe methods used to set machinery and equipment to correct angle, including: cutting, grinding, clearance, sharpness in accordance with PUWER and ACoPs 24.03 explain the importance of applying lubricants to machinery	1	1	1.6

25.01 Know how to maintain vertical spindle moulders	25.01 describe maintenance checks which should be carried out on machinery, as in 24.01 25.02 explain the importance of following correct maintenance reporting procedures 25.03 explain the importance of documenting maintenance work	1	1	1.6
26.01a Know how to report defects and discrepancies in materials, machines, tooling and equipment.	26.01 Identify and diagnose problems relating to Insufficient machine maintenance	1	4	6.6
26.01b Know how to report defects and discrepancies in materials, machines, tooling and equipment.	26.02 State the effects of poor or no maintenance on: Legislation requirement/Safety requirement, downtime and lost production.	1		
26.01c Know how to report defects and discrepancies in materials, machines, tooling and equipment.	26.03 Identify and diagnose problems relating to component holding including: the use of safety aids including jigs and holders, the use of saddles and supports	1		
26.01d Know how to report defects and discrepancies in materials, machines, tooling and equipment.	26.04 Identify and diagnose problems relating to component holding including: the use of safety aids including jigs and holders, the use of saddles and supports	1		
	TOTAL	33	33	55