

WIGAN & DISTRICT  
MINING & TECHNICAL COLLEGE

Session 1907—1908

HOMework EXERCISES

PREPARED BY

Name Fred. Forster

Address 22 Brook St.

Golborne

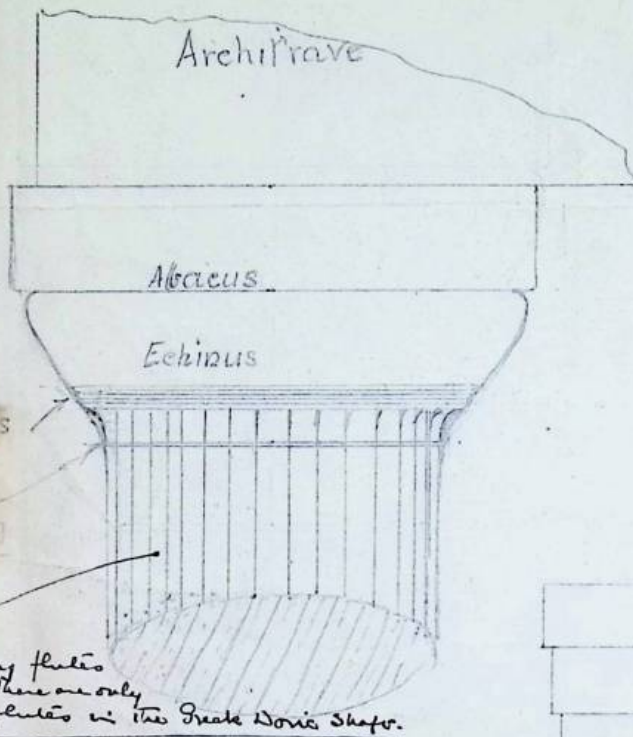
Subject \_\_\_\_\_

Class \_\_\_\_\_

Teacher--Mr. \_\_\_\_\_

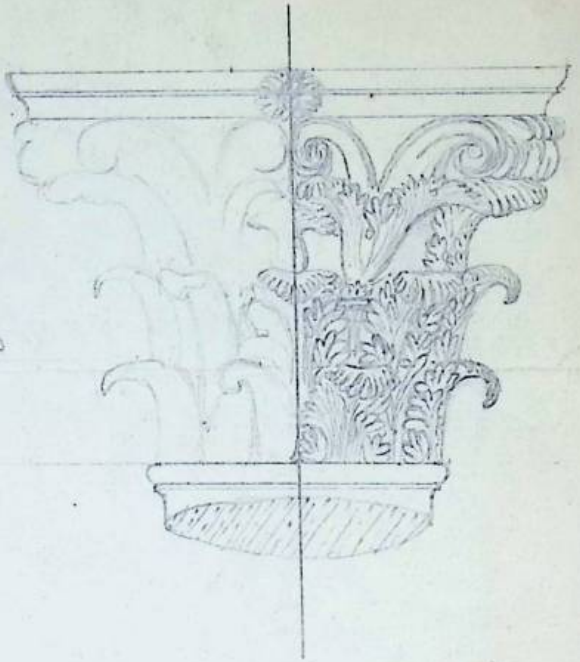
Architecture

Quest: 1

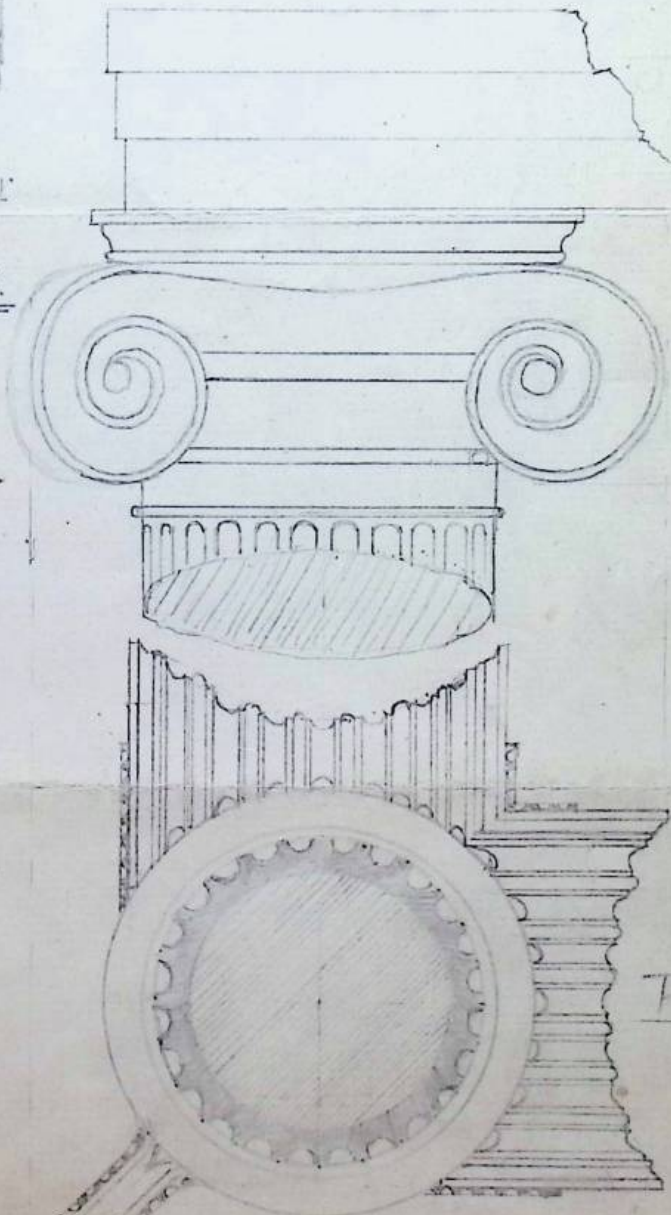


No. of flutes shown. There are only twenty flutes in the Greek Doric shaft.

Capital of Doric Order  
from  
Parthenon, ATHENS.



Roman - Corinthian - Capital



Greek —  
Ionic Capital

Plan

10

Y.S.

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Oct 3<sup>rd</sup> 1910

MARKS AWARDED.  
(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10

== Architecture ==

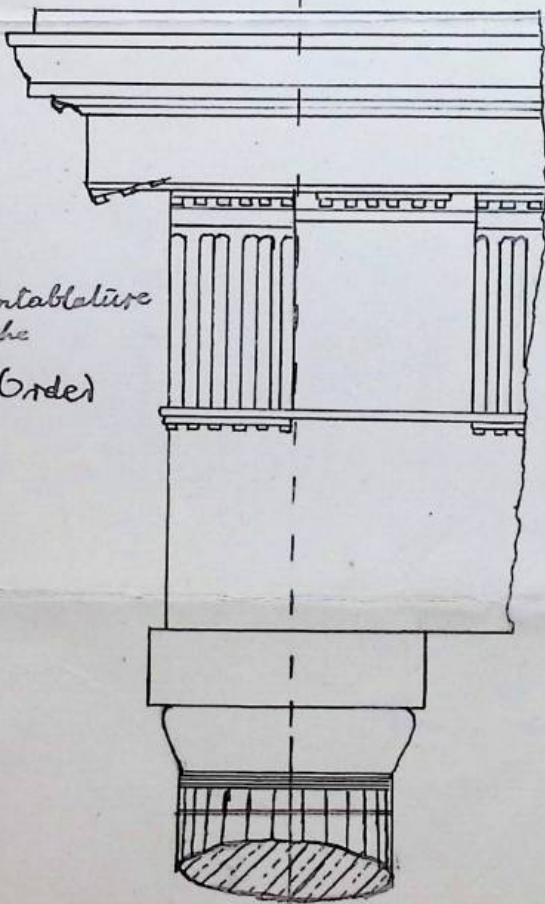
The architraves are plain bands in both orders except the Ionic is divided into 3 plain fascias which slightly project over the one below

The frieze in the Doric is divided in square panels called metopes with triglyph between but the Ionic is either plain or carved with sculpture taking the form of a continuous band without a break in it

The cornices are similar but the Ionic having dentils bands ~~and~~ and no mutules also there are several mouldings combined to make the bed mould with a cyma recta and a fillet to form the crown moulds In the Doric there is the birdsbeak mould below the crown moulds and the mutules decorated with 18 gutta ornament below the corona

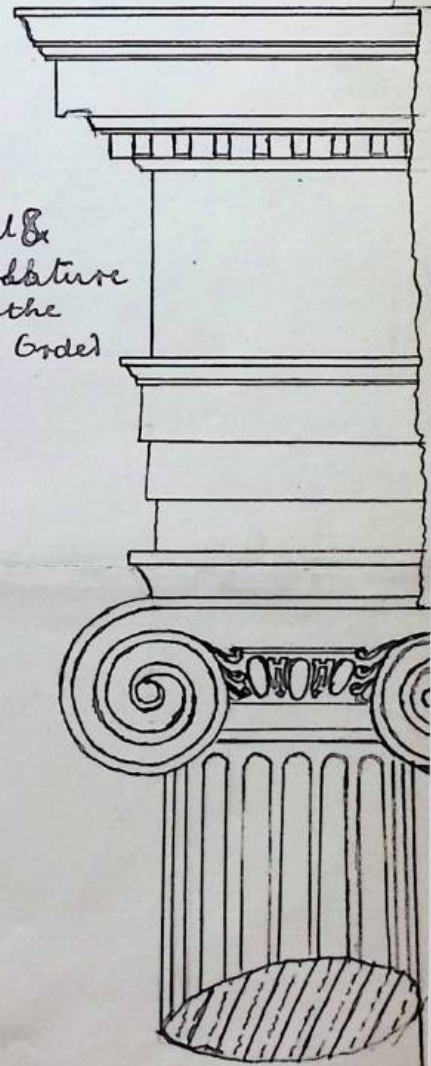
Quest. 2

Capital & Entablature  
of the  
Doric Order



Capital &  
Entablature  
of the  
Ionic Order

V. 95



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Sept: 27<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

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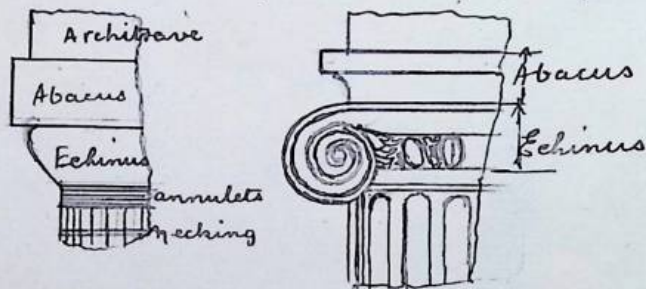
## Architecture

In general appearance the Doric order expresses masculinity by its strength severity and dignity whereas the Ionic represents femininity by its elegance, lightness and grace

In the shafts of the columns, the Doric springs directly of the Stylobate and fluted by 20 shallow flutes which finish with a sharp arête and extending up the shaft to the capital; also in the shaft there is an outward curvature called the entasis to counteract the hollow appearance in straight sided columns.

The shaft of the Ionic springs from a base and is also fluted but consists of 24 flutes divided by fillets and being deeper than in the Doric and finishes rounded the necking and commencing as

Capitals The principle feature of the Doric capital is the Echinus mould whereas in the Ionic the spiral volute



The Doric capital consists Abacus Echinus and annulets without any ornamentation but in the Ionic the Abacus has a small moulding also being much thinner. It has also a pair of spiral volutes with a distinct carved Echinus mould and a bead mould underneath.

WIGAN AND DISTRICT

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SESSION 190 -190

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286

## HOME WORK EXERCISE

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Fred Horster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Sept: 27<sup>th</sup> 1910

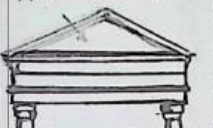



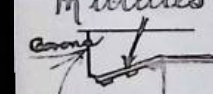
MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10

— Architecture —

Naos	The cell or principal chamber in a temple wherein the God or Goddess was kept
Hall	Is a name applied indifferently, to the first large apartment on entering an house, or to the public room of a corporate body, a court of justice, and a <u>manor house</u>
Colonnade	Is a range of columns along the ends or sides of a building
Parade	The principal front of a building
 Pediments	The triangular crowning part of a portico which terminates vertically the slopes of a roof. In Gothic architecture it is called "gable."
 Tiles	Thin pieces of plate or baked clay or other material used externally for covering roofs. <small>addition in floor. wall 11</small>
 antefix	The ornamental blocks or animals heads fixed vertically at regular intervals below the eaves of the temple from which the water is cast away from the eaves of the roof; also used to cover the joints of the tiles
Stylobate	The base or substructure on which a colonnade is placed
Bleedatory	The upper vertical divisions in the nave, choir, and transepts of a church used to admit light to the temple
 Hypaethral	A building or temple without a roof and possessing a central space open to the sky.
 Mutules	A projecting inclined ornament consisting of square blocks and is gutter and supposed to be derived from the ends of wooden rafters
Corona	A square projection of the upper part of the cornice having generally a plain vertical face with its soffit recessed so as to form a drip
Bedmould	The moulding under under a projection such as a corona under the cornice
Dentels	Are small square blocks or projections in the bed of a cornice of the Ionic and Corinthian Orders
Entablature	The whole of the top portion of an order consisting of 3 parts architrave frieze + cornice



WIGAN AND DISTRICT

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SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Oct 10<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

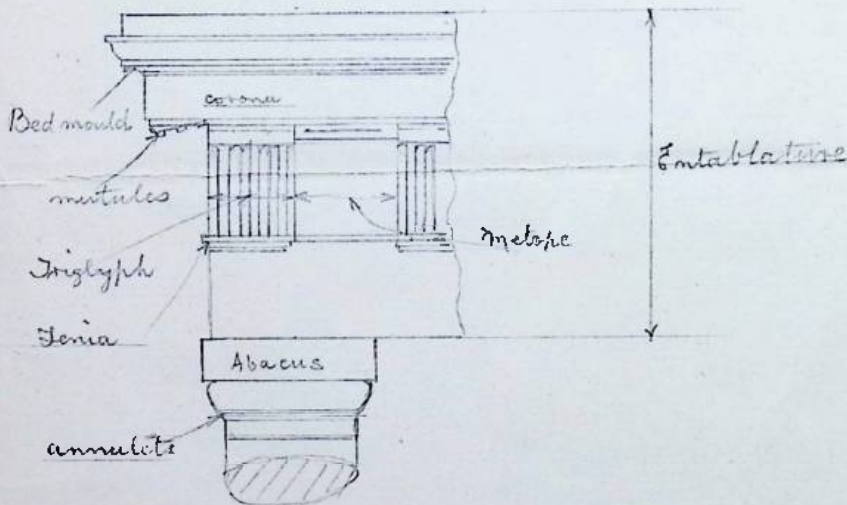
\* This should be the date of the lesson at which the work was set.

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## — Architecture —

Triglyph	The vertical tablets in the Doric frieze chamfered on 2 vertical edges and having 2 vertical channels in the middle
Metope	The square space between the triglyphs in the Doric frieze and is either plain or decorated
Fenestra	The band of fillet forming the upper member of the Doric architrave
Abacus	The square or rectangular slab forming the crowning member of the capital
Annulets	Small flat fillets encircling a column and used to decorate the echinus moulds of the Doric order

Draw. 4



WIGAN AND DISTRICT

1010  
Mining and Technical College.

SESSION 190 -190

286  
NUMBER OF CLASS TICKET.

HOME WORK EXERCISE

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Subject Architecture

Stage I

Teacher, Mr. Howells

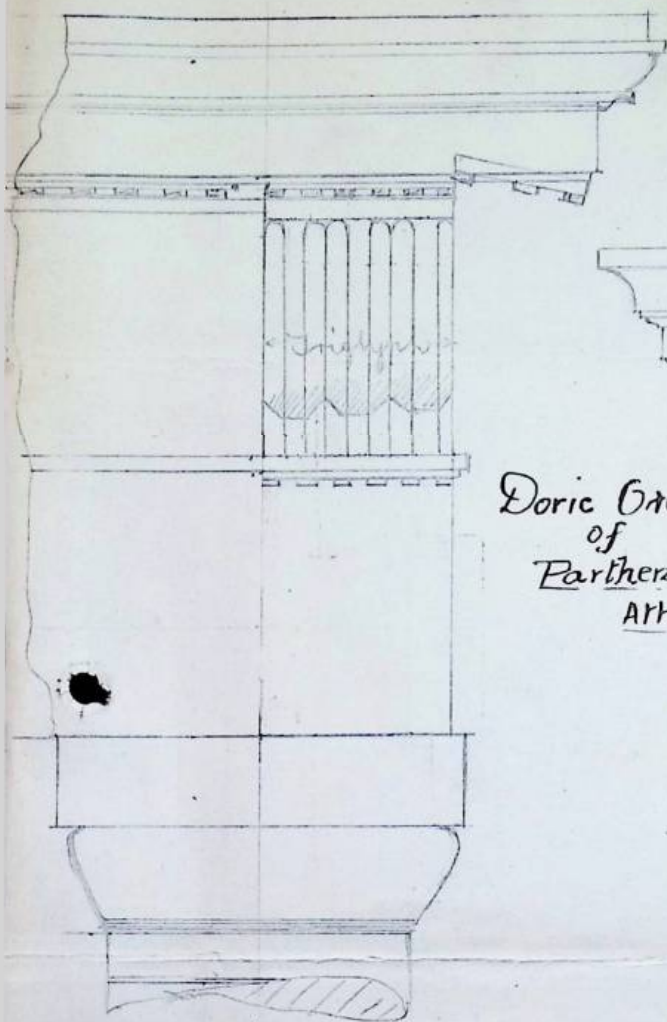
\* Date Oct 10 1910

MARKS AWARDED.  
(Possible Marks, 10)

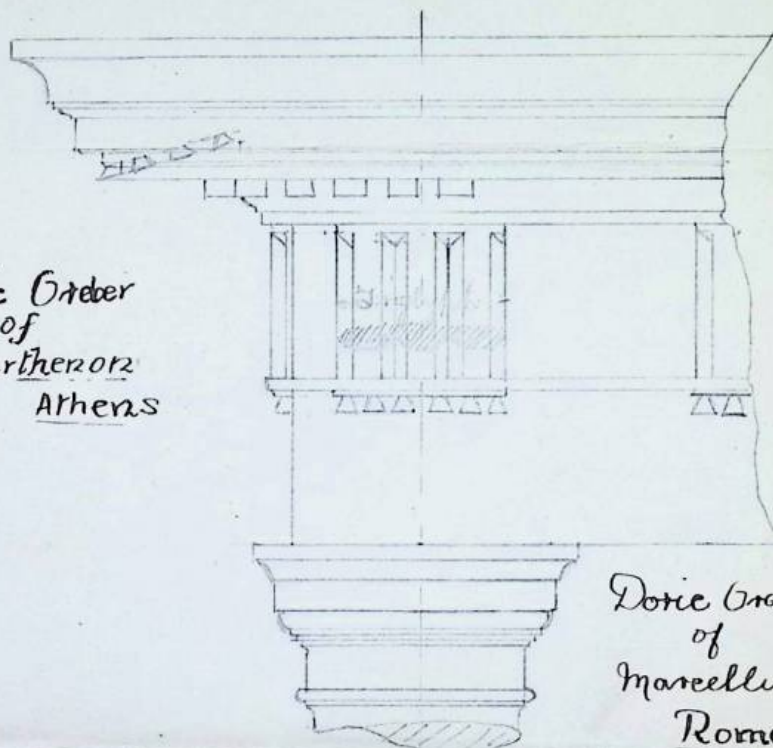
\* This should be the date of the lesson at which the work was set.

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= Architecture =



Doric Order  
of  
Parthenon  
Athens



Doric Order  
of  
Mars Ultor  
Rome

Lines #  
The difference of the treatment of entablature at the angle of a building in Greek and the Roman style is that in the Greek the triglyphs at the angle are set between the centre line of column and the angle of frieze also there are guttae crowning them. The crowning mould of the cornice is different having the echinus mould.

In the Roman the triglyph is set on either side of the centre line of column and finished differently. In place of the guttae there is a dentil band, and guttae underneath the triglyphs are different in shape. The crowning mould of the cornice is the cavetto with a fillet above.

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Forster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Oct: 10<sup>th</sup> 1910

MARKS AWARDED.

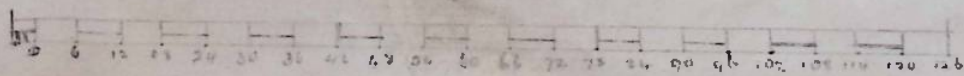
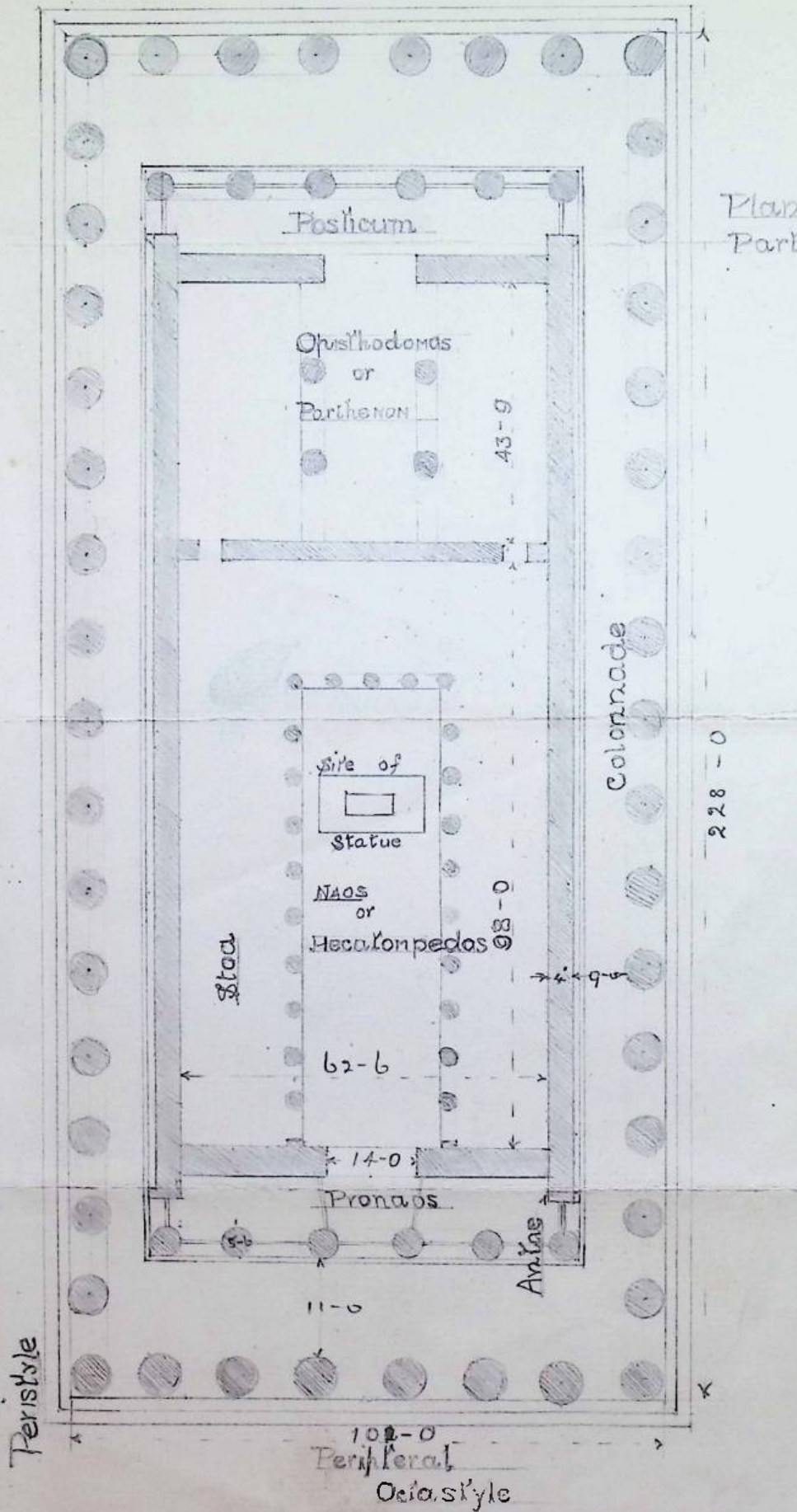
(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10  
Forster

Ques: 6

Plan of Parthenon, ATHENS



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horstel

Subject

Architecture

Stage

1

Teacher, Mr.

Howells

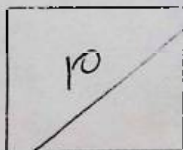
\* Date

Oct 17<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.



## Architecture

### Prothion at Athens

Description. The Prothion was erected ~~400 B.C.~~

ques. 7

its architect was Mnecicles and is situated in the Acropolis north of the Parthenon. The order employed was the Ionic and is an interesting example owing to the irregular planning probably due to its sloping site and the fact that it consisted of three distinct shrines, the eastern portion being dedicated as the shrine of Athena Polius (guardian of the city) western portion to those of Erechthius and Poseidon. There are three porticoes of different designs an eastern Ionic hexastyle portico, a northern Ionic tetrastyle portico and a southern Caryatid portico but the eastern portico probably formed the principal entrance. The north portico gave access to the western cella which is on a level 10 feet below the eastern one and is approached by a wide flight of steps on the north. The columns in this portico are diastyle and are 2-9 diameters and 25 feet high and the doorway being of the finest workmanship. The southern portico was probably not an entrance but a raised tribune and consists of 6 sculptured draped female figures spaced similarly to the northern portico and resting on a marble wall 8 feet above terrace and supporting an unusual entablature on which rests a marble supported roof. The exterior, built in marble, owes much of its character to its sloping site and unusual disposition of the porticoes. The capital has a plaited torus mould between the volutes once inlaid with coloured glass or stones and bronze embellishments were fixed to parts of it. The spiral volutes appears to have been finished by hand and enriched with fillets. The abacus is enriched with egg and tongue ornament. The eastern portico is similar although less rich. The angle columns in each portico have volutes arranged to show on both faces and the whole building crowned with an entablature 5 feet high.



WIGAN AND DISTRICT

# Mining and Technical College,

SESSION 190 -190

*212*

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

*Fred Horster*

Subject *Architecture*

Stage *I*

Teacher, Mr. *C. Howells*

\* Date *Oct: 24<sup>th</sup> 1910*

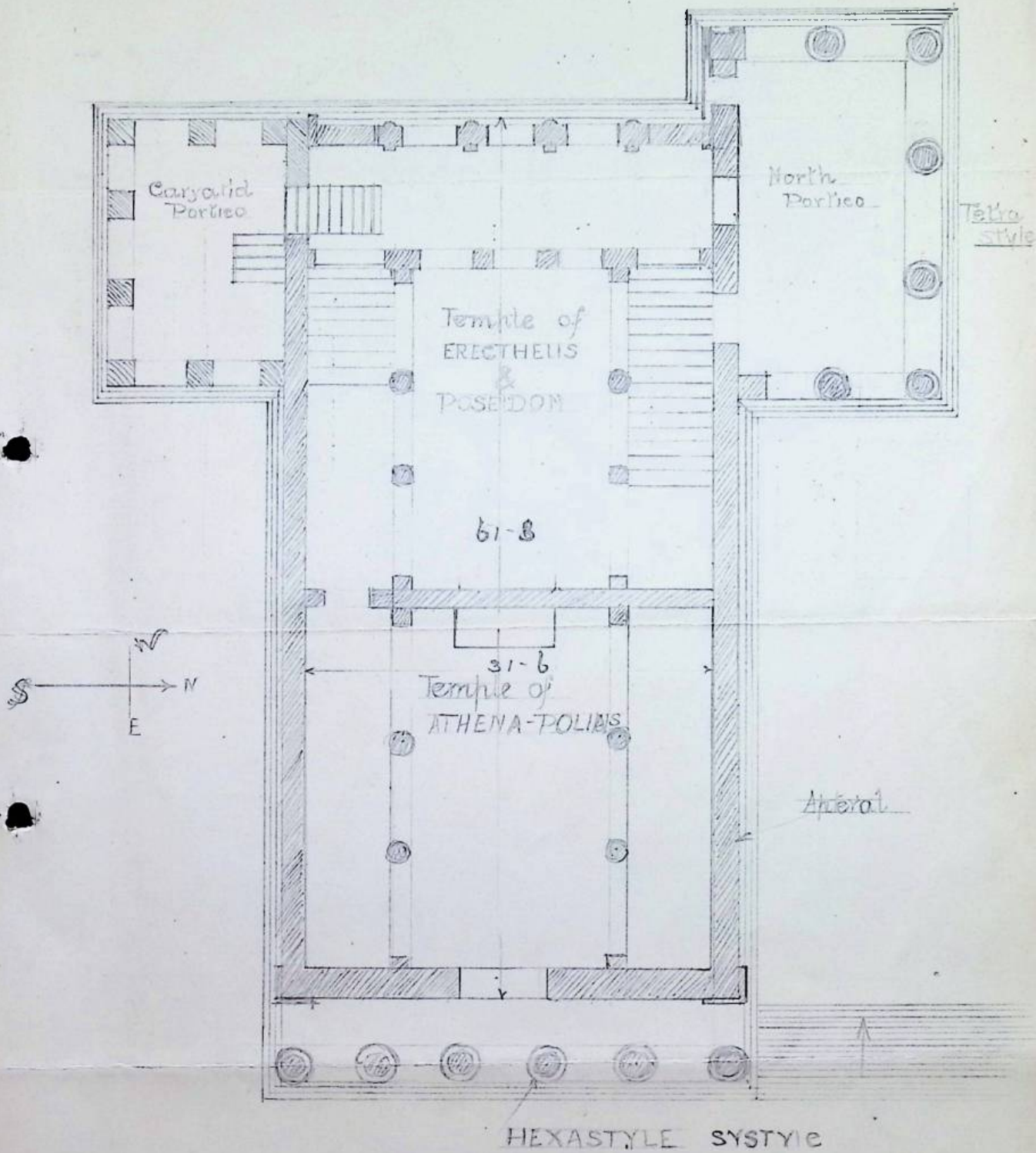
MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

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Quest. 7



— PLAN of ERECTHEION, ATHENS —

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286
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## HOME WORK EXERCISE

WRITTEN BY

Thed. Forster

Subject Architecture

Stage D

Teacher, Mr. Howells

\* Date Oct. 24 1910

MARKS AWARDED.  
(Possible Marks, 10)

10
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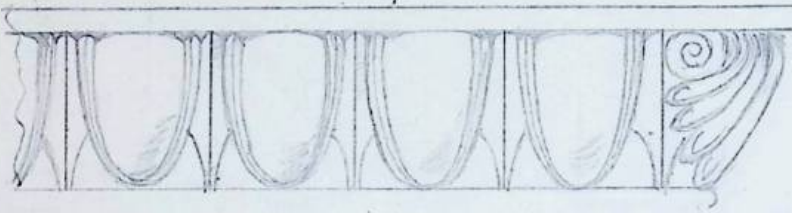
\* This should be the date of the lesson at which the work was set.

— Architecture —

— Greek Ornament —

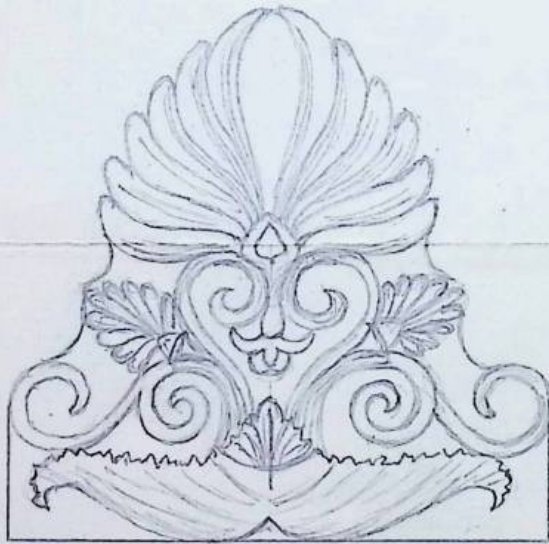


Honey Suckle Ornament

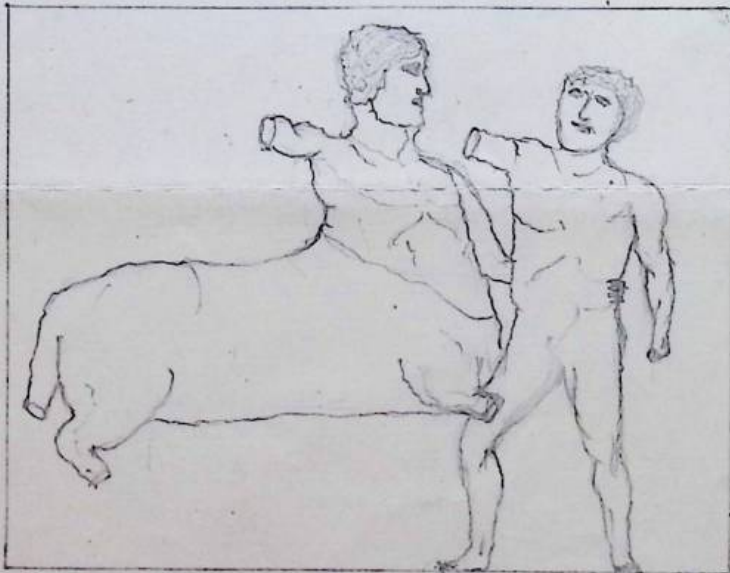


Egg & Tongue

Ovolo



Antefixa Ornament



Sculptured  
metope

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Frederic Howells

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Oct 31<sup>st</sup> 1910

MARKS AWARDED.  
(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10

# — Architecture —

- Caisson** a sunk panel in ceiling of vaults, or domes and also in the soffit of Corinthian and Composite entablatures.
- Chalcidæ** a small room in the baths and other buildings appropriated for conversations
- Bay:** The division of compartment into which the nave or roof of a building  
a principal compartment or division in the architectural arrangement of a building.
- Podium** A continuous basement or pedestal of a dwarf wall used as a substructure for the colonnade and usually terminated with a pedestal and used for a statue
- Pedestal** A substructure frequently placed under columns in classic architecture and consisted of three parts the lower part called the base, the central the dado or die and the top portion the cornice.
- Dome:** The spherical or other wise formed convex roof over a circular or polygonal building
- Cupola** a term properly speaking confined to the under side of ceiling of a dome
- Vault** An arched covering in stone or brick over any space
- Cross Vault** That formed by the intersection of two or more simple vaults
- Caryatide** Sculptured <sup>human</sup> female figures used as columns or supports for entablatures
- Stret** a labyrinthine ornament formed of one or more small fillets alternately disposed in a vertical and horizontal positions and extending to nearly equal distances in each direction
- Intercolumniation** The distance of one column to the next of a series forming a colonnade or portico

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190 .

~~412~~

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Hooster

Subject

Architecture

Stage

D

Teacher, Mr.

Howells

\* Date

Nov 7<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

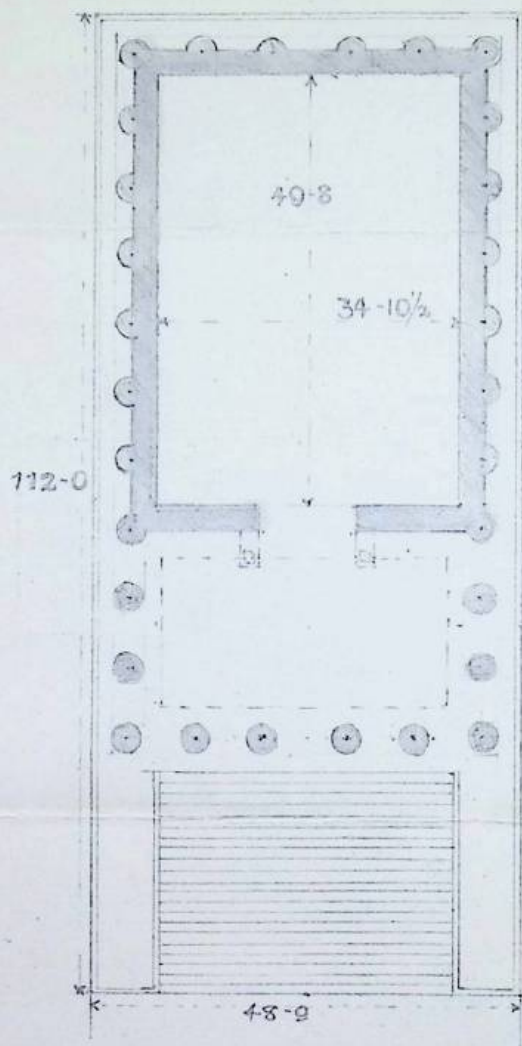
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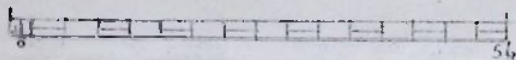
— Architecture —

A pseudo-peripteral, prostyle, hexastyle, temple

Quest 10



PLAN of TEMPLE MAISON CARRÉE. Nîmes





WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject

Architecture

Stage

F

Teacher, Mr.

Howells

\* Date

Nov: 7<sup>th</sup> 1910

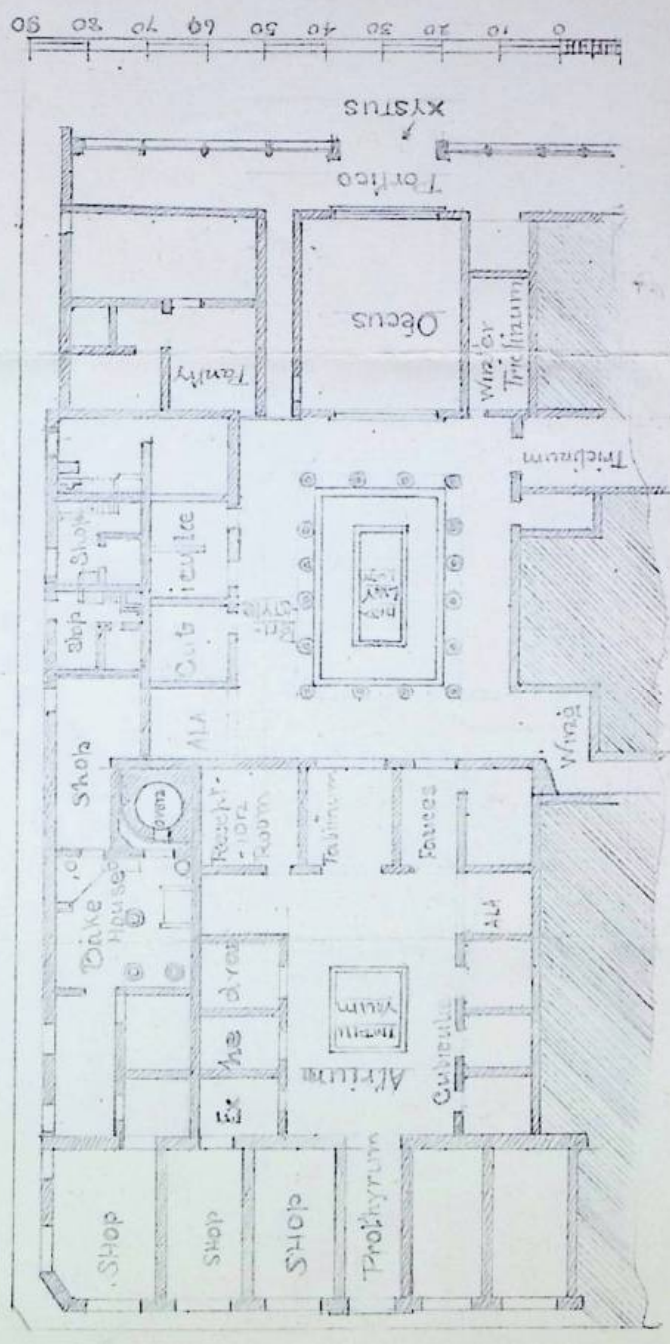
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(Possible Marks, 10)

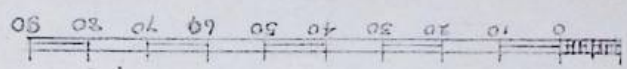
\* This should be the date of the lesson at which the work was set.

10

Ans: 11



Scale

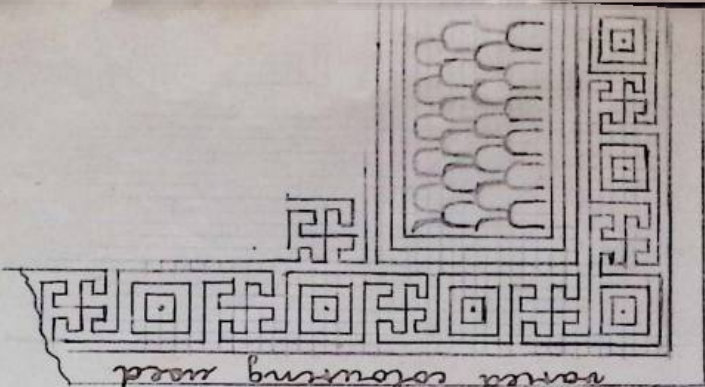


Plan of House of Trajan at Pompeii

The decorations of the walls were painted in bright and dark colours using black extensively as a ground and usually dark being placed near the foot with the brighter colours above.

The floors were usually set out in geometrical form and laid in mosaic; a greater portion were in black and white although there were bright and varied colouring used.

Example of mosaic pavement in black and white marble



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Hooster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Nov. 11<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

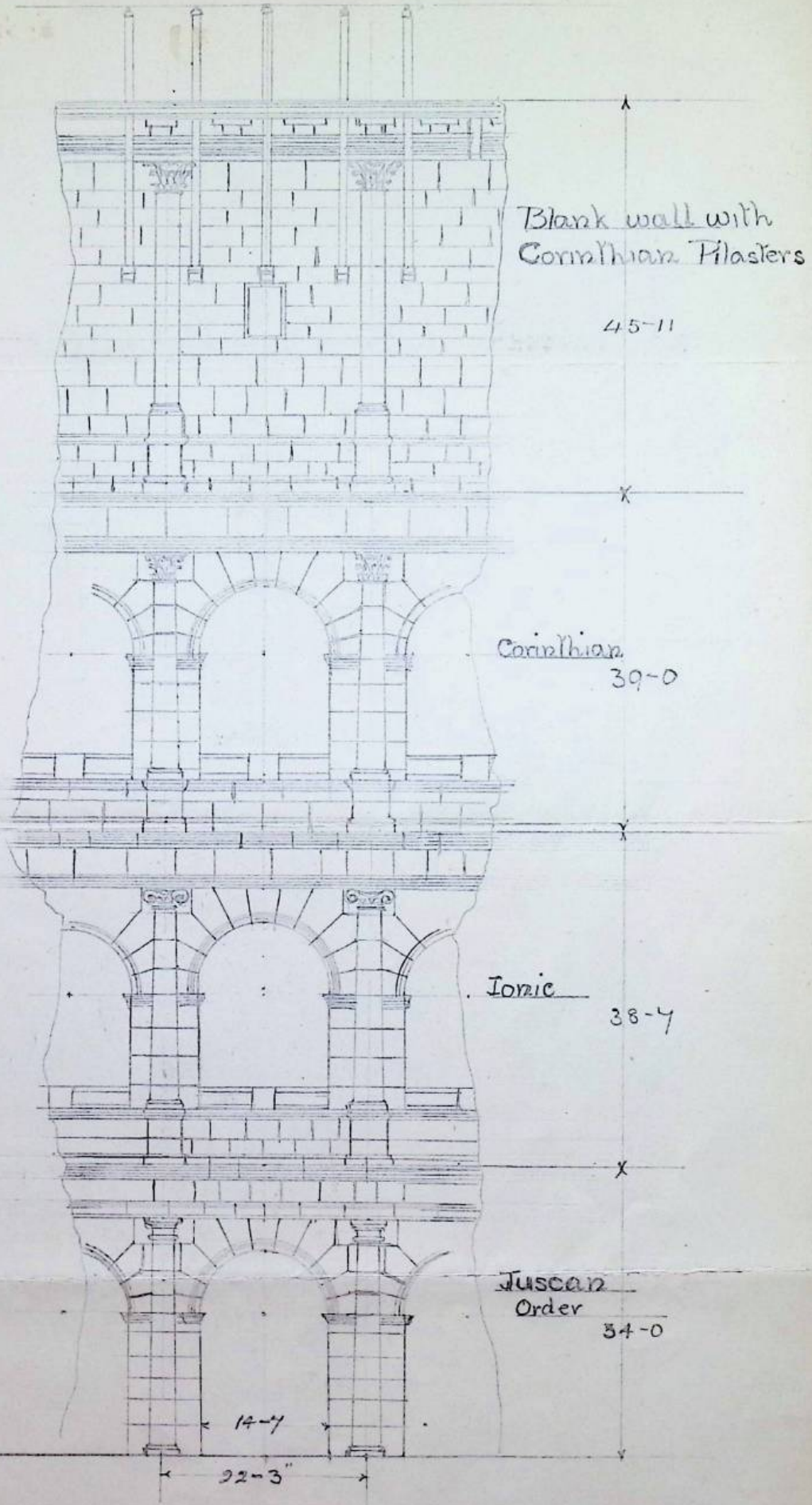
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V.S.  
10

== ARCHITECTURE ==

Ques: 12

Front Elevation  
of A Bay of  
COLOSSEUM. ROME



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject Architecture

Stage \_\_\_\_\_

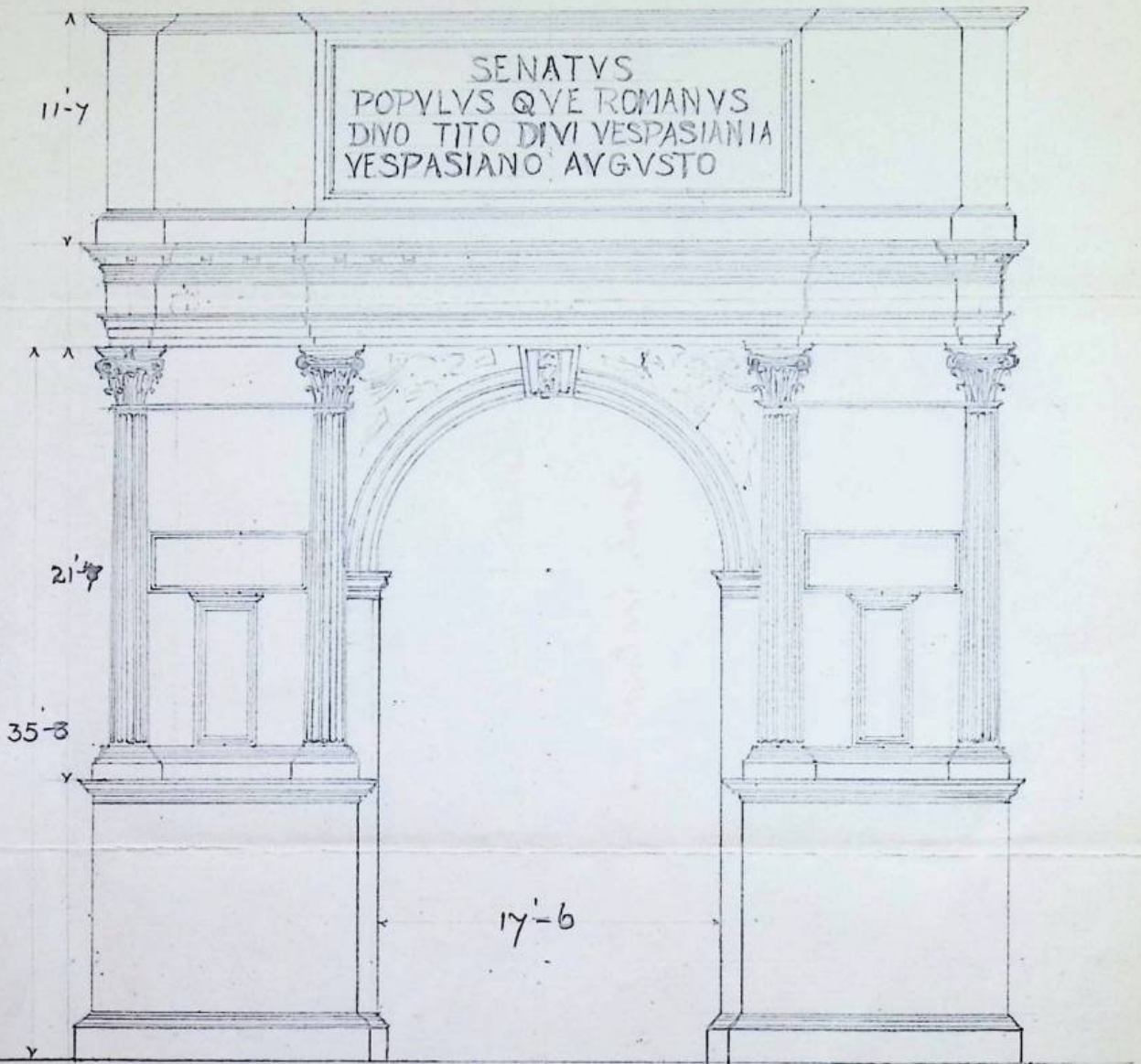
Teacher, Mr. Howells

\* Date Nov 21<sup>st</sup> 1900

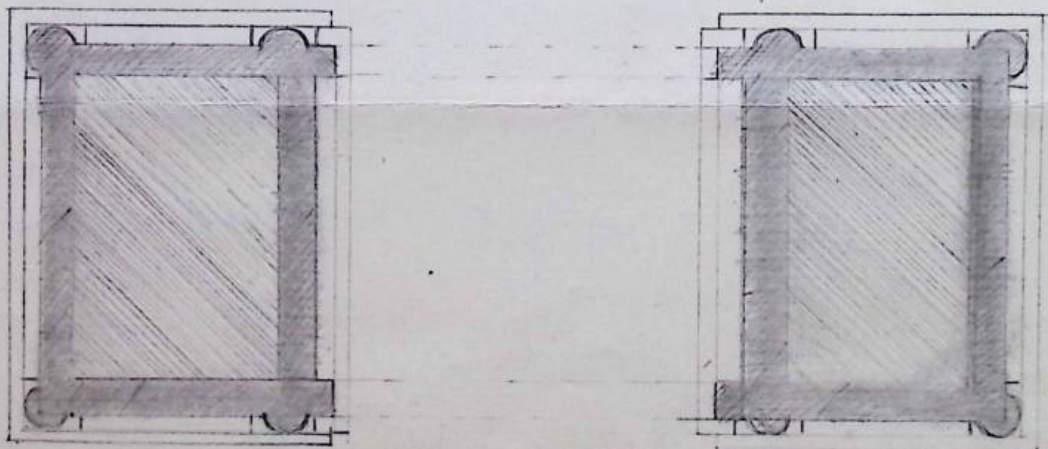
MARKS AWARDED.  
(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10<sup>EX</sup>



ELEVATION of ARCH of TITUS. Rome



PLAN

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

256

## HOME WORK EXERCISE

WRITTEN BY

Fred Horster

Subject Architecture

Stage \_\_\_\_\_

Teacher, Mr. Howells

\* Date Nov: 28 <sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10

## Architecture

Description The Colosseum or Flavian Amphitheatre was commenced by Vespasian in A.D. 70 continued by his son Titus and completed with the exception of the upper story by Domitian in A.D. 82. It is the finest and largest example of its kind in the world consisting of a vast ellipse in plan measuring externally 620 ft by 513 and divided by 80 openings. The arena is oval shaped measuring 287 ft by 180 ft and surrounded by a wall 15 ft high. The height of the building was 157 ft which was divided into 4 stories but the building originally was 120 ft to the top of the third order but after a wall was built on the top 37 ft high. The three lower orders consisted of semicircular headed openings there being 80 in each story and separated by piers on which were attached columns, of the Tuscan order in the bottom story the Ionic in the second, and the Corinthian in the third. The stone wall on top is almost blank except it is enriched with Corinthian pilasters, and openings left in each alternate panel. Above these openings there is a row of corbels set around the building <sup>and are</sup> supposed to have carried the masts of the Velarium. The seats were built of solid stone to which access was made from the 80 openings by means of stair cases and corridors radiating from the walls. The radiating walls were built of concrete where there was the least weight, tufa stone and travertine stone where there were the heaviest pressures. There was no mortar used but the system of construction was one of concrete vaults resting upon the same material 2-3 thick faced with travertine stone 4-0 thick and lined with 9" of brickwork; also marble was made use of for columns, cornices, seats, and ornamental purposes. The concrete was made in 3 varieties viz lava the first where great strength was required, tufa and brickbats where less strength was required and pumice stone where lightness was required. The auditorium has four ranges of seats the two lower ones forming the grand tiers and the third separated from the second by a wall, and the top being the later addition was in the peristyle form. The seats rise up from the arena underneath of which are stair cases and corridors formed.

Ques. 104



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Forster

Subject Architecture

Stage +

Teacher, Mr. Howells

\* Date Dec 5<sup>th</sup> 1910

MARKS AWARDED.  
(Possible Marks, 10)

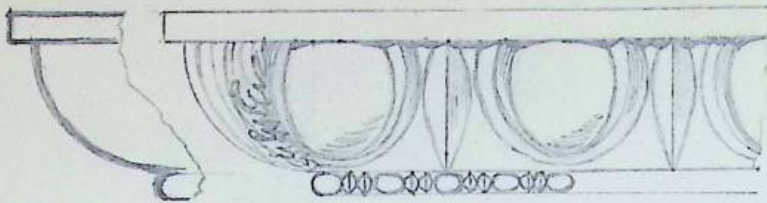
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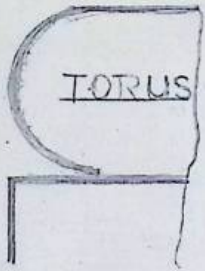
— ARCHITECTURE —

Ques. 25

— OVOLO —



— EGG - & - TONGUE —



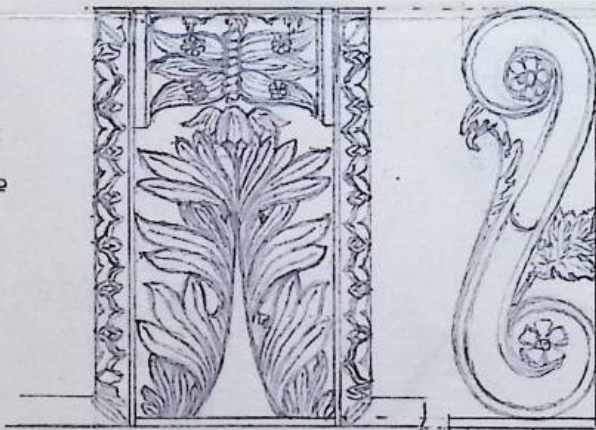
TORUS



— BAY-LEAF-GARLAND —

— Console —

Looking up



From — TEMPLE — JUPITER — STATOR — ROME —

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Forster

Subject Architecture

Stage

Teacher, Mr. Howells

\* Date Dec 12<sup>th</sup> 1910

MARKS AWARDED.

(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10

## Architecture

The periods of Norman and English Gothic Architecture according to Rickman

The first period: Norman lasting from 1066 to 1189

The kings reigning during the period	}	King William I	from	1066	to	1087
		" William II	"	1087	"	1100
		" Henry I	"	1100	"	1135
		" Stephen	"	1135	"	1154
		" Henry II	"	1154	"	1189

Second period: Early English from 1189 to 1307

King Richard I	from	1189	to	1199
" John	"	1199	"	1216
" Henry III	"	1216	"	1272
" Edward I	"	1272	"	1307

Third period: Decorated from 1307 to 1377

King Edward II	from	1307	"	1327
" Edward III	"	1327	"	1377

Fourth period: Perpendicular from 1377 to 1546

King Richard II	from	1377	to	1399
" Henry IV	"	1399	"	1413
" Henry V	"	1413	"	1422
" Henry VI	"	1422	"	1461
" Edward IV	"	1461	"	1483
" Edward V	"	1483	"	—
" Richard III	"	1483	"	1485
" Henry VII	"	1485	"	1509
" Henry VIII	"	1509	"	1546

The periods given by Sharp were termed the Romanesque style which included seven periods.

Romanesque      Gothic	}	First: Saxon	lasting from	—	to	1066
		Second: Norman	"	1066	to	1145
		Third: Transitional Gothic	"	1145	"	1190
		Fourth: Lancet	"	1190	"	1245
		Fifth: Geometrical	"	1245	"	1315
		Sixth: Curvilinear	"	1315	"	1360
		Seventh: Rectilinear	"	1360	"	1550

} Early English  
Decorated  
Perpendicular

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Forster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Dec: 19<sup>th</sup> 1910

MARKS AWARDED.  
(Possible Marks, 10)

\* This should be the  
date of the lesson  
at which the work  
was set.

--

## Architecture

Roman basilicas were erected as courts of justices and exchanges for merchants.

The early christians made use of these buildings for worship, also, copied the plans of them when building their own.

The planning of them was usually rectangular in plan with large <sup>semi</sup> circular recesses at each end known as apses; but the entrance was made from the side of the basilica.

The ordinary basilica consists of a large hall which corresponds with the nave of modern churches and occupies about  $\frac{3}{4}$  of the building; the remaining parts forming a transverse aisle which intervenes between the hall and the semi circular apse.

Ques: 179

The hall was usually divided by rows of columns into three and sometimes five parts. Sometimes the aisles were covered with galleries which, along with the hall was used by merchants and spectators.

The transverse portion was usually raised a little above the hall and was used by notaries and advocates.

The apses was used by the judges who occupied elevated seats erected therein. and in front of the apse the altar used for offerings was placed.

The exterior of the building was generally plain, but the interior was treated with lavish decorations.

The roofs of them were generally constructed of wood of the ordinary type of roof, and in some cases vaulting was used to cover them.

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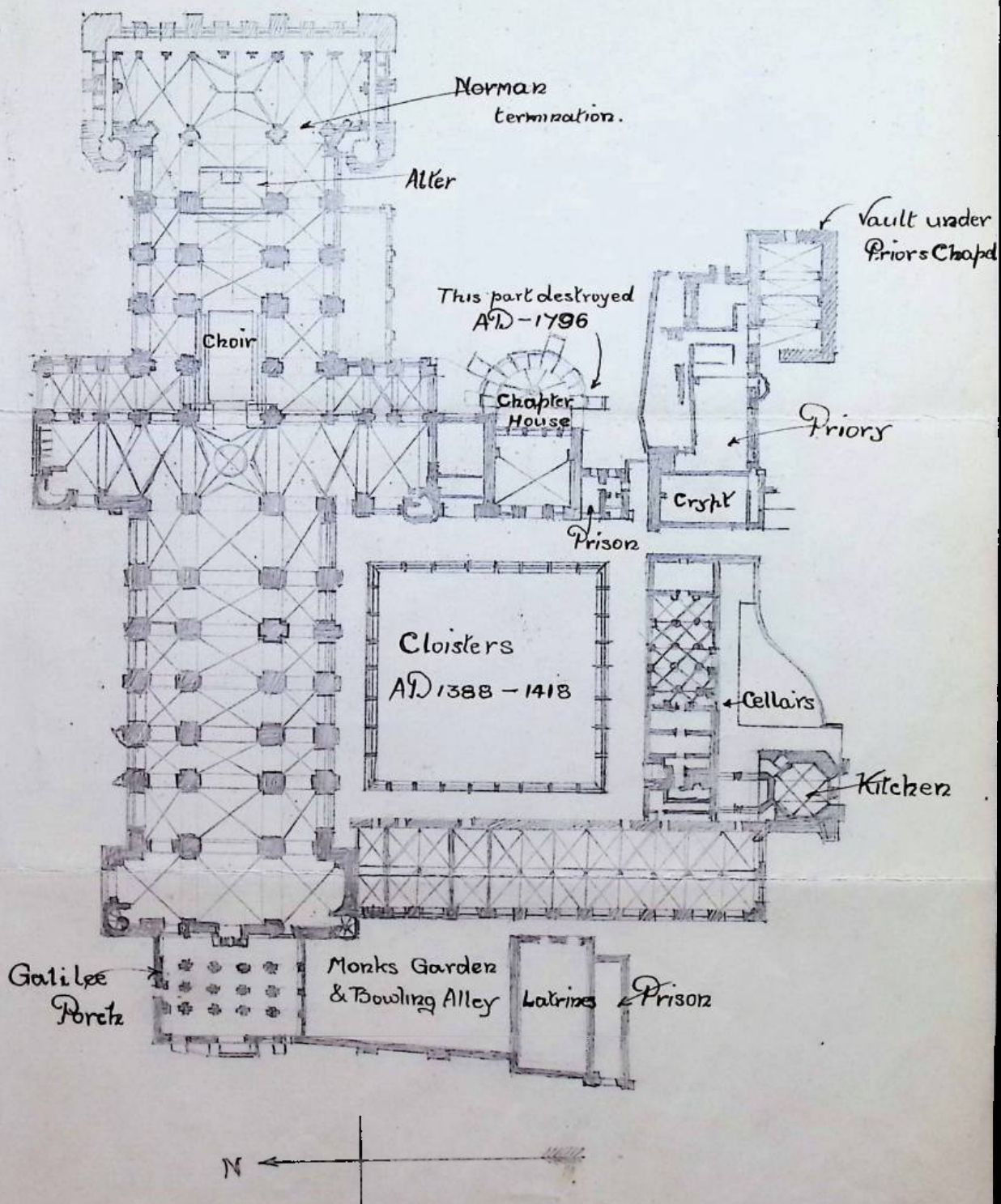
10

# — ARCHITECTURE —

QUES:

PLAN of NORMAN CATHEDRAL

from DURHAM



This was not asked for  
but it is an excellent drawing



WIGAN AND DISTRICT  
Mining and Technical College.

SESSION 190 · -190

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WRITTEN BY

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Subject Architecture

Stage D

Teacher, Mr. Howells

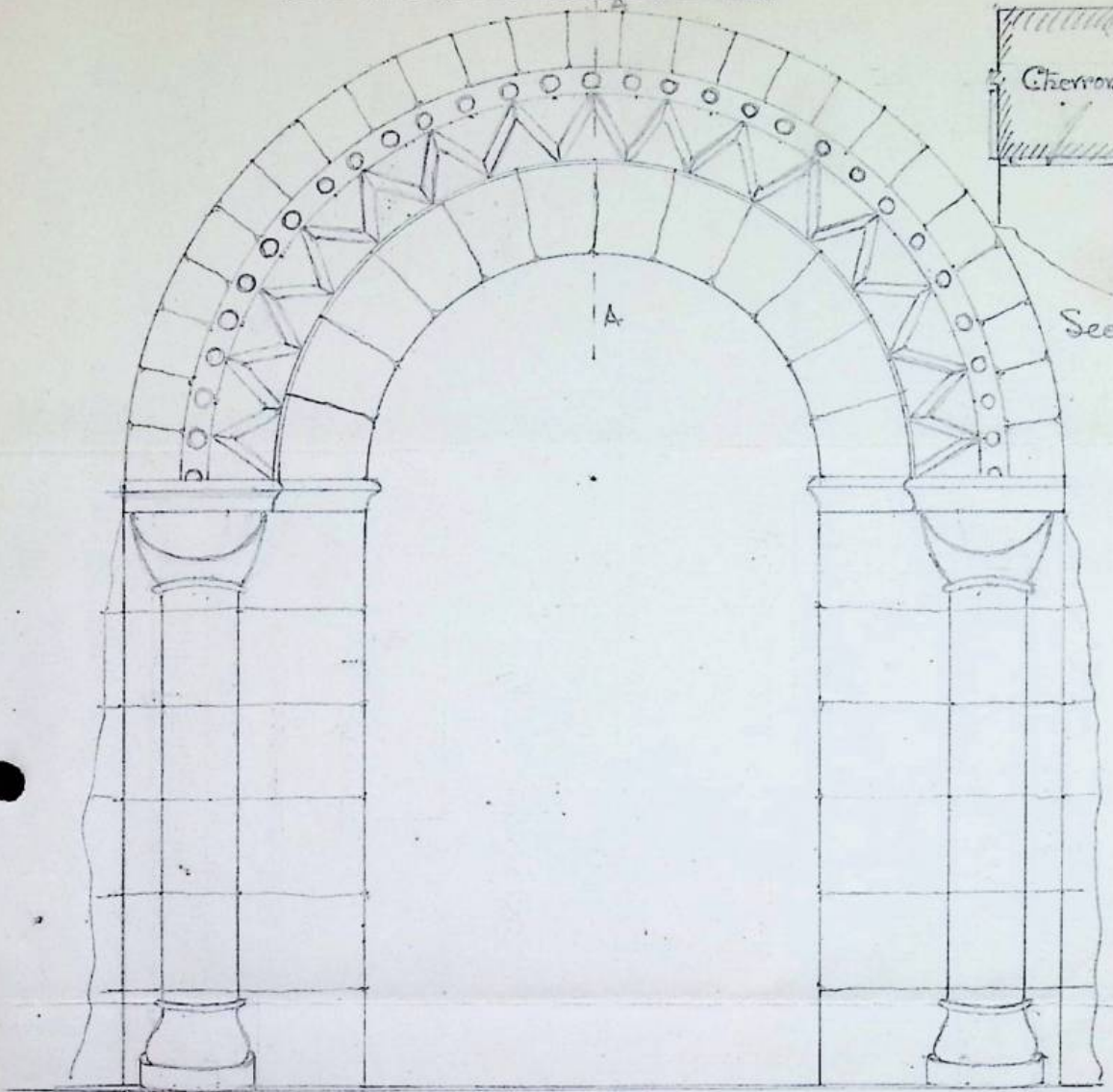
Date Jan 19<sup>th</sup> 1911

MARKS AWARDED.  
(Possible Marks, 10)

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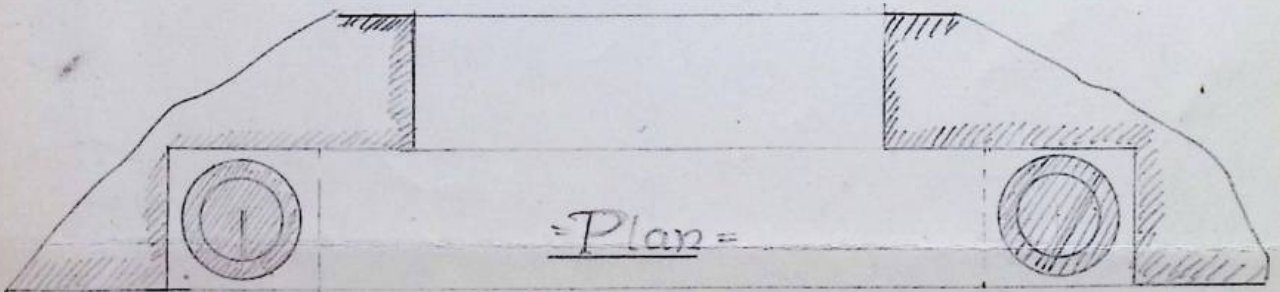
10<sup>EX</sup>

— ARCHITECTURE —

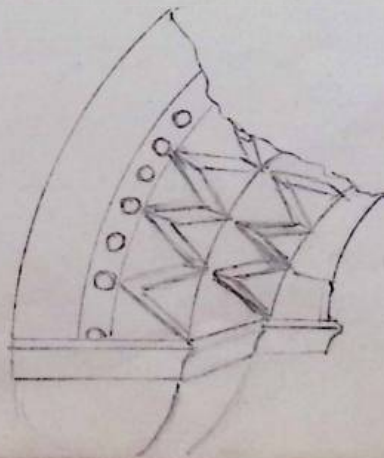


— Elevation of A Norman Door —  
— from —

— Woolston Church Warwickshire —



Ques:



Sketch showing Zigzag mould  
or soffit of projecting arch

WIGAN AND DISTRICT  
Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

HOME WORK EXERCISE

WRITTEN BY

Hred Forster

Subject Architecture

Stage D

Teacher, Mr. Howells

\* Date Jan 16<sup>th</sup> 1911

MARKS AWARDED.  
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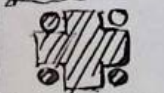
10

Architecture

Norman architecture was the period between the years 1066 to 1189 in which time most of the cathedrals were commenced by the Normans. The general planning takes the form of a cross consisting of a nave, chancel and transept with an apsidal termination at the east end of the chancel, also a low massive tower supported on semicircular arches over the intersection of the nave and transept. The interior was arranged in three tiers the lowest and largest tier opened out into the aisles which were continuous throughout the choir and nave. The space was divided into large semicircular headed openings by central piers from which the arches sprang. Above these arches there is a string course and then the second tier of triforium which opened into the nave by means of semicircular headed openings separated by piers; these openings were again divided into two semicircular headed openings springing from a central pier. Then came the string course and the third tier of clerestory in which we find a three semicircular arched headed openings separated by two central piers in one bay, and these three being spanned by one semicircular arched headed opening.

The windows were usually very small and deeply splayed and arranged in groups of 3, 4, or 5 lights and generally semicircular arched head. also circular windows were used in the west front. The doorways of the earliest examples were plain, but in the later examples instead of shallow jambs being used, very deep ones were employed and were very richly decorated with small columns. The arches over these openings were semicircular, segmental or horseshoe shaped. The walls were very thick therefore there was little use for buttresses and those which were used were broad, and flat, without any mouldings or string courses in them except in the later style. The outside of the walls were formed of slabs of stone on the face and the space afterwards filled in with gouted rubble. In later work the exterior of walls were decorated with arcading. The piers of the earliest work were massive, but as the style developed lighter proportions were used. Various forms were used and were sometimes isolated and clustered and sometimes they were ornamented with flutes or channels of various forms. The capitals resembles somewhat a bowl truncated and other were used decorated with foliage, animal and human forms. The bases resemble the attic base with the addition of the foot ornament. The mouldings were Chevron, Belet Nail head, beak head double cone and Bossell

arcading



Pier & pier



capital



chevron

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190 .

NUMBER OF CLASS TICKET.

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WRITTEN BY

Fred Forster

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Jan 23<sup>rd</sup> 1911

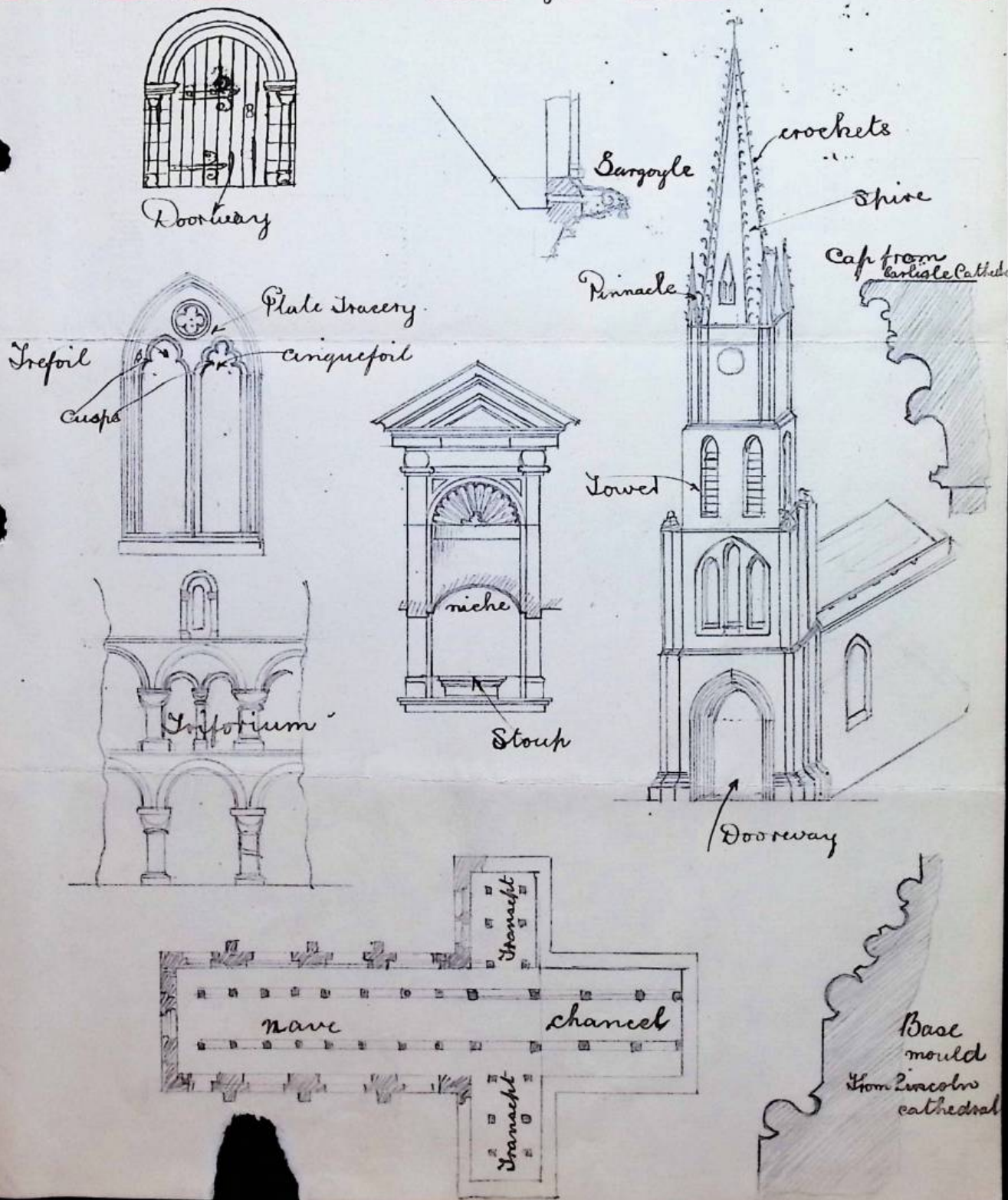
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10

- Nave** The main body of a cathedral extending from the chancel or choir to the principal doorway
- Chancel** The portion extending from the nave set apart for the clergy and choir.
- Triforium** The space formed between the sloping roof and the aisle vaulting and open to the nave.
- Porch** The exterior appendage to a building forming a covered approach to one of its principal doorways



WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

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## HOME WORK EXERCISE

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Subject Architecture

Stage I

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\* Date Jan 30<sup>th</sup> 1911

MARKS AWARDED.

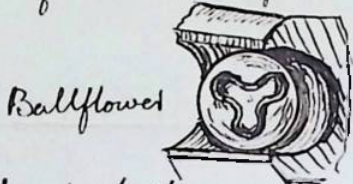
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**Aisle:** The lateral divisions of a church which run parallel to the nave and usually separated <sup>from it</sup> by pillars and columns

**Arcade:** A series of apertures separated by pier or columns from which arches spring and used for the decoration of wall surfaces



Ballflower



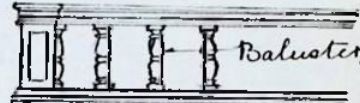
arcade

ashlar

**Ashlar:** Squared stonework in regular courses

**Ballflower:** An ornament resembling a ball placed in a circular flower the 3 petals of which form a cup round it

**Baluster:** A small pillar or column supporting a handrail coping or cornice

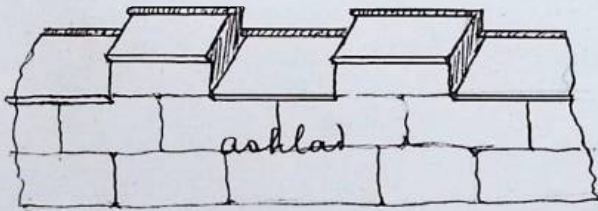


Balusters

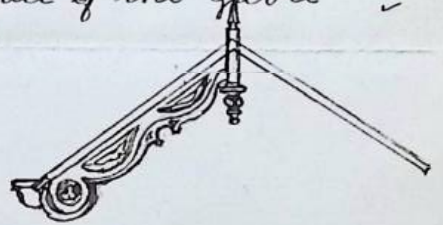
Balustrade

**Balustrade:** A range of pillars or balusters

**Bargeboard:** The ornamental timber fixed at the ends of a roof which projects over the face of the gable



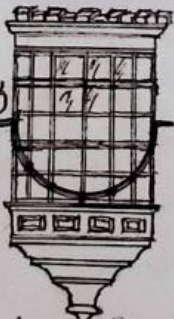
ashlar



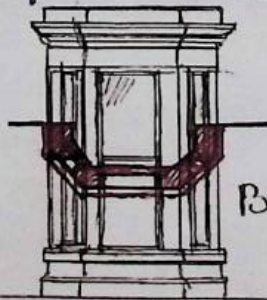
**Battlement:** A notched or indented parapet wall

**Baywindow:** A window forming a recess in a room and projecting outward from the wall and may be rectangular, polygonal, or semicircular

**Oriel** A window or other recess corbelled out from the face of the wall by means of projecting stones



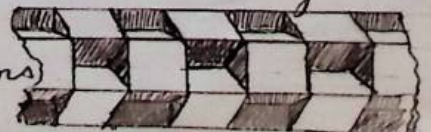
oriel window




Baywindow

**Belfry:** A term generally applied to the upper room in of a tower in which the bells are hung

**Billet Mould:** A mould used by the Normans





- Doorway Is the framework of an opening in a wall for a door
- Tower A polygonal building which projects above the roof of a cathedral and is chiefly used for carrying the bells
- Tracery The ornamental pattern work in stone filling the upper part of a Gothic window and may be either "plate" or "bar" tracery
- Cusps The terminations formed by the curved parts in a trefoil, quatrefoil, or cinquefoil, tracery
- Trefoil The ornaments in a window or door head forming the two cusps. <sup>There may be three cusps</sup> 
- Cinquefoil The five cuspidated divisions or curved pendants inscribed in the head of a Gothic window or door head
- Stoup A shallow bowl for water usually placed in a niche in the chancel wherein the priest laved his hands before the performance of sacred rites.
- Gargoyle The grotesque carving of animals or human heads placed usually at the angles of the tower of a church or on the exterior of it, and serving as a spout in a case of overflow.
- Brackets Ornaments of projecting leaves or bunches of foliage used to decorate the ribs of pinnacles or spires
- Niche A recess in a wall for the reception of statue, or vase, etc.
- Spire The pointed termination of a tower of a cathedral and is either pyramidal, octagonal or conical.
- Pinnacle A small turret like termination placed on the top of buttresses or elsewhere and ornamented with crockets
- Transept The transverse part of a cathedral usually at right angles and between the nave and the chancel

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

NUMBER OF CLASS TICKET.

286

## HOME WORK EXERCISE

WRITTEN BY

Fred Horstet

Subject Architecture

Stage I

Teacher, Mr. Howells

\* Date Jan 30<sup>th</sup> 1910

MARKS AWARDED.  
(Possible Marks, 10)

\* This should be the date of the lesson at which the work was set.

10 RF.

WIGAN AND DISTRICT

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SESSION 190 -190 .

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## HOME WORK EXERCISE

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Fred Forster

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Stage I

Teacher, Mr. Howells

\* Date Feb 6<sup>th</sup> 1911

MARKS AWARDED.

(Possible Marks, 10)

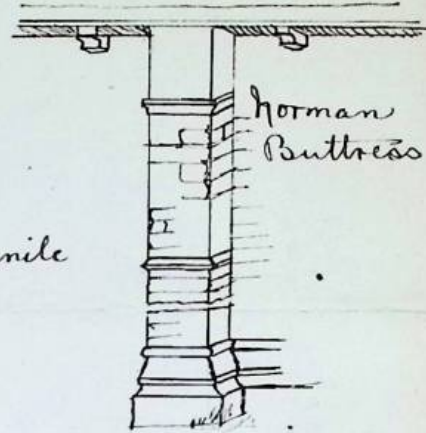
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10/80

**Buttress:** A mass of masonry projecting beyond the face of the wall to create additional strength and support



Campanile



Norman Buttress

**Canopy:** An ornamental projection over doors windows ~~or~~ coverings over niches and tombs

**Campanile:** An Italian name for a bell tower generally detached from the main building and sometimes attached to it

**Cloisters:** - Covered passages of communication surrounding a square open space called the garth and connecting the cathedral to the chapter house, refectory and other parts of the monastery to which they were attached.

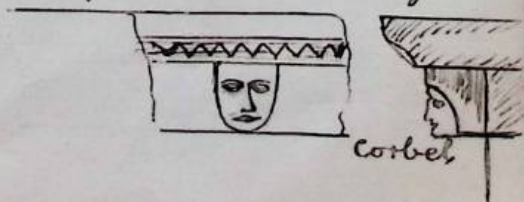
**Cathedral:** The principal church of a diocese in which the throne of the bishop is placed.

**Chantry chapel:** - A small <sup>Chapel</sup> church in an ancient church, with an endowment for one or more priest.

**Chapter house:** - The place of assembly for the abbot or prior and members of a monastery for the transaction of business relating to the general body of the society and usually opened out of the cloisters on the eastern most side, and usually polygonal on plan with a vault resting on a central pillar.

**Choir:** - That portion of the church usually eastward of the nave set apart for the clergy and the choristers during service.

**Corbel:** - A block of stone or timber projecting from a wall and supporting the beams of a roof or any other weight; they are often elaborately carved or moulded



Corbel

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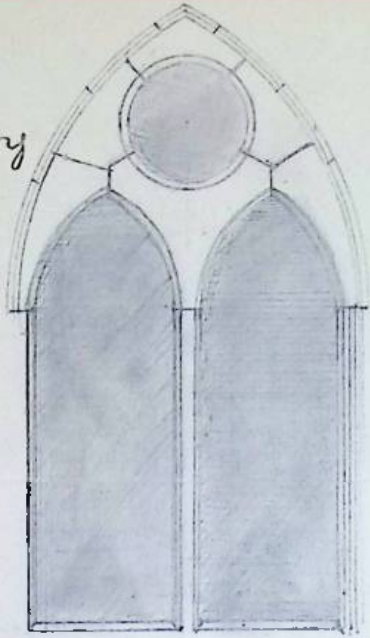
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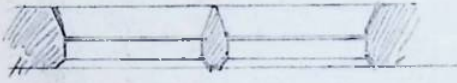
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Plate Tracery



Example of Early  
English window from  
Lapachmere, Sussex  
1220



WIGAN AND DISTRICT

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SESSION 190 -190 .

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WRITTEN BY

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Subject Architecture

Stage II

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\* Date Feb 6<sup>th</sup> 1911

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The planning in the Early English remained much the same to the Norman, except the concentration of the weight of the roof and vaulting on to buttresses instead of the walls, also a square end was formed for an apse later in the period. The walls are lighter and the nave compartments were made oblong in place of the former square divisions also flying buttresses were introduced in this period. Piers:— These as a general rule were grouped together; shafts of various section were used some being circular, octagonal, diagonal, and cruciform in plan.

In some cases small columns are used which almost hide the central shaft and these were sometimes detached but connected at intervals with bands

The capitals are various but the most common form is the plain bell shaped moulding but in addition there are some ornamented with leaf forms and occasionally animals and birds heads. The most prevalent base moulding used was one similar to the Attic base

Arches:— The treatment of the arch is one thing which marks the difference between this period and the Norman the pointed arch taking the place of the semicircular one

Windows: These were usually long and narrow and had a lancet arch turned over them; they were usually without cusps but later in the style the trefoil head was used; circular windows was also freely used.

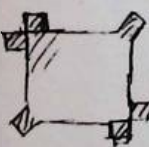
Doorways These have an arched head sometimes very much pointed; with a large number of mouldings and decorated with the dog tooth ornament. The jambs are also decorated with narrow columns: Some of the larger doorways are divided into two openings by a shaft but a number of smaller shafts clustered and approached by porches. Steeples: The towers are much taller than those in the Norman, and with spires on the top.

The spire was developed in this period and was usually octagonal in plan and ornamented with Lucarnes, and ribs ornamented with crockets.

Roofs and Vaults: The chief vault used was the plain 4 part vault or quadripartite vault. There does not appear to be any Early English wood roofs entire but it is probable the simple tie beam was used.

Buttresses: There were 4 kinds of buttresses used but the types most commonly used are those with the long slender buttress with narrow face and great projection usually placed diagonally at the angle of a building and that types with two buttresses at each angle.

Moulds: These are generally boldly rounded and deeply undercut and consists of plain rounds and hollows; the hollows of the mould are often filled with the dog tooth ornament or with foliage. The chief ornaments are the dog tooth and carved diaper patterns were used to decorate the walls also in spandrels of door arches trefoils and quatrefoils are used and the cusps foliated. Elegant carved foliage was much used, the typical example being that of a flowing curved line with foliage springing from it



This is not a quadripartite vault

in 3 or 4 leaves



WIGAN AND DISTRICT

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I

Teacher, Mr.

Howells

\* Date

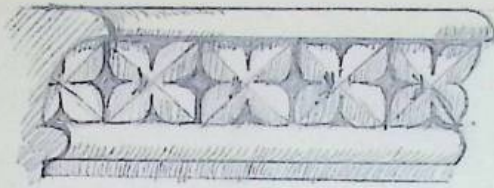
Feb 13<sup>th</sup> 1911

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Early English  
Dog Tooth



Early English Capital  
from Romsey Church HANTS



Early English  
Crocket

VS

WIGAN AND DISTRICT

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Stage I

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10

## Architecture

Decorated period from 1307-1377.

The general proportions of the building were less lofty than in the preceding style but the general appearance of the buildings were simple but magnificent. In the interior there is one of the most striking changes from the Early English and that being that the clerestory was enlarged with a corresponding decrease in the triforium, also there was the increased number of ribs in the vaulting. Windows: In this period there is an arched opening forming the whole window which was divided by mullions into 2 or more lights and the mullions branched out into flowing tracery. The architraves of the windows are much ornamented with mouldings and sometimes formed into shafts. The heads were commonly equilateral in shape but flat headed and segmental

Uses: 26

forms were used. Doorways The chief difference between the Decorated and Early English is that there is no division between them, also different ornaments were used and we often find that the moulding is continued down to the base of the wall ornaments: The chief ornaments are the bellflower and the 4 leaved flower, carved in the hollows of the mouldings. The use of canopies over doors was adopted the top of which was decorated with crockets and finials. Steeple: The top of the towers usually finished with a battlemented parapet with pinnacles at the corners. The spires were started at some distance behind the parapet with a sort of flying buttress springing from the pinnacles. The spires were slender in proportion and were richly decorated.

Piers These are arranged generally with a diamond wise shaft with as many smaller shafts as would stand close together. The cap and bases differ from the Early English by being not so simple in treatment and more naturalistic. Vaults and Roofs In this period a new set of ribs known as Lierne ribs was introduced besides all the ribs in the Early English. Wooden roofs externally were in the Early English period steeply pitched but with a smaller pitch in the Decorated and were probably of the trussed rafter tie beam or collar braced patterns.

The general ornaments. In these we find in their foliated work very naturalistic forms used based on such plants as the ivy oak vine and seaweed.

The greater use of stained glass lead the larger size with very fine tracery worked in them. Fittings in wood such as choir stalls, pews, pulpits etc were also largely decorated.

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190 .

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## HOME WORK EXERCISE

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Fred Forster

Subject Architecture

Stage II

Teacher, Mr. Howells

\* Date Feb 9<sup>th</sup> 1911

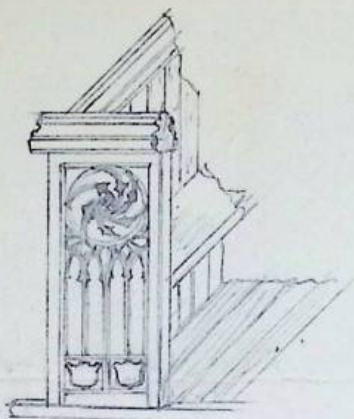
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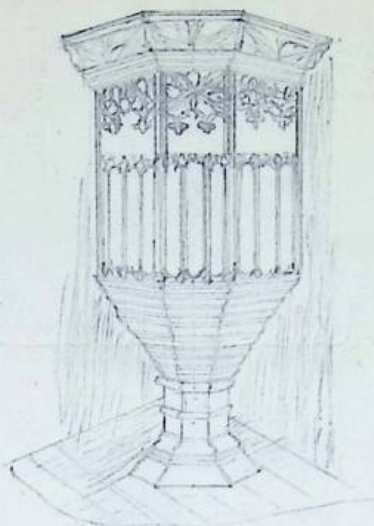
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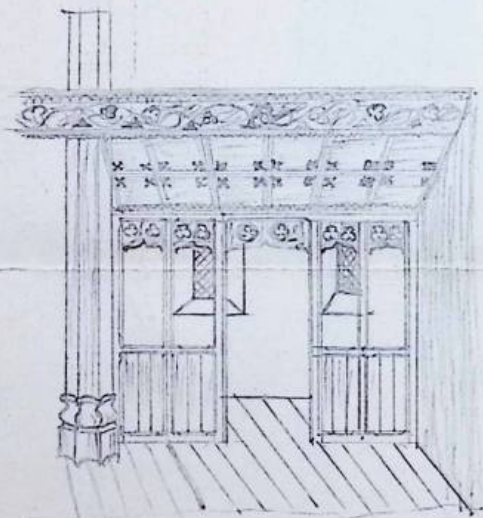
— Architecture —



— Pew. Sreepie Aston. Oxon. —

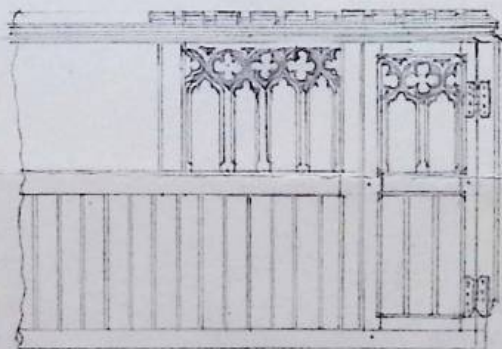


— Pulpit Wolvercol. Oxon. —



— Rood loft. Handborough —

— Oxfordshire —



— Parclose screen. Geddington Church —

— Northants —

2ues: 27

WIGAN AND DISTRICT

# Mining and Technical College.

SESSION 190 -190

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286

## HOME WORK EXERCISE

WRITTEN BY

Fred Forster

Subject Architecture

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Teacher, Mr. Howells

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