



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2012**

History of Art

Assessment Unit AS 2

assessing

Module 2: Architecture, Craft and Design

[AD121]

THURSDAY 19 JANUARY, MORNING

MARK SCHEME

AS Generic Mark Scheme

Assessment Criteria	Level 1 0–12 marks	Level 2 13–24 marks	Level 3 25–36 marks	Level 4 37–48 marks	Level 5 49–60 marks
Knowledge Source, select, recall material 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 Present a clear and coherent response (AO3), addressing Quality of Written Communication requirements.	Insufficient communication. Unclear, incoherent and/or non-extensive, 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 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20

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...) 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

121.201: Give a broad critical appraisal of the Acropolis in Athens and its four major buildings, establishing appropriate contexts.

Indicative content

Answers should include the following:

KNOWLEDGE

- Immediate context
 - **Religious** Development of temple; its religious and social functions; major examples in European Greece, Sicily, Southern Italy, Greek Asia Minor. Ictinus (Iktinus), Mnesicles, Callicrates (Kallikrates).
 - In summary
 - Classical orders, Materials and methods, Civic.
- Identification of practitioners and works, and descriptions of works:
 - Acropolis.
 - Generally: “city at the top” or “highest city”; an elevated citadel or fortified district within a Greek city, usually containing the principal religious and civic buildings.
 - In Athens. Hill, about 80 m (260 ft) high, with flattened top roughly oval in shape, that had been walled before 6th cent BC by the Pelasgians. Accessed from the west by a winding processional path. Site for four major buildings, all constructed using white Pentelic marble, as below.
 - Parthenon, 448–432 BC.
 - Architects Ictinus (Iktinus) and Callicrates (Kallikrates). Commissioned by Pericles. Architecture and sculpture overseen by Phidias.
 - Athens’ main temple, dedicated to the city’s patron goddess Athena, and also the city’s treasury. On southern side of Acropolis and facing east. Doric peristyle of 8 × 17 columns (overall measurements 33.5 × 72.2 m/110 × 237 ft) with Ionic sculpted frieze high on outside of the cella walls. Portico at each end, two columns deep. The cella divided into two rooms, the smaller, to the west, the *parthenon* or treasury; the main room or naos, opening to the east, housed Phidias’s chryselephantine (gold and ivory over wooden core) statue of Athena, some 12 m/40 ft tall. Other sculpture in the two pediments and ninety-two metopes.
 - Propylaea, 437–432 BC (unfinished due to Peloponnesian War).
 - Architect Mnesicles.
 - Generally: ancient Greek term for gateway structure to a sacred site.
 - In Athens. Monumental gateway to the Acropolis. Six-columned Doric porches or facades to west and east, and rooms or wings to north and south. The northern wing considerably larger than the southern one and some scholars believe it to have been used as a picture gallery (pinakothekē). The southern wing provides access to the Temple of Athena Nike. Two rows of three Ionic columns connect the Doric porches.
 - Erechtheum, 421–405 BC (replacement for older temple).
 - Architect Mnesicles (?).
 - Small complex Ionic temple dedicated to Erechtheus, Poseidon and Athena. On northern side of Acropolis. Irregular layout and levels, with three differently sized Ionic colonnades (site slopes from north to south and from east to west); Caryatid Porch (or rostrum; flat roof supported by six columns in the form of maidens) to the south, facing the Parthenon; finely decorated friezes and capitals.
 - Temple of Athena Nike (or Temple of Nike Apteros, the Wingless Victory), c. 427–424 BC.
 - Architect Callicrates (Kallikrates).
 - Very small tetrastyle (four column) Ionic temple, with colonnaded portico at front and rear (amphiprostyle), on prominence immediately to south of Propylaea. Originally housed wooden cult statue of Athena Nike. A parapet, with various carvings of Nike, was added around the temple c. 410 BC.

UNDERSTANDING

- Analysis/interpretation/significance/appraisal:
 - Parthenon, Erechtheum and the Temple of Athena Nike the principal temples of Athens and the city's patron goddess Athena; Classical masterpieces; enormous expense and care lavished on their construction; in some respects more like great sculptures than buildings.
 - Athenian Acropolis and its buildings highly visible focal point for entire city, reinforcing sense of religious and social cohesion. Western room within the Parthenon also the city-state treasury.
 - Greek religious worship patterns, and the climate, exerted little pressure to accommodate large numbers of worshippers within temples. The religious festival of the annual Panathenaic Procession – up to and through the Athenian Acropolis and its complex of buildings – an example of how the site was used and how Greeks observed their religion and simultaneously promoted social cohesion.
 - The architecture and sculpture of the Acropolis in Athens of unsurpassed influence within western visual culture.
- Any other valid content to be identified at the standardising meeting and credited.

AS 2 Section 2 – Early Renaissance Italian architecture

121.202: Compare and contrast two examples of Early Renaissance Italian ecclesiastical (church) architecture, establishing contexts and referring to appropriate architects and works.

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 practitioners 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.
 - Florence Cathedral Dome, 1420–36.
 - 1418, Brunelleschi wins competition with design of octagonal pointed arch form with eight principal stone ribs and sixteen secondary ones; the secondary ribs encased in a double-shell of stone in the lower part of the dome and herring-bone brick in the upper. The brick-laying technique 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. 1446–51, lantern added, overseen and possibly partly designed by Michelozzo di Bartolommeo (1396–1472).
 - Leon Baptista (Battista) Alberti (1404–72). Quintessential “Renaissance man” highly accomplished in a range of the arts and humanities. Born into Florentine nobility but the family expelled from the city for political reasons in 1402; Alberti himself first recorded there in 1434.
 - 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 three semi-circular arches, the central one framing the main door surmounted by a triangular pediment; the two side arches, left as shallow niches. A plinth, broken at the entrance, surrounds the building and supports, on the front façade, four fluted engaged columns and, on each of the side elevations, seven 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.

UNDERSTANDING

- Comparison and contrast, e.g.:
 - Brunelleschi.
 - Florence Cathedral Dome: 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.
 - 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.
- Any other valid content to be identified at the standardising meeting and credited.

AS 2 Section 3 – European architecture Renaissance to Rococo

121.203: Critically appraise one French and one British example of architecture from the Renaissance to Rococo period, establishing relevant contexts.

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).
 - **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.
- Identification of required practitioners and works, and descriptions of works, e.g.:
 - Louis Le Vau (1612–70).
 - Château of Vaux-le-Vicomte, Maincy, Melun, c. 1656–61.
 - The most magnificent chateau to that time, built for Nicolas Fouquet, the French Overseer of Finance, later charged with embezzlement. Interiors decorated by Charles Lebrun (1619–90) and others. Extensive formal gardens, incorporating a moat, designed by André Le Nôtre (1613–1700). Double-storey arcaded structure approached through central courtyard, flanked by service buildings. Rectangular hallway leading to octagonal domed saloon opening onto the gardens; a grand apartment either side, one for Fouquet and one for royal visits (Louis XIV).
 - John Vanbrugh (1664–1726), soldier turned playwright turned architect. Influenced and aided by Nicholas Hawksmoor (c. 1661–1736).
 - Blenheim Palace, Woodstock, Oxfordshire, 1705–25.
 - National tribute to, and country residence of, Duke of Marlborough. Monumental stately home; symmetrical arrangement of colonnades and porticoed and other buildings around gradually narrowing central forecourt.

UNDERSTANDING

- Analysis/ interpretation/ significance/ appraisal, e.g.:
 - Louis Le Vau.
 - Château of Vaux-le-Vicomte.
 - Highly influential – used as model for Le Vau's own redesign and expansion of the Palace of Versailles, 1669.
 - Vanbrugh.
 - Blenheim Palace.
 - Dramatic scale, theatricality of effect (approach through narrowing forecourt creates impression of greater distance and scale); towers at four corners of forecourt surmounted by highly sculptural lanterns testify to Italian Baroque influence.
- Any other valid content to be identified at the standardising meeting and credited.

AS 2 Section 4 – Architecture 1835–1918

121.204: Compare and contrast two examples of institutional, commercial or industrial architecture – by different architects – from the years 1835–1918, establishing relevant contexts.

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.
and in summary
 - Arts and Crafts Movement, Art Nouveau, Wiener Werkstätte and Deutscher Werkbund, and/or Independents, as not already covered.
- Identification of required practitioners 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 based on organic structures, exuberantly textured and coloured. Influenced by nature, religious belief, Catalan independence movement (political and artistic), Moorish design and the architectural theories of Eugène Emmanuel Viollet-le-Duc.
 - Sagrada Família (variously referred to as a church, cathedral or temple), Barcelona, 1875–ongoing.
 - In 1883–84 Gaudí replaced Francesco del Villar as architect, continuing to work on the church until his death. His predecessor's modest Neo-Gothic design, with flying buttresses, replaced by 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", 1660–75; 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).
 - 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, 1836–40 (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. 1849–50, 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, 1850–51.
 - Large temporary structure (1,848 x 408 x 108 ft/563 x 124 x 33 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/ appraisal, e.g.:
 - Gaudí.
 - Sagrada Familia.
 - Prime example of Gaudí'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 "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 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.
 - 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.
 - Any other valid content identified at the standardising meeting to be credited.

AS 2 Section 5 – Architecture 1900–1945

121.205: Compare and contrast two examples of domestic architecture – by different architects – from the years 1900–1945, establishing relevant contexts.

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 practitioners and works, and descriptions of works, e.g.:
 - Le Corbusier (b. Charles-Édouard Jeanneret, Switzerland, 1887; d. France, 1965). Architect, designer, town-planner, artist and writer. The most active Modernist (or International Style) architect in promoting functionalism as a design principle. Post-1945 work increasingly sculptural in expression. Trained under Josef Hoffmann in Vienna (1905), Auguste Perret in Paris (1908–09) and Peter Behrens in Berlin (1910–11).
 - Villa Savoye, Poissy, 1927–31. Weekend retreat; severely geometrical flat-roofed concrete dwelling raised off ground on thin columns or pilotis. Horizontal strip windows; painted white; no applied decoration.
 - Frank Lloyd Wright (1867–1959). Leading American independent and proponent of what he himself termed ‘organic’ architecture – distinguishing his approach from that of ‘hard-edge’ modernists such as Gropius, Mies van der Rohe and Le Corbusier, and emphasizing the uniqueness of each client’s and each site’s requirements. Unusually long, varied and prolific career, extending from ‘Arts and Crafts’ homes, adapted for American mid-west suburbs, through to the highly innovative white spiral form of the Guggenheim Museum in New York, completed six months after his death.
 - Falling Water, Kaufmann House, Bear Run, Pennsylvania, 1935–39. Weekend retreat for wealthy businessman and his family. Sited in a birch forest, directly over a small waterfall, and built of rough-cut local stone and timber plus reinforced concrete with banded windows. Smoothly finished reinforced concrete platforms are cantilevered out from the walls and chimney of rough-cut local stone, and tied in also to the natural rock.

UNDERSTANDING

- Analysis/ interpretation/ significance/ appraisal, e.g.:
 - Le Corbusier. His flat-roofed, reinforced concrete housing structures criticised for being:
 - 1/ more suited to a Mediterranean-type climate than more northerly and/or wetter ones;
 - 2/ efficient and cost-effective within western and/or industrialised regions but not so in third world and/or developing regions.
 - Villa Savoye the defining example of Le Corbusier’s “5 points of a new architecture” (pilotis, free plan, free façade, strip windows and roof terrace/garden). Functionalist; idealist and influential but some practical shortcomings (as above) and questionable as to ‘homeliness’ of design approach.

- Wright. Major influences include: Arts and Crafts Movement, traditional American ranch houses, and traditional Japanese wooden architecture. A large central fireplace generally the hub of his houses, surrounded by open-plan living spaces. Attacks notion of architecture as boxes within boxes, hence his often using large overhanging eaves, providing flow of space between interior and exterior, and windows tending to be floor-to-ceiling or in continuous bands (rather than small 'holes' through exterior walls). Air-conditioning, lighting and other detailing all part of the original design.
 - Falling Water. Structurally and aesthetically innovative. As typical of his house designs, open-plan for most part and centred on large fireplace. The main living area takes the living rock as its floor, and a small stairway connects directly to the waterfall below. The cantilevered platforms, horizontal banded windows, and flat roofs echo the modernism of Gropius, Mies van der Rohe and Le Corbusier but the use of local materials and the formal coherence achieved between man-made and natural forms (the cantilevered platforms, for instance, echoing the rock formations) are significantly different. The cantilevered platforms echo his 'Prairie House' use of large overhanging eaves and the flow of space between interior and exterior.
- Any other valid content to be identified at the standardising meeting and credited.

AS 2 Section 6 – Three-dimensional craft and design 1850–1918

121.206: Critically appraise what you see to be three very different examples of chair design from the years 1850–1918, establishing relevant contexts.

Indicative content

Answers should include the following:

KNOWLEDGE

- Immediate context:
 - **Shaker** Anonymous, elegantly functional, well crafted interiors, furniture, boxes and other household artefacts; reflecting religious commitment and values.and/or
 - **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.and/or
 - **Arts and Crafts Movement** Led by textile designer William Morris; reaction to industrialism; craft as art; unresolved agonizing on ethics of craft production seeking mass market; sporadically functionalist, traditional materials and techniques; Philip Webb, Charles F. A. Voysey.and/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.and in summary
 - Shaker, Early industrial design, Arts and Crafts Movement and/or Art Nouveau, as not already covered.
- Identification of required movement, practitioners and works, and descriptions of works, e.g.:
 - Shaker (officially the United Society of Believers in Christ's Second Appearing). A Protestant celibate sect originating in Manchester in 1747 (or in London in 1706, according to Shaker oral tradition), relocating to N. America under the leadership of Ann Lee ("Mother Ann") in 1774 where it expanded to a high of about 18 communities and 6,000 members between 1830 and 1850, but falling to only 8 members in 2000 – rule of celibacy meant there were no second-generation Shakers. Communal living and property, with the sexes segregated; the communities self-sufficient, hard working, orderly, believing in "plain and simple" living; building, making and other forms of work viewed as forms of worship, to be done to the very highest standards and without ostentation of any kind.
 - Shaker factory, New Lebanon, New York State.
 - Rocking chair, c. 1880. Light-weight rocking chair in stained maple; simple woven seat.and/or
 - Early industrial design.
 - 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.
 - Bentwood Chair No. 14, c. 1859. Light-weight mass-produced laminated wood chair; steam treatment also used to bend solid wood.and/or
 - Arts and Crafts Movement.
 - Philip Webb (1831–1915). Architect, designer and founding member of Arts and Crafts Movement.
 - Morris Chair, 1866. Reclining upholstered armchair; arms backwardly extended and drilled with series of holes in which inserted pins/pegs set desired reclining angle.and/or
 - Art Nouveau.
 - Hector Guimard (b. Lyons, 1867; d. New York, 1942). Widely seen as pre-eminent French Art Nouveau architect and designer.

- Dining room chair, for Maison Coillet, Lille, c. 1898–1900 (reproduced in Charlotte and Peter Fiell, *Design of the 20th Century*, Taschen, Köln, 1999, p. 314). Fine hardwoods and upholstered seat; sweeping organic forms – the side rails, for instance, sharply angled down from back to front and almost continuous curves with the chair’s back.

UNDERSTANDING

- Analysis/interpretation/significance/appraisal, e.g.:
 - Shaker.
 - Shaker factory, New Lebanon, New York State.
 - Rocking chair. Finely crafted, although also batch- or mass-produced; practical, elegant, unostentatious, durable; designed to be hung on lintel-high peg-boards when not in use, leaving floor space free for cleaning or other activities. Product of a religious belief system but anticipates many of the functionalist design principles of Modernism.
 - Early industrial design.
 - Gebrüder Thonet.
 - Bentwood Chair No. 14. Functional, reasonably comfortable and affordable; curved lines arguably anticipate Art Nouveau.
 - Arts and Crafts Movement.
 - Webb.
 - Morris Chair. Essentially simple and practical design, although some fussiness of treatment in the turned rails and other decorative touches (strength also slightly compromised by the turnings).
 - Art Nouveau.
 - Guimard.
 - Dining room chair. Flowing organic lines throughout lend the design coherence; also coheres with the Art Nouveau style generally. Conspicuously costly – fine hardwoods and ostentatious design and craftsmanship.
- General, e.g.:
 - General craft–design relationship; conflict, often unresolved, between aesthetic, social and/or economic principles; tension between art and industry; catering for elite or mass markets.
- Any other valid content identified at the standardising meeting to be credited.

AS 2 Section 7 – Three-dimensional craft and design 1918–1945

121.207: Give a broad critical appraisal of Modernist 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 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; arms – black, apart from yellow ends – horizontal; 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 Wassily Kandinsky (1866–1944), the abstract painter and Bauhaus master, 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.

UNDERSTANDING

- Analysis/ interpretation/ significance/ appraisal/ discussion:
 - 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 cabinet-making 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 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 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.

AS 2 Section 8 – Textiles and fashion design 1850–1945

121.208: Give a broad critical appraisal of either fashion design or Bauhaus textiles design within the years 1850–1945, establishing contexts and referring to appropriate designers and works.

Indicative content

Answers should include the following:

KNOWLEDGE

- Immediate context:
 - **Bauhaus** Ethos of abstraction, formal experiment, functional design; craft with a view to mass-production; Adelgunde (Gunta) Stölzl, Anni Albers, Léna Meyer Bergner (Helene Bergner).
 - or
 - **Fashion** Earliest practical sewing machines invented 1840s–50s; economic, practical, gender, personal, lifestyle, social, cultural factors; emergence of haute couture; Charles Worth, Paul Poiret, Coco Chanel, Cristobal Balenciaga.
- and in summary
 - Arts and Crafts Movement, Bauhaus, Art Deco and/or Fashion, as not already covered.
- Identification of required movement, practitioners and works, and descriptions of works: either Bauhaus, e.g.:
 - Adelgunde (Gunta) Stölzl (b. Munich 1897, d. Küsnacht, Switzerland 1983). Textile artist and designer who studied and taught at the Bauhaus (its only female master) and who played leading role in moving textiles design from craft-based pictorialism to abstraction-based art and industrial-production design. 1913–17, studied at the Kunstgewerbeschule (School of Applied Arts), Munich. 1917–18, served as Red Cross nurse in WWI. 1919–23, studied at Bauhaus. 1924, studied dyeing and textile production at a school in Krefeld and helped Johannes Itten establish the Ontos weaving workshops, in Herrliberg, near Zürich. 1925, returned to Bauhaus as member of teaching staff and, in 1927, was appointed Junior Master in the weaving workshop. 1929, married Israeli architecture student Arie Sharon and thereby lost German citizenship. 1931, political pressure by Nazis forced her resignation (the school itself closing 1932). 1931, emigrated to Switzerland and, with her former students Gertrud Preiswerk and Heinrich Otto Hürlimann, established S-P-H Stoffe (S-P-H Fabrics), a textile studio and weaving workshop. 1933–37, business partnerships dissolved due to financial difficulties. 1937, established her own hand weaving studio, Handweberei Flora (Hand Weaving Studio Flora):
 - *Schlitzgobelin Red-Green Rug*, 1926–27. Hand-loom tapestry in cotton, wool, silk and linen; richly coloured and patterned; predominantly reds and greens, with grids and checkerboard patterns set against wave forms top and bottom. .
 - Anni Albers (née Fleischmann; b. Berlin 1899; d. Orange, Connecticut, USA, 1994). Textile designer and weaver. 1922, studied textile design in the Weaving Workshop at the Bauhaus in Weimar under Georg Muche, Gunta Stölzl and Paul Klee. 1925, married Josef Albers – artist, designer and master of the foundation course at the Bauhaus. 1929–30, appointed assistant tutor in the Weaving Workshop at Bauhaus, Dessau. 1933, following closure of Bauhaus, the couple emigrated to USA. 1933–49, both teaching at Black Mountain College, North Carolina. During and after this time, also working as a freelance designer of both hand-crafted and machine-produced textiles. 1963, largely ceased weaving, designing instead for printed textiles (1970, she sold her looms). Author of several books, including *On Designing*, 1959, and *On Weaving*, 1965.
 - *No. 175* wall hanging, 1925 (reproduced in Charlotte and Peter Fiell, *Design of the 20th Century*, Taschen, Köln, 1999, p. 28). Vertical format; grid-like abstract composition. Series of alternating light and dark horizontal rows, of muted colours, with smaller contrasting panels within certain rows.

or Fashion, 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.
 - An example of his silk ball gowns, c. 1872. Curvaceous hourglass form achieved by use of corsetry and bustle; ostentatiously expensive fabrics and trimmings (see, e.g., detailed description and illustrations at: "Charles Frederick Worth: Ball gown {C.I.46.25.1a-d}", The Metropolitan Museum of Art, New York; <http://www.metmuseum.org/toah/works-of-art/C.I.46.25.1a-d.htm> {accessed 30 Dec.2010}).
- 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.
 - An example of her 'little black dress', c. 1927. Pleated wool jersey dress; finely tailored (see, e.g., detailed description and illustration at "Gabrielle 'Coco' Chanel: Day ensemble {1984.28a-c}", The Metropolitan Museum of Art, New York; <http://www.metmuseum.org/toah/works-of-art/1984.28a-c>. {accessed 30 Dec.2010}).

UNDERSTANDING

- Analysis /interpretation/ significance/ appraisal/ discussion:
either Bauhaus, e.g.:
 - Stözl.
 - *Schlitzgobelin Red-Green Rug*. Example of her freely experimental hand-woven textile art. Tapestry a medium lending itself particularly well to grids and abstract forms, fully consistent with Bauhaus approach. Strong similarities with paintings of Bauhaus master Paul Klee; richly complex and dynamic abstract patterns.
 - Albers.
 - *No. 175* wall hanging. Simple grid-like abstract composition respects the fundamentals of a woven textile (warp and weft). Also consistent with general ethos of geometrical abstraction seen at the time in the fine art works of the Russian Constructivists, De Stijl and the Bauhaus itself. Early or transition piece in progress from handcraft to designing for Jacquard power looms and industry.

or Fashion, e.g.:

- Worth.
 - Ball gown, c. 1872. Extravagant form, colour, materials and decorative treatment, finely and expensively crafted. Female form extravagantly 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 Eugénie his major client.
- Chanel.
 - 'Little black dress', c. 1927. 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-WWII, for which Chanel herself was a leading role model. Certain democratisation of style, connecting with servants' uniforms, and capable of being cheaply emulated.
- Any other valid content to be identified at the standardising meeting and credited.

AS 2 Section 9 – Graphic design 1850–1945

121.209: Give a broad critical appraisal of Post-Impressionist and Art Nouveau graphic design, 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 movements, 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 Paris-based; 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.

- 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.

AS 2 Section 10 – Automotive design to 1945

121.210: Automotive design to 1945 saw very different design approaches. Discuss the approaches of three designers/manufacturers illustrating this diversity, establishing contexts and referring to appropriate 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/or
 - **Other** Sports/racing cars: Enzo Ferrari, William Lyons/Jaguar, Ettore Bugatti/Bugatti, Aston Martin; Various, Harry Ferguson, Raymond Loewy, Henry Dreyfuss.
 - and in summary
 - Family car or Other, as not already covered.
- Identification of required practitioners and works, and descriptions 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 four-horsepower *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*. Five-seat, front-mounted four-cylinder, two-speed family car. Designed 1908 by team including Childe Harold Wills, Joseph A. Galamb and Eugene Farkas. Assembly-line mass production from 1913. Almost 17 million manufactured in USA, Canada and Britain by 1927, about half of the global car production to that time. Design simple, practical and economical. 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”). 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 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 (7,036 cc, in 1909/10 increased to 7,428 cc; 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.

- Harry Ferguson (b. near Hillsborough, Co. Down, 1884; d. Stow-on-the-Wold, England, 1960). Engineer, aviator, inventor, manufacturer. 1909, made first powered flight in Ireland, in an aeroplane of his own design. 1926–28, invented new plough and three-point linkage, the Ferguson System, revolutionising farming. 1938, he made a handshake agreement with Henry Ford whereby the Ferguson System would be used on Ford tractors (9N, 1939–42; 2N, 1942–47; and 8N). 1947, this agreement broken by Ford’s grandson, Henry Ford II, whereupon Ferguson sued for \$240–340m, reaching an out-of-court settlement in 1952. 1953, he merged with Massey-Harris to become Massey-Harris-Ferguson Co., and subsequently Massey-Ferguson Co. Later developments, through Ferguson Research Ltd, included four-wheel-drive systems for family, sports and racing cars.
 - *TE20* (“Tractor England, 20 hp”; also informally known as the *Wee Grey Fergie*) tractor, 1946–56. *Black Tractor* prototype of 1933 led briefly to production of the *Model A* by David Brown Tractors, Huddersfield, 1936–38, before full production of the *TE20* by The Standard Motor Company at Coventry. Over 500,000 produced 1946–56. Small, economical lightweight tractor with three-point linkage and hydraulics systems, designed to operate a wide range of implements, including the first wheel-less plough.

UNDERSTANDING

- 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 T*’s 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.
 - Ferguson.
 - *TC20*. Established basic design of the modern agricultural tractor, three-point linkage and hydraulics systems enabling safe and efficient operation of very wide range of agricultural tasks. Adaptable, affordable system, suitable even for the smallest farms and/or hilly conditions. Significant aid to food production worldwide.
- Any other valid content to be identified at the standardising meeting and credited.