ADVANCED SUBSIDIARY (AS)
General Certificate of Education 2014

## History of Art

## Assessment Unit AS 2

assessing
Module 2: Architecture, Craft and Design
[AD121]

MONDAY 9 JUNE, MORNING

## MARK

## SCHEME

| Assessment Criteria | Level 1 <br> 0-12 marks | Level 2 <br> 13-24 marks | Level 3 <br> 25-36 marks | Level 4 37-48 marks | Level 5 <br> 49-60 marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Knowledge <br> Source, select, recall material <br> to demonstrate knowledge effectively (AO1). | Insufficient knowledge. Recall lacking scope, depth, relevance and/ or accuracy. | Limited knowledge. Recall problematic in scope, depth, relevance and/ or accuracy. | Satisfactory knowledge. Recall mostly satisfactory in scope, depth, relevance and accuracy. | Good knowledge. Recall extensive, relevant and accurate, with minor lapses. | Excellent knowledge. Recall extensive, relevant and accurate. |
| Understanding Demonstrate understanding through analysis and make substantiated judgements and sustained discussion and/or arguments (AO2). | Insufficient understanding. Any relevant analysis, judgements, discussion and arguments unsubstantiated and/or unsustained. | Limited understanding. Any relevant analysis, judgements, discussion and arguments problematic. | Satisfactory understanding. Analysis, judgements, discussion and/ or arguments mostly relevant and satisfactorily substantiated. | Good understanding. Analysis, judgements, discussion and/ or arguments relevant, substantiated and sustained, with minor lapses. | Excellent understanding. Relevant and fully substantiated and sustained analysis, judgements, discussion and/ or arguments. |
| Communication <br> Present a clear and coherent response (AO3), addressing Quality of Written Communication requirements. | Insufficient communication. Unclear, incoherent and/or nonextensive, with inaccurate spelling, punctuation and/or grammar, and/ or inappropriate vocabulary and/ or form/style of writing. | Limited communication. Clarity, coherence, extensiveness, spelling, punctuation, grammar, vocabulary and/or form/ style of writing problematic. | Satisfactory communication. Clarity, coherence, extensiveness, spelling, punctuation, grammar, vocabulary and form/style of writing mostly satisfactory. | Good communication. Clear coherent, and extensive, with accurate spelling, punctuation and grammar, and appropriate vocabulary and form/style of writing, with minor lapses. | Excellent communication. Clear, coherent and extensive, with accurate spelling, punctuation and grammar, and appropriate vocabulary and form/style of writing. |
| Marks available for each AC | $1 \begin{array}{llll}1 & 2 & 3\end{array}$ | $\begin{array}{llll}5 & 6 & 7 & 8\end{array}$ | $9 \quad 10 \quad 11 \quad 12$ | 13141516 | $\begin{array}{llll}17 & 18 & 19 & 20\end{array}$ |

Throughout this mark scheme:

- insufficient - clear that minimum required standard for an AS pass has not been achieved
- limited and problematic - unclear that minimum required standard for an AS pass has been achieved.


## AS 2 Mark Scheme

Candidates' demonstrated knowledge and understanding of the indicative content will be assessed against the assessment criteria and performance descriptors within the AS Generic Mark Scheme above.

For each question, candidates must demonstrate some knowledge and understanding of the relevant 'immediate context' - within their historical contexts, closely associated artistic styles, themes, centres, movements and/or practitioners, as identified within the particular subject content section. 'Immediate contexts' shown below reproduce in full content descriptions directly relating to the questions, with the less relevant contextual content shown in summary form. The major part of each answer should not be contextual but, rather, drawn from the subject content to directly address the question.

Principal practitioners and works relevant to the examination question should be dated on first mention. Basic biographies should be provided for these principal practitioners. (To assist examiners, information within the Mark Scheme may occasionally be extensive - more than expected from any single candidate's answer.)

For archiving purposes each question is given a six-digit reference, the first three digits identifying the year ( $09,10 \ldots$ ) and examination series (1, January; 2, May-June), and the second three the unit (1-4) and section number (01-10).

## AS 2 Section 1 - Greek architecture

142.201: Critically appraise two civic examples of Greek architecture, establishing relevant contexts - civic here includes theatres and town-planning but not temples.

## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context:
- Civic Town-planning; theatre design; major examples.

O and in summary

- Classical orders, Materials and methods, Religious.
- Identification of works, and descriptions of works
- Town-planning, e.g.:
- Athens and/or (in Greek Asia Minor/Turkey) Miletus and/or Priene.
- General features:
- location: usually for complexity of geographic, social, strategic, agricultural, commercial... reasons
- boundaries, natural (river, harbour, escarpment...) and/or artificial
- Greek gridded street plans, with arterial and descending hierarchy of street-types, developed mainly from 7th century BC (earlier developments more 'organic'; opportunities for fully gridded systems usually confined to new or very substantially reconstructed developments)
- zones or districts: sacred, public and private
- acropolis, or other form of high citadel, housing sacred - and often also civic treasures; religious/spiritual centre; widely visible focal point for the community
- agora: civic centre; an open square or area for assembly, initially of the Demos (population of free men) but latterly a place of general assembly and functioning mostly as a marketplace; usually surrounded by public buildings (official residences, law courts, prison...)
- stoa: a long rectangular covered colonnade enclosed at the back and opening onto a public space - generally the agora - at the front.
and/or
- Theatre design, e.g.:
- Priene, $5-4$ th $C$ BC and/or Epidaurus, c. 350-300 BC and/or Theatre of Dionysus, Athens, c. 330 BC and/or Delphi, c. 160 BC.
- General features:
- developed mainly from 4th century BC
- location: set into a bowl-shaped hillside
- tiered stone seating (cavea), regularly divided by access aisles radiating up and out from a circular, or almost circular, orchestra where the actors, chorus and dancers performed
- behind the orchestra, a one-storeyed, flat-topped, colonnaded stage building (skene) providing changing room, theatrical store, and backdrop, or support for changeable scenery
- the top front of the skene a narrow stage (proscenium or proskenion)
- used for large public meetings as well as drama.
and/or
- Architect(s) unknown.
- Choragic Monument of Lysicrates, Athens, 335-334 BC.
- Monument erected by the choregos (patron of theatrical performances) Lysicrates to display a bronze tripod won by him for sponsoring a chorus at the Theatre of Dionysus. One of the earliest surviving examples of the Corinthian order used on a building's exterior. The tall square base supports a hollow circular structure (without access), with six engaged Corinthian columns, and topped by an acanthus finial.

UNDERSTANDING

- Analysis/interpretation/significance/appraisal:
- Greek town-planning, e.g.:
- orthogonal grid layouts (in such as the Ur, Indus Valley, Egyptian, Chinese and Minoan civilisations) pre-date Ancient Greek examples
- orthogonal grid layouts and other town planning elements, as developed by the Greeks, influential on Roman and later developments (e.g., the Roman forum equivalent to the Greek agora).
and/or
- Theatre design, e.g.:
- highlights limitations of adhering to post-and-lintel/ trabeated (rather than arch/ arcuated) structural system (location largely determined by suitable natural hillside; unenclosed, exposed to weather)
- strong in aesthetics, acoustics and sense of place
- basis for Roman and later developments.
and/or
- Architect(s) unknown.
- Choragic Monument of Lysicrates.
- extravagant
- celebratory
- decorative
- expression of Greek competitiveness
- testimony to importance of theatre in Greek society
- significant for early use of Corinthian
- influential
- Any other valid content to be identified at the standardising meeting and credited.


## AS 2 Section 2 - Early Renaissance Italian architecture

142.202: Critically appraise two non-domestic examples of Early Renaissance Italian architecture, establishing relevant contexts - non-domestic here refers to such as religious, civic, institutional, industrial, commercial.

## Indicative content

Answers should include the following:

## KNOWLEDGE

- Immediate context:
- Florence as centre Isolated examples elsewhere; Filippo Brunelleschi, Leon Baptista (Battista) Alberti, Michelozzi Michelozzo (Michelozzo di Bartolommeo), Giovanni Pisano, Bernardo Rossellino.
- and in summary
- Classical influence and rise of Humanism, Technical and aesthetic developments.
- Identification of required practitioner(s) and works, and descriptions of works, e.g.:
- Filippo Brunelleschi (1377-1446). Leading 15th century Florentine goldsmith, sculptor and architect. 1401, lost to Ghiberti competition for north Baptistery doors; thereafter, concentrates on architecture, spending time in Rome studying buildings of antiquity. About 1410-20, (re)discovers linear/scientific perspective. Innovative structural and mechanical engineer.
- Foundling Hospital (Ospedale/Spedale degli Innocenti), Florence; designed 1419, built c. 1421-51.
- Two-storey building with outside loggia/arcade facing onto the newly created Piazza SS. Annunziata. Loggia a series of round arches and small domes supported on delicate unfluted columns (Composite or Corinthian - authorities differ; Composite essentially) and corbels, set into main hospital wall; an entablature above the arches, and pedimental windows above the entablature.
and/or
- Dome, Florence Cathedral, 1420-36.
- 1418, Brunelleschi wins competition with design of octagonal pointed arch form with 8 principal stone ribs and 16 secondary ones; the secondary ribs encased in a doubleshell of stone in the lower part of the dome and herring-bone brick in the upper. The brick-laying technique was derived from ancient Roman buildings and permitted the dome to be erected without timber centring. Hoists and other special equipment needed also designed by Brunelleschi. 1436-51, lantern added, overseen and possibly partly designed by Michelozzo di Bartolommeo (1396-1472).
and/or
- Leon Baptista (Battista) Alberti (1404-72). Born illegitimately in Genoa into a Florentine banking, minor nobility, family. The family expelled from Florence for political reasons in 1402; Alberti himself first recorded there in 1434. Quintessential 'Renaissance man', highly accomplished in a range of the arts and humanities. From 1431, he served as an architectural consultant to the Papacy. His writings include De Re Aedificatoria (Ten Books of Architecture), 1452, which drew heavily from Vitruvius, the ancient Roman writer on architecture, as well as his own studies of Rome's architectural heritage. His Della Pittura (or Pictura; On painting), 1436, dedicated to Brunelleschi, is the first theoretical study of Renaissance visual arts and highly influential, especially as earliest known written account of vanishing-point perspective. He left few architectural works.
- Malatesta Temple (Tempio Malatestiano/S. Francesco), Rimini; exterior designed 1450.
- Refurbished classical exterior, designed 1450, enclosing original Gothic church; ground storey only completed; a domed roof intended. Front façade of 3 semi-circular arches, the central one framing the pedimental main door; the 2 side arches left as shallow niches. A plinth, broken at the entrance, surrounds the building and supports, on the front façade, 4 fluted engaged columns and, on each of the side elevations, 7 deep semi-circular arches. Above the columns and arches, a heavy entablature. Small round windows throughout. The capitals of the engaged columns to Alberti's own design, incorporating volutes, egg-and-dart mouldings, acanthus leaves and winged cherub heads.
and/or
- Bernardo Rossellino (b. Settignano, near Florence, c. 1409; d. Florence 1464); sculptor, architect and town planner. Studied under Alberti.
- Tomb of Leonardo Bruni, 1444-47, marble; Santa Croce, Florence.
- Bruni, a leading Florentine humanist and statesman, is depicted lying on a bier, which is supported by Roman eagles, holding a copy of his book, History of the Florentine People or History of Florence, and with a laurel crown on his head. Below him is a sarcophagus with an inscribed plaque held by two angels or genii in bas-relief. Translated from Latin, the inscription reads: "At Leonardo's passing, history grieves, eloquence is mute, and it is said that the Muses, Greek and Latin alike, cannot hold back their tears". A fluted Corinthian pilaster either side and a semi-circular arch above frame the figure. Above the arch, a medallion of a rampant lion, the Bruni family coat-of-arms, supported either side by an angel or cupid. The niche immediately behind the figure is divided into three simple rectangular panels. Above these, a deep florally-ornamented architrave, and above this, within the arch, a tondo bas-relief of the Madonna and Child, this also supported by two angels. The arch itself is highly ornamented with laurel leaf and other decoration.
UNDERSTANDING
- Analyses/interpretation/significance/appraisal, e.g.:
- Brunelleschi.
- Foundling Hospital.
- Example of enlightened social care as well as one of earliest examples of Renaissance urban planning (building opening onto a public square). Elegant proportioning based on cube and hemisphere. Classical referencing.
and/or
- Dome, Florence Cathedral.
- Largest dome since the Pantheon in Rome, c. 118-125, and the highest to that time. Highly innovative and daring engineering solution. Resolution involving ancient Roman, Gothic and Renaissance forms and techniques.
and/or
- Alberti.
- Malatesta Temple.
- Alberti's refurbishment borrows elements from the antique triumphal arch (including the Arch of Augustus in Rimini itself) but also brings an innovative and individual sense of design and massing of forms that significantly influences the development of Renaissance architecture. Limited structural innovation; exceeded by aesthetic.
and/or
- Rossellino.
- Tomb of Leonardo Bruni.
- Architectural and sculptural forms in close harmony. Highly influential example of wall tomb. The abundant references to Greek and Roman antiquity set against the relatively few Christian ones clearly illustrate a cultural shift towards Humanism.
- Any other valid content to be identified at the standardising meeting and credited.
142.203: Critically appraise two non-domestic examples of European architecture Renaissance to Rococo, establishing relevant contexts - non-domestic here refers to such as religious, civic, industrial, institutional, commercial.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context:
- France Armies of Charles VIII of France invade Italy 1494; Italian Renaissance gradually influences French Gothic; rich mix of classical and romantic tendencies; François Mansart (Mansard), Louis Le Vau, Jules Hardouin Mansart (Mansard).
and/or
- Britain Reformation; Henry VIII breaks with Rome and establishes Church of England, 1529; period of iconoclasm; resistance to and isolation from Renaissance artistic influences; first colony established in Virginia, N. America, 1607, marking beginning of 300 years of overseas expansion; architectural expression mainly through great country houses; Robert Smythson, Inigo Jones, Christopher Wren, Nicholas Hawksmoor (Hawksmore), John Vanbrugh.
0 and in summary
- France or Britain, as not already covered.
- Identification of required practitioner(s) and works, and descriptions of works, e.g.:
- Jules Hardouin Mansart (1646-1708). Grandnephew of François Mansart, under whom he trained. Appointed Architect to the King (Louis XIV) 1675. Began redesign and expansion of the Palace of Versailles 1678; thereafter given responsibility for major architectural projects throughout France.
- Church of the Invalides (or the Dôme of the Invalides), Paris, c. 1676-1706.
- Belonging to an institution caring for disabled soldiers. Hardouin Mansart appointed to the project in 1676, taking over from Libéral Bruant who had been appointed in 1670. Plan based on Greek cross with a circular chapel in each of the four corners. Square sub-structure topped by a tall tambour and slender dome ( $105 \mathrm{~m} / 344 \mathrm{ft}$ high), with an oculus.
and/or
- Christopher Wren (1632-1723). Son of the Dean of Windsor. Educated in sciences at Oxford. Appointed professor of astronomy at Gresham College, London c. 1656. Savilian professor of astronomy at Oxford 1661-73. Earliest architectural work c. 1662-63; commissions largely for church or crown. 1664-65, consulted on refurbishment of the Old St Paul's Cathedral, following which he spent several months in Paris studying major buildings by François Mansart (15981666), Louis Le Vau (1612-70) and others, and briefly meeting Gianlorenzo Bernini (15981680). Following Great Fire of London in 1666, appointed Surveyor General to the Crown 1669. Involved in designing 51-52 of the city's churches, c. 1670-86. Saw himself as effectively having to invent a new tradition of church architecture, writing, "...in our reformed Religion, it should seem vain to make a Parish church larger than that all who are present can both hear and see. The Romanists, indeed, may build larger Churches, it is enough if they hear the murmur of the Mass, and see the Elevation of the Host, but ours are to be fitted for Auditories".
- Sheldonian Theatre, Oxford, c. 1663-69.
- Building intended for university ceremonials. Exterior derived from Serlio's reconstruction of D-shaped Theatre of Marcellus, Rome. Interior remarkable for using triangulated timber trusses to span $21.3 \mathrm{~m} / 70 \mathrm{ft}$ without ground supports.
and/or
- St Paul's Cathedral, London, 1673-1710.
- Various designs proposed, including a domed Greek-cross with portico of giant Corinthian columns (Wren's own preference; the wooden 'Great Model', 1673, still exists), before building began on a Latin-cross design, with a spire over the crossing, and a classical portico - the 'Warrant Design', 1675. Wren made many changes to this design over the course of its construction, including changing the spire to a dome, similar to the one in the Great Model.
- Analysis/interpretation/significance/appraisal, e.g.:
- Jules Hardouin Mansart.
- Church of the Invalides.
- Strongly influenced by Roman Baroque and particularly the plan and dome designed by Michelangelo for St. Peter's. In turn, Mansart influenced many others well into the 18thC; some of his Palace of Versailles work, such as the Hall of Mirrors, begun 1678, anticipating Rococo. Limited structural innovation; aesthetic arguably dominant.
and/or
- Christopher Wren.
- Sheldonian Theatre.
- Exemplifies mathematical and scientific understanding allied to innovative, imaginative structural engineering.
and/or
- St Paul's Cathedral.
- Centralised Greek-cross design of 1673 rejected as impractical, too radical and/or insufficiently Protestant. Final building a masterly solution to a demanding brief and impressive synthesis of many stylistic influences. Definitive statement of English Protestant Baroque. Aesthetically and structurally innovative.
- Any other valid content to be identified at the standardising meeting and credited.
142.204: Critically appraise two non-domestic examples of architecture 1835-1918, establishing relevant contexts - non-domestic here refers to such as religious, civic, institutional, industrial, commercial.


## Indicative content

Answers should include the following:

## KNOWLEDGE

- Immediate context:
- Arts and Crafts Movement Structural and decorative integration; contribution to ideas of suburb and Garden City; Philip Webb, Charles F. Voysey, Edwin Lutyens.
and/or
- Art Nouveau Painting and plant form influences; influence of Viollet-le-Duc's 'structural rationalism'; Antonio (Antoni) Gaudí, Victor Horta, Charles Rennie Mackintosh.
and/or
○ Wiener Werkstätte and Deutscher Werkbund Innovative practice in Austria and Germany; tension between 'arts and crafts' and industrial approaches; Adolf Loos, Josef Hoffmann, Peter Behrens.
and/or
- Independents Joseph Paxton, Gustave Eiffel, Dankmar Adler and Louis Sullivan, Frank Lloyd Wright.
O and in summary
- Arts and Crafts Movement, Art Nouveau, Wiener Werkstätte and Deutscher Werkbund and/or Independents, as not already covered.
- Identification of required practitioner(s) and works, and description of works, e.g.:
- Antonio Gaudí (1852-1926). Son of a coppersmith. Based in Barcelona, where almost all of his work is found. A unique style, within Art Nouveau, based on organic structures, exuberantly textured and coloured. Influenced by nature, religious belief, Catalonian independence movement (political and artistic), Moorish design and the architectural theories of Eugène Emmanuel Viollet-le-Duc.
- Sagrada Familia (variously referred to as a church, cathedral or temple), Barcelona, 1875-ongoing.
- In 1883-1884 Gaudí replaced Francesco del Villar as architect, continuing to work on the church until his death. He replaced his predecessor's modest Neo-Gothic design, with flying buttresses, with a highly complex one, of cathedral proportions, in which the arches, piers and columns are 'equilibrated' (self-supporting - tilting, dispensing with the need for internal bracing or external buttressing). Catenary model based on Hooke's Law ("the arch stands as the loaded chain hangs", 1660-1675; weighted loops of cord/wire suspended from ground-plan set out on a large board and then inverted, each loop corresponding with the size and loading of a particular arch).
and/or
- Peter Behrens (b. Hamburg 1868, d. Berlin 1940). Highly influential architect, and industrial, corporate identity and furniture designer. 1886-9, studied painting in Karlsruhe. 1890s, worked in Jugendstil (German Art Nouveau) style as painter and designer in Munich. 1893, cofounded Sezession movement of artists, architects and designers. 1899, influenced by J. M. Olbrich to take up architecture. 1903-7, Director of Düsseldorf School of Applied Arts, directing studies away from craft-based approach and towards industrial design and work-based practice. 1907, founding member of Deutscher Werkbund, its aim to modernize German design. 1907-14, design consultant with AEG, the electrical manufacturing company, designing buildings, products, publicity material, workers' housing and furniture. 1908-11, gave architectural training to, among others, Gropius, Mies van der Rohe and Le Corbusier. 1922, taught at the Prussian Academy of Fine Arts and became head of Architecture Department there in 1936, remaining in the post, during Nazi rule, until his death in 1940.
- AEG Turbine Factory, Berlin, 1908-10.
- Massive masonry corner pylons, narrowing towards top, with extensive use elsewhere of iron/steel and glass. Designed with use and manufacture of very large machinery in mind. Well lit and adaptable functional space.
and/or
- Joseph Paxton (1803-1865). Gardener and self-taught landscape architect and architect. 1826, appointed Head Gardener at Chatsworth, Derbyshire, by William Spencer, 6th Duke of Devonshire. In this post for 30 years, overseeing the estate, its gardens and exotic plants, and designing buildings and landscape features. During this time also carried out work for numerous private and public authority clients. Built the 'Great Stove' conservatory at Chatsworth, 1836-1840 (destroyed 1920), the largest glass-house in Europe at the time, using a ridge-and-furrow glazing system (invented by John Loudon in 1817) supported by arched laminated-timber frames. 1850, patented an improved ridge-and-furrow glazing system. 1849-1850, designed and constructed a special conservatory for a specimen of the enormous Victoria Regia (now Victoria Amazonica) lily, achieving the plant's first flowering in Britain. An illustration of Paxton's daughter Annie standing on one of the lily's floating leaves appeared in The Illustrated London News in 1849.
- Crystal Palace, Hyde Park, London, 1850-1851.
- Large temporary structure ( $1,848 \times 408 \times 108 \mathrm{ft} / 563 \times 124 \times 33 \mathrm{~m}$ ) prefabricated from cast iron, wrought iron, glass and timber to accommodate Great Exhibition of 1851. Disassembled and re-erected in enlarged form at Sydenham, South London, 1852, where it was destroyed by fire in 1936. Development of his conservatory ridge-and-furrow glazing system but the rib structure of the Victoria Amazonica lily was also apparently an inspiration.
UNDERSTANDING
- Analysis/interpretation/significance/appraisal, e.g.:

O Gaudí.

- Sagrada Familia.
- Prime example of Gaudi's total commitment to his art; fully consistent and coherent throughout. In plan and elevation, eschewing the 'Euclidean' geometrical forms (of circles, straight lines and flat surfaces) conventionally used by architects in favour of complex 'Non-Euclidean' ones (catenary, hyperboloid, conoid, paraboloid) closer to the organic forms of nature. Arguably structurally and functionally 'rational' in that large volumes are enclosed with minimal material, but particularly costly, and demanding on the craft skills of his masons, as constructed of cut stone rather than, say, poured concrete. Distinctiveness of the architecture accords with Catalonian drive for independence. The aesthetic, imaginative and 'irrational' aspects appealed to Surrealists. Following the decline of International Style Modernism in the 1950s and '60s, his work influenced the architecture of curved surfaces.
and/or
- Behrens.
- AEG Turbine Factory.
- Masonry corner pylons point to past, with innovative use elsewhere of iron/steel and glass pointing to Modernist functionalism. New materials and methods, structurally and aesthetically innovative.
- Paxton.
- Crystal Palace.
- Widely regarded as the most innovative and influential building of the 19th century. Informed by detailed knowledge and understanding of natural forms. Adoption of materials and methods of industry and civil engineering - rather than those of craftsmen, builders and architects. Exploitation of industry and mass production; few elements reproduced in large numbers; prefabrication; unskilled or semi-skilled labour; just-in-time delivery; exploitation of new railway/transport system; rapid assembly and disassembly; minimal imprint on site. Structurally and aesthetically innovative.
- Any other valid content identified at the standardising meeting to be credited.
142.205: Critically appraise two non-domestic examples of architecture 1900-1945, establishing relevant contexts - non-domestic here refers to such as religious, civic, institutional, industrial, commercial.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context
- French Avant Garde Development of reinforced concrete; classical rationalism; the Industrial City; Tony Garnier, Auguste Perret, Le Corbusier.
and/or
- De Stijl and Bauhaus De Stijl: Neo-Plasticism; influences of Cubism and the machine-made; Gerrit Rietveld, Jacobus Johannes Pieter Oud. Bauhaus: functionalism; concrete, steel and glass classicism; Walter Gropius, Ludwig Mies van der Rohe.
and/or
- North American Innovative practice; informed by and reacting to European modernism; Frank Lloyd Wright, Richard Buckminster Fuller.
and/or
- Independents Wells Coates, Alvar Aalto, Berthold Lubetkin.
- and in summary
- French Avant Garde, De Stijl and Bauhaus, North American and/or Independents, as not already covered.
- Identification of required practitioner(s) and works, and descriptions of works, e.g.:
- Walter Gropius (1883-1969). Founding director of the Bauhaus and widely recognised as one of the most influential architects of the 20th century. Inspired to enter the profession at least partly by the great medieval cathedrals. Studied architecture in Munich and Berlin, 1903-07; worked under Berlin architect and designer Peter Behrens (1868-1940), 1907-10. Joined the Deutscher Werkbund, 1910, initially allying himself to Henry van de Velde's individualistic 'arts and crafts' approach but, by 1914, switching to Hermann Muthesius's functionalist, industry-led one. 1914-18, squalor of WWI and its aftermath (he served as an officer in the trenches) motivation to improve general living conditions through enlightened architecture and design, and machine production. 1919-28, first director of the Bauhaus. 1934-37, Gropius left Germany for England, working with Maxwell Fry. 1937-52, left for USA to head Harvard Graduate School of Design's Department of Architecture.
- Bauhaus Building, Dessau, 1925-26.
- Building complex comprising workshop wing, accommodation and studio blocks, teaching wing for Dessau Technical College, a 'flyover' administrative section, and a block containing an auditorium, theatre and canteen. Constructed of reinforced concrete, steel and glass; no applied decoration.
- Alvar Aalto (b. Kuortane, Finland 1898; d. Helsinki 1976). Leading Scandinavian Organic Modernist architect, city planner, furniture and glassware designer. Renowned for designing in sympathy with both the human user and the natural environment. Strongly influenced by nature and by Finnish vernacular architecture, craft and design. Contended it was the task of the architect and designer to humanize mechanical forms. 1916-21, studied architecture at Helsinki Polytechnic Institute. Early work reveals uneasy mix of Gothic and Classical elements - the latter relating to the Nordic Classical architectural movement, active c. 1910-30:
- Tuberculosis Sanatorium, Paimio, 1928-33.
- Built for long-stay patients at a time when tuberculosis was rife, affecting all conditions and classes of people, and treatment largely comprised rest in hygienic surroundings with exposure to sunlight and fresh air. Commission won through competition. Minimal disruption to surrounding natural landscape of pine trees. Wards arranged in a tall narrow block with large windows and facing the morning sun. Reinforced concrete frame construction with glazed stairwells, and balconies where patients could socialise, at the end of each block. Staff and administration blocks branch off the ward block. Design extended to furniture and fittings; artificial light from behind the patient's head; rooms painted in soft tones with darker ceilings, encouraging rest; wall-hung cupboards eased floor cleaning; attention paid to sound insulation.

UNDERSTANDING

- Analysis/interpretation/significance/appraisal, e.g.:

O Gropius.

- Bauhaus Building.
- Defining example of modernist non-domestic architecture. Reinforced concrete frame with supporting columns set back from the non-structural 'curtain walls' of metal-framed windows. Building system allowing rapid and economical construction of large, well lit, open-plan spaces. Non-symmetrical; functionalist. Structurally and aesthetically innovative.
O Aalto.
- Tuberculosis Sanatorium.
- In many respects a model for the modern hospital. Careful attention to detail to help improve health and welfare of patients. Integrated architectural and design approach. More sensitive to human needs than most 'functionalist' designs.
- Any other valid content to be identified at the standardising meeting and credited.
142.206: Critically appraise either early industrial three-dimensional design or Art Nouveau threedimensional craft and design 1850-1918, establishing contexts and referring to appropriate practitioners and works.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context:
- Early industrial design Great Exhibition of 1851 highlights poor state of British product design; widespread debate, design reforms; from craft- into batch- and mass-production; Michael Thonet, Christopher Dresser, Josef Hoffmann.
or
- Art Nouveau Fluid lines predominantly; new interior schemes; conspicuous craftsmanship, luxury; application of a decorative motif; Louis Comfort Tiffany, René Lalique, Hector Guimard, Charles Rennie Mackintosh.
O and in summary
- Shaker, Early industrial design, Arts and Crafts Movement and/or Art Nouveau, as not already covered.
- Identification of required practitioners and works, and descriptions of works, e.g.:

O Michael Thonet (b. Boppard, Germany, 1796; d. Vienna, Austria, 1871). With his sons Franz, Michael, August and Joseph, founded the furniture making firm of Gebrüder Thonet in Vienna, 1845. Awarded bronze medal for furniture design at 1851 Great Exhibition in London.

- Bentwood Chair No. 14 (Kaffeehausstuhl or Coffee shop chair No. 14), c. 1859.
- Light-weight mass-produced laminated wood chair; rounded forms. Steam treatment also used to bend solid wood. Some 30 million produced to 1930. Awarded gold medal at 1867 World's Fair in Paris.
- Christopher Dresser (b. Glasgow, 1834; d. 1904). Lecturer in botany. Prolific designer of wallpaper, textiles, ceramics, glass, furniture and metalware. Influential writer and theorist on design. Described by some as the first modern, or professional, industrial designer. Contended that ornamentation should be based not on historical styles but on the abstraction of natural forms. Shared certain views on design with William Morris and the Arts and Crafts Movement but, unlike them, interested in designing for industry and a wide market. Influenced by Pugin, Owen Jones and oriental art and design, especially Japanese, examples of which he had seen at the 1862 International Exhibition in London. 1876-7, made his first trip to Japan, after which he established the firm Dresser \& Holme to import Japanese and oriental goods.
- Model No. 2045 Crow's Foot Claret Jug, 1878; electro-plate and glass; designed for and manufactured by Hulkin \& Heath.
- Amphora-shaped glass jug supported on three feet; angular handle connecting feet and lid assemblies.
- Josef Hoffmann (b. Pirnitz, Moravia, 1870; d. Vienna 1956). Architect and designer. Trained and worked under architect Otto Wagner in Vienna. Founder member of the Wiener Sezession (Vienna Secession). Visited Britain in 1900, meeting Charles Rennie Mackintosh and various representatives of the Arts and Crafts Movement, including Charles Robert Ashbee. Mackintosh's quite severe and functional form of Art Nouveau a major influence, and he invited Mackintosh to contribute to the VIII Secessionist Exhibition held in Vienna that year. 1903, helped establish the Wiener Werkstätte (Viennese Workshop) co-operative workshop, based on Ashbee's Guild of Handicraft, and was its director until 1932/3.
- Sitzmaschine (Sitting Machine) Model No. 670, c. 1905-8; chair of bent beechwood and pierced sycamore panels, with adjustable back, manufactured by Jacob \& Josef Kohn, Vienna (and/or Thonet?) in a number of versions (most with cushions to back and seat). Designed originally for the Purkersdorf Sanatorium in Vienna.
- The adjustable back influenced by Philip Webb's Morris Chair, c. 1866. Forms more rectangular and rectilinear than curved.

O Louis Comfort Tiffany (b. New York, 1848; d. New York, 1933). Decorative artist and designer of textiles, wallpapers, ceramics, glassware, interiors, jewellery and metalwork. Studied painting in New York and Paris before beginning to work in glass in 1873. In 1894 patented "Favrile" glass, which he described as "distinguished by brilliant or deeply toned colours, usually iridescent like the wings of certain American butterflies, the necks of pigeons and peacocks, the wings of various beetles" (http://www.answers.com/topic/favrile-iridescent-glass).
■ Jack-in-the-Pulpit vase for Tiffany Studios, 1907 (illustrated in Charlotte and Peter Fiell, Design of the 20th Century, Taschen, 1999, ISBN 3-8228-7039-0, p. 693).

- Named after the herbaceous plant native to north eastern USA. Narrow smoothly rounded base and long stem culminating in large softly trumpet-like opening. "Favrile" glass, deep blue-green with iridescent shots of such as turquoise, emerald and mauve, according to lighting.
○ René Lalique (b. Ay, France, 1860; d. Paris, 1945). Glass designer associated with both Art Nouveau and Art Deco. Specialising in perfume bottles, vases, jewellery, chandeliers, clocks and, latterly, car bonnet mascots.
■ Deux Paons (Two Peacocks) lamp, 1920.
- Softly cylindrical base of frosted fluted glass; extravagant "stopper" in form of two peacocks.
O Hector Guimard (b. Lyons, 1867; d. New York, 1942). Widely seen as pre-eminent French Art Nouveau architect and designer.
- Balcony railing, for the Fonderies de Saint-Dizier, c. 1907-09.
- Standardised mass-produced cast iron architectural element; curvilinear vegetal forms. Both practical and decorative.
O Charles Rennie Mackintosh (b. Glasgow, 1868; d. London, 1928). Leading British Art Nouveau architect and designer. Influenced by Ruskin, Morris, Scottish baronial and vernacular architecture, Japanese architecture and design. Exerted considerable influence on Viennese Art Nouveau architects and designers.
■ High-backed chair, oak with horsehair upholstery over rush, c. 1896-97 (illustrated in Fiell, ibid., p. 435); commissioned by Miss Kate Cranston for the Luncheon Room of her Argyle Street "Willow Tea Rooms".
- Rounded slightly tapering stiles (outer uprights of the chair back), with two flat vertical boards forming centre of the back. Oval top with cut-out in form of flying bird. Back stretcher (behind and below the seat itself) a wide board curving upwards towards centre. Seat rail also slightly curved upwards towards centre. Legs plain and square.


## UNDERSTANDING

- Analysis/ interpretation/ significance/ appraisal, e.g.: either
- Gebrüder Thonet.
- Bentwood Chair No. 14.
- Functional, lightweight, reasonably comfortable. Affordable due to its design having adapted handcraft methods to mass-production ones. Use of laminates and steambending enabled efficient and economical use of wood. Flat-pack transportation also saves costs. Curved lines influenced by contemporary Rococo Revival and also anticipate Art Nouveau.
O Dresser.
■ Model No. 2045 Crow's Foot Claret Jug.
- Inventively practical design and restrained use of ornament (abstracted natural forms). Electro-plating and industrial processes reduce costs and broaden potential market.
O Hoffmann.
- Sitzmaschine (Sitting Machine) Model No. 670.
- Part of an early attempt to create unity between building and furnishings ('gesamtkunstwerk', a 'total work of art'). Shift from Art Nouveau curvaceous, indulgent decorativeness towards rationalism and functionalism. Exposed structure and simple forms consistent with machine production. An early instance of Hoffmann's lengthy and mutually profitable association with J\&J Kohn as an industrial designer and, more broadly, an example of a work by him that had major influence on modernist design as a whole.
or
- Tiffany.
- Jack-in-the-Pulpit vase.
- Smoothly organic forms typical of Art Nouveau; richly coloured and textured glassware.
- Lalique.
- Deux Paons lamp.
- Combination of curvilinear and rectilinear forms indicative of being on cusp between Art Nouveau and Art Deco.
- Guimard.
- Balcony railing.
- The overall organic and dynamic effect is offset geometrically by the horizontals of the top and bottom rails, and the three paired verticals within the design. At a time of extensive urban modernization the design gives some sense of reconnection with the world of nature and organic forms.
O Mackintosh.
- High-backed chair.
- Imposing, dignified, severe air lent by the chair's verticality and restrained decoration. Rectilinear tempered by curvilinear. Various symbolic meanings can be attached to the forms (sky, Earth, etc.).
- Any other valid content identified at the standardising meeting to be credited.
142.207: Critically appraise Modernist (not Art Deco) three-dimensional craft and design 1918-1945, establishing contexts and referring to appropriate practitioners and works.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context
- Modernist De Stijl: Neo-Plasticism; Theosophical, Cubist, machine influences; Bakelite developed 1907-09; Gerrit Rietveld. Bauhaus: formal experiment, functionalism; craft with a view to mass-production; Ludwig Mies van der Rohe, Marcel Breuer, Marianne Brandt, Wilhelm Wagenfeld. Independents: Le Corbusier, Alvar Aalto.
- and in summary
- Art Deco.
- Identification of required practitioners and works, and descriptions of works, e.g.:
- Gerrit Rietveld (b. Utrecht, Netherlands, 1888; d. Utrecht, 1964). De Stijl architect and designer. Trained as cabinetmaker in his father's business 1899-1906 before establishing his own cabinet-making business in 1911, when he also began studying architecture. Joined De Stijl in 1918-19. Most radical of the De Stijl architects and designers.
- Red and Blue (or Red/Blue) Chair, c. 1917-23. Wooden construction, originally unpainted; c. 1923, painted in primary colours (red, yellow, blue) and black under De Stijl influence (especially of Piet Mondrian, 1872-1944).
- Rectilinear elements throughout. Supporting frame and chair arms of square-section elements - black, apart from the yellow ends - arranged vertically or horizontally. Seat, flat rectangular section painted blue and slightly inclined downwards towards back; back, flat rectangular section painted red and slightly inclined back from vertical. All elements seem to simply abut one another (no apparent jointing or visible means of attachment).
- Marcel Breuer (b. Pécs, Hungary, 1902; d. New York, 1981). Modernist architect and designer. Bauhaus student 1920-23. Head of Bauhaus carpentry/furniture workshop c. 1925-28. One of the first to use tubular steel for furniture, influenced in this by his purchase of a racing bicycle $c$. 1925 and/or awareness of Dutch designer Mart Stam's (1899-1986) tubular steel cantilevered chair prototype of 1926.
- Model No. B3, Wassily Chair, c. 1925-27, for Standard-Möbel, Berlin (a manufacturing firm established by Breuer and the Hungarian architect Kalman Lengyel), and Thonet.
- Chrome-plated tubular steel armchair with stretched leather or canvas seat, back and arms. Chair frame appears almost a continuous length of tubular steel, for part of its length forming a 'runner' either side. Named after the abstract painter and Bauhaus master Wassily Kandinsky (1866-1944), who encouraged Breuer's experiments in new materials.
- Alvar Aalto (b. Kuortane, Finland 1898; d. Helsinki 1976). Leading Scandinavian Organic Modernist architect, city planner, furniture and glassware designer. Renowned for designing in sympathy with both the human user and the natural environment. Strongly influenced by nature and by Finnish vernacular architecture, craft and design. Saw the task of architect and designer to humanize mechanical forms. 1916-21, studied architecture at Helsinki Polytechnic Institute. Early architectural work reveals uneasy mix of Gothic and Classical elements - the latter relating to the Nordic Classical movement, active c. 1910-30. 1924, married designer Aino Marsio (1894-1949), subsequently collaborating with her on numerous projects. Experimented extensively with laminated wood and plywood. 1935, with Aino and others, founded Artek, a company to mass-produce and market his laminated birch moulded-plywood furniture designs still being produced:
- Paimio chair (Model No. 41), 1930-33; later produced by Artek.
- Moulded birch plywood armchair with sweeping curves. Designed to help recuperation of patients at the Tuberculosis Sanatorium, Paimio, 1928-33, also designed by Aalto.
- Analysis/interpretation/significance/appraisal, e.g.:
- Rietveld:
- Red and Blue Chair.
- Apart from the inclined seat and back, complies with De Stijl's visual fundamentalism of only verticals and horizontals, and only primary colours plus white, black and grey. Aesthetic statement more than a practical chair design (although apparently more comfortable than it looks). Structure clearly revealed on the level of arrangement of basic forms but not revealed on the level of how the wooden pieces are securely attached to one another (a chair is particularly demanding in terms of stresses and strains). Antithesis of the craft skills Rietveld would have learnt in his father's cabinetmaking workshop. Simple abutment of elements could be related to recent invention of (electric) welding, used in metalwork.
- Breuer.
- Model No. B3
- Chrome-plated tubular steel construction light, strong, adaptable, hygienic and reasonably workable and affordable. Minimal visual clutter and consistent with developments in Modernist architecture. Functional, modern, innovative, visually interesting/exciting; suitable for mass-production; can also be criticised as coldly clinical and somewhat lacking in comfort.
- Aalto.
- Paimio chair.
- Functional; no applied decoration; self-coloured natural material, enhanced by varnish only. Adds sense of warmth and psychological connection that would probably not be available from man-made materials such as steel or plastics. Crisp and clean organic forms. Connects with Scandinavian craft heritage in use of curved wood. Making use of local skills and materials. Pioneering use of plywood and the structural use of wood veneers (following recent developments in glue and timber cutting technologies, and mass production techniques). Bentwood techniques allow efficient connection of vertical and horizontal elements. Modernism humanised. Such work strongly influential on Charles and Ray Eames and other leading Modernist furniture designers
- Any other valid content to be identified at the standardising meeting and credited.
142.208: Critically appraise fashion design 1850-1945, establishing contexts and referring to appropriate designers and works.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context
- Fashion Earliest practical sewing machines invented 1840s-50s; economic, practical, gender, personal, lifestyle, social, cultural factors; emergence of haute couture; Charles Worth, Madeleine Vionnet, Paul Poiret, Coco Chanel, Cristobal Balenciaga.
- and in summary
- Arts and Crafts Movement, Bauhaus, Art Deco.
- Identification of required practitioners and works, and descriptions of works, e.g.:
- Charles Worth (b. Bourne, Lincolnshire, 1825; d. Paris, 1895). English-born fashion designer based in Paris; widely referred to as the first modern couturier.
- Ball gown, silk, c. 1872; collection of The Metropolitan Museum of Art, New York, USA; accession number C.I.46.25.1a-d.
- Curvaceous hourglass silhouette achieved by corsetry and bustle. Bustle: a framework of steel or cane hoops used to support a woman's dress extended at the back; introduced c. 1869 as a slightly more practical replacement for the crinoline, a dome-shaped framework. Ostentatiously expensive fabrics and trimmings.
- Gabrielle ‘Coco’ Chanel (b. Saumur, France, 1883; d. 1971). Fashion designer renowned for the comfort, practicality and simple elegance of her designs, and credited more than any other with freeing women from the constraining and generally ostentatious clothing of the previous era. Precise details of early life unclear but seems to have been raised in a convent orphanage at Aubazine, where she learned to sew. 1902-04, café-concert singer under name 'Coco'. 1910, with the financial backing of Arthur 'Boy' Capel, she began making and selling hats from her own shop in Paris. 1913, opened a boutique in Deauville and, in 1915, another in Biarritz, selling her own designs of hats, blouses and chemises - designed to be worn without corsets. 1916, began using jersey (a cheap material previously found mostly in underwear) for her garments; borrowing elements from menswear (sweaters, blazers, trousers...). By 1920s, she had established a couture house, textile factory and range of perfumes, including Chanel No. 5. 1939-53, her business closed on outbreak of WWII and, following an affair with a Nazi officer, she went into exile in Switzerland. 1954, business reopened.
- Day ensemble ('little black dress'), c. 1927; collection of The Metropolitan Museum of Art, New York, USA; accession number 1984.28a-c.
- Pleated wool jersey dress; simple in form and material but finely tailored, including seam binding and hand-sewn belt.
- Cristobal Balenciaga (b. Guetaria, near San Sebastian, in Basque region of Spain, 1895; d. Spain 1972). His mother a seamstress. A local patron sponsored his tailoring training in Madrid. His fashion designs met early success but the Spanish Civil War, 1936-39, forced him to move operations to Paris, his first fashion show there in 1937. Rapidly recognised as revolutionizing force in fashion.
- Evening coat, silk, 1940-45; collection of Metropolitan Museum of Art, New York, Accession number C165.28.1F.
- Black full length silk evening coat with integral cape, deep cuffs and eight silver filigree, black-centred, buttons.
UNDERSTANDING
- Analysis /interpretation/significance/appraisal, e.g.:

O Worth.

- Ball gown.
- Extravagant form, colour, materials and decorative treatment, finely and expensively crafted. Female form exaggerated (using corsetry, bustle and voluminous fabrics) to point where much physical activity and, by implication, female independence are curtailed. Worth's career coincident with reestablishment of French Empire, under Napoleon III, and the Empress Eugènie his major client.
- Chanel.
- Day ensemble ('little black dress').
- Modest form, colour, materials and decorative treatment, finely and expensively crafted. Innovative use of black as a fashion colour. Simple clean lines and inconspicuous detailing often described as 'classically elegant'. 'Boyish' lines reflecting new independence and freedom of lifestyle for western women post-WWI, for which Chanel herself was a leading role model. Certain democratisation of style, connecting with servants' uniforms, and capable of being cheaply emulated.
- Balenciaga.
- Evening coat.
- Almost straight drop from shoulders anticipates Balenciaga's later development of the 'sack' dress. 'Straight drop' also of the eight silver filigree buttons contrasting with the soft black of the fabric.
- Any other valid content to be identified at the standardising meeting and credited.
142.209: Critically appraise Post-Impressionist and Art Nouveau graphic design 1850-1945, establishing contexts and referring to appropriate designers and works.


## Indicative content

Answers should include the following:

## KNOWLEDGE

- Immediate context
- Post-Impressionism and Art Nouveau Contemporary art influences; street as gallery; Jules Chéret, Henri de Toulouse-Lautrec, Alphonse Mucha, Aubrey Beardsley.
- and in summary
- Wars and revolution, Modernism.
- Identification of required practitioners and works, and descriptions of works, e.g.:
- Jules Chéret (1836-1932). Often referred to as the 'father of the modern poster', producing more than 1,000 over the course of his career. Worked for a time in England but mainly Parisbased; helped develop colour lithography.
- Les Girard - Folies Bergère, colour lithograph poster, 1877.
- Four ginger-haired dancers - three males, in black tails, one female, in black and flowing grey gown - in lively composition against a flat red ground, their forms entwined with the words 'Folies Bergère' at the top and 'Les Girard' at the bottom. Limited palette of red, black, white, off-white, grey and ginger.
- Henri de Toulouse-Lautrec (1864-1901). Impressionist/Post-Impressionist painter and graphic designer of minor aristocratic birth (and stunted growth) whose subjects almost exclusively concern the night life scene - concert and dance halls, cafés and brothels - of Paris in the 1890s. Produced only 32 posters but is recognised as a major influence on the modern poster.
- Jane Avril au Jardin de Paris, colour lithograph poster, 1893.
- Dancer top left rather roughly framed by a heavy line connecting to the neck of a double bass, lower right. Dancer shown against receding stage boards with the poster text, in white and black, top right. The double bassist's head, hand and sheet music schematically rendered bottom right. Very limited palette of yellow, black and various derived tones, plus the dancer's lips picked out in red. A splatter-type texture variously applied.
- Aubrey Beardsley (1872-98). Short-lived but unique and influential English Art Nouveau illustrator specialising in black-and-white images.
■ "The Climax" illustration, first published 1893, to Oscar Wilde's play Salomé, written in
French and first published in English in 1894 (version incorporating text as illustrated in Alan and Isabella Livingston, The Thames and Hudson Dictionary of Graphic Design and Designers, 1998, ISBN 0-500-20259-1, p. 24).
- Black-and-white illustration of Salomé holding head of John the Baptist, top right, the reward she requested from King Herod for pleasing him with her dancing (based on Biblical story). Large black areas contrasting with large white areas and also with areas of fine detail. Predominantly organic, curvilinear forms; very shallow pictorial space. Globules of blood appear to drop from the severed head and an exotic flower grows out of the pooled blood. Just below left centre of the composition are the words "J'AI BAISÉ TA BOUCHE/ IOKANAAN/ J'AI BAISÉ TA BOUCHE" (translating from the French as "I have kissed your mouth/ lokanaan/ I have kissed your mouth").


## UNDERSTANDING

- Analysis/interpretation/significance/appraisal, e.g.:
- Chéret.
- Les Girard - Folies Bergère.
- Lively, graceful, humorous, inventive, engaging, influential. Has been claimed Chéret's posters helped liberalise attitudes towards female emancipation.
- Toulouse-Lautrec.
- Jane Avril au Jardin de Paris.
- Major influences Degas, Chéret and Japanese prints. Curvilinear forms relate to general Art Nouveau style. Acute observation and great economy and inventiveness of means. His physical deformity arguably a factor in his ability to gain insights into the lives of other 'outcasts' from polite/conventional/respectable society.

O Beardsley.
■ "The Climax".

- Beardsley and Wilde leading and controversial players in the Aesthetic movement; widely condemned at the time as decadent, perverse, morally corrupt. "The Climax" a prime example of their controversial material; taking theme from the Bible's New Testament and emphasizing erotic aspects. Congruence of sex and death. Japanese prints a major influence. Beardsley a strong influence on French Symbolist painting.
- Any other valid content to be identified at the standardising meeting and credited.
142.210: Critically appraise family car design to 1945, establishing contexts and referring to appropriate designers, manufacturers and examples.


## Indicative content

Answers should include the following:
KNOWLEDGE

- Immediate context:
- Family car From batch- to mass-production; social, economic, environmental and other kinds of impact; Henry Ford/Ford, Henry Royce/Rolls-Royce, Citroën, Chrysler, Mercedes-Benz, Ferdinand Porsche (Senior), Battista Pininfarina.
- and in sumary
- Other.
- Identification of required practitioner(s) and works, and description of works, e.g.:
- Henry Ford (b. Michigan, USA, 1863; d. Dearborn, Michigan, 1947). Engineer, designer, industrialist and pioneer of assembly-line mass production (standardised parts, division of labour, and assembly-line system carrying the product to the worker), greatly increasing output and savings on production costs. By 1896 he had designed and built his first car, the fourhorsepower Quadricycle. Various family car and racing car prototypes followed, 1896-1903, relationships with financiers ending acrimoniously when he insisted on design development and they on immediate production. 1903, the Ford Motor Company incorporated, almost immediately profitable but also almost immediately engaged in legal challenge to a patent claiming rights on all petrol-powered cars, losing the case in 1909 but winning it on appeal in 1911. Also in dispute 1909-19 with his own shareholders who wanted to take profits out of the Company rather than reinvest them into design and production improvements. By 1919 all shares in the Company were held by Ford and other family members. By 1927, when production had been relocated to a huge new plant at River Rouge, Michigan, the Company was largely self-sufficient in production, assembly and transportation, and operating in 33 countries, but about to suffer serious market loss due both to the Great Depression and tardiness in matching what rival car manufacturers were by then able to offer. Model $T$ design team led by Childe Harold Wills and included Joseph A. Galamb and Eugene Farkas.
- Model $T$ family car, designed 1908, manufactured 1913-1927.
- Five-seat, two-speed, family car; front-mounted four-cylinder petrol engine. Almost 17 million manufactured in USA, Canada and Britain by 1927, about half of the global car production to that time. Simply, practically and economically designed. Various body styles on a standard chassis. Various body colours offered initially but restricted to black from 1913 (Ford: "in any colour you choose, so long as it's black"). The unit price of about $\$ 850-950$ in 1908 falling to about $\$ 290$ by 1927, despite initially paying workers well above going rate.
- Charles Stewart Rolls (1877-1910) and Henry Royce (1863-1933), founders of Rolls-Royce Ltd, 1906. Rolls mostly providing the finance and business expertise and Royce the engineering and designing.
- 40/50 hp or Silver Ghost, 1907-25.
- After introduction of the Phantom I in 1925, all $40 / 50 \mathrm{hps}$ were officially renamed Silver Ghosts after a particular 1907 example - finished in aluminium paint and with silver-plated fittings - ordered by the company's Commercial Managing Director, Claude Johnson). Six-cylinder (7,036cc, in 1909/10 increased to 7,428cc; 48-80 bhp), three-speed (four-speed from 1913) car with various body styles (such as the Barker Tourer, Hooper Landaulet, London-Edinburgh type, and Barker enclosed cabriolet). Substantial chassis had rigid front and rear axles with leaf springs all round. Electric starting and lights introduced from 1919. Special lubrication and bearings used in the engine, transmission and elsewhere to minimize noise and vibration, and to increase reliability. Extensive, arduous public trials undertaken to increase awareness of the new car and demonstrate its reliability, quietness and refinement.
- Analysis/interpretation/significance/appraisal, e.g.:
- Ford.
- Model T.
- More than any other, made the car "the ordinary man's utility rather than . . . the rich man's luxury", with stated intention that the car be "so low in price that no man making a good salary will be unable to own one". Own workers also viewed as customers. Major role in general social change from an agricultural to an industrial society, and pioneering international conglomerates. Extensive repercussions affecting everything from urban planning to world economics. Ford assembly-line production methods revolutionised modern manufacturing in general. The utilitarian nature of the Model Ts design also its eventual downfall - others unable to match its price but able to surpass it in customer appeal (features, engineering developments, exclusiveness, styling, colour choice, etc).
- Rolls-Royce.
- 40/50 hp or Silver Ghost.
- Promoted as having been designed and constructed to the highest standards almost irrespective of costs. Unashamedly addressing an elite, luxury, exclusive market.
- Any other valid content to be identified at the standardising meeting and credited.

