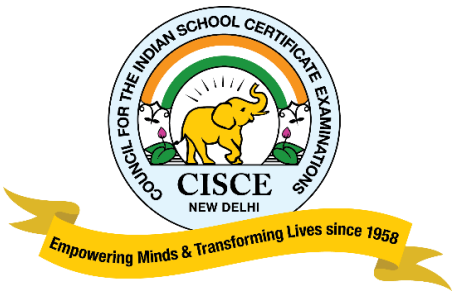
ISC

YEAR 2027

INDIAN SCHOOL CERTIFICATE EXAMINATION



GEOMETRICAL AND BUILDING DRAWING (870)

February 2025

© Copyright, Council for the Indian School Certificate Examinations

All rights reserved. The copyright to this publication and any part thereof solely vests in the Council for the Indian School Certificate Examinations. This publication and no part thereof may be reproduced, transmitted, distributed or stored in any manner whatsoever, without the prior written approval of the Council for the Indian School Certificate Examinations.

Council for the Indian School Certificate Examinations (CISCE)

MISSION STATEMENT

The Council for the Indian School Certificate Examinations is committed to serving the nation's children, through high quality educational endeavours, empowering them to contribute towards a humane, just and pluralistic society, promoting introspective living, by creating exciting learning opportunities, with a commitment to excellence.

ETHOS OF CISCE

- Trust and fair play.
- Minimum monitoring.
- Allowing schools to evolve their own niche.
- Catering to the needs of the children.
- Giving freedom to experiment with new ideas and practices.
- Diversity and plurality - the basic strength for evolution of ideas.
- Schools to motivate pupils towards the cultivation of:
  Excellence - The Indian and Global experience.
  Values - Spiritual and cultural - to be the bedrock of the educational experience.
- Schools to have an 'Indian Ethos', strong roots in the national psyche and be sensitive to national aspirations.

CLASS XII

There will be two papers in the subject:

Paper I - *Theory: 3 hours…… 80 Marks*

Paper II - *Project Work ……. 20 Marks*

PAPER I (THEORY): 80 Mark

Building Drawing

Candidates will be required to answer **all** questions.

The course on Building Drawing should be based on the form and construction of simple buildings and parts of buildings; small dwelling houses (single and two storey), garages, sheds and green houses.

Orthographic projection in either First or Third Angle projection, including sectional views of buildings and parts of buildings and building details, e.g. foundations, walls (including openings), jambs, sills, lintels and arches, floors and roofs, doors and windows, simple stairs.

Preparation of simple working drawings and details from free-hand sketches.

Free-hand sketching on both orthographic and pictorial form of simple building details and tools used in the various building crafts and school workshops such as hammer, mallet, tri - square, plane chisel, trowel, screwdriver and the like.

Drawing paper (folded) will be provided but candidates may use any type of drawing paper for answering the question provided it is of suitable quality and of the correct size.

PAPER II (PROJECT WORK): 20 Marks

In addition to the syllabus prescribed above, candidates are also required to be assessed in Project Work.

The Project work is to be assessed by the subject teacher and the Visiting Examiner appointed locally and approved by CISCE.

All candidates will be required to have completed **two** projects from any topic/s covered in theory.

Assessment Criteria for different types of Projects

Theory Based Project: Mark allocation for *each* project (10 marks)*:

S. No.	Criteria	Marks
1.	Title of the Project and Introduction	1
2.	Content	3
3.	Presentation and originality	2
4.	Conclusion/Comments/Summary	1
5.	Viva-Voce (Visiting Examiner)	3
	Total	**10**

Model Based Project: Mark allocation for *each* project (10 marks)*:

S. No.	Criteria	Marks
1.	Title of the Project	1
2.	Model construction	4
3.	Concise Project report	2
4.	Viva-Voce (Visiting Examiner)	3
	Total	**10**

Sketching Based Project: Mark allocation for *each* project (10 marks)*:

S. No.	Criteria	Marks
1.	Annotations	3
2.	Line weights	4
3.	Viva-Voce (Visiting Examiner)	3
	Total	**10**

List of suggested assignments for Project Work:

1. **Model Making:**

   Make a Study model to Scale, selecting any topic from the syllabus. Example:

   - Scaled model of Small Residence
   - Detailed model of Staircase
   - Model demonstrating different types of roofs

2. **Market Survey on Building Materials (Online/offline):**

Conduct a market survey of selected building materials which are commonly used in construction along with their rates. Collect samples/pictures of ***any 5*** building materials used (e.g.: Bricks, Wood & Wood Finishes, Flooring, Doors & Windows materials). Prepare a report including:

- The findings of your Market Survey, along with samples/pictures of building materials collected.
- Factors to be kept in mind while selecting building materials.
- Innovation in technologies and other global factors leading to a rapid change in building materials.

3. **Site Study/Desktop Study:**

Select a site (It could be a site which is under construction, a completed project such as an apartment, bungalow, independent villa, interiors of a residence or a project online, etc.). Visit the selected site to understand the type of construction, the materials used and the architectural or interior design.

Prepare a project report highlighting your observations and findings along with site pictures.

4. **Sketching:**

Develop ten free hand sketches of buildings and their details. Examples:

- Door & Window details
- Types of bricks
- Isometric views of building or their details
- Plan & Section details
- One point or two-point perspectives

5. **Working Drawings:**

Prepare two simple working drawings (manually) for any project, including sectional views of buildings and parts of buildings along with building details, with lineweights, e.g.: Civil Drawings, Sections & Elevations, etc.

Students must be given sample working drawings for reference and asked to draft manually with lineweights (This exercise will help students understand the role of consultants who prepare different types of working drawings).

Example: Foundations, walls including openings, jambs, sill, lintels, arches, floors, roofs, doors and windows & simple stairs.

6. **Research Study:**

Study any one of the following topics and present your findings in the form of a report (giving a few examples of projects) **OR** prepare a Powerpoint presentation (of not less than 15 slides) on the same.

- Contemporary/Modern Architecture
- Sustainable Architecture
- Traditional Architecture
- Art Deco
- Brutalist Architecture

7. **Precedent Study - Indian Architecture:**

Conduct a deep and extended study on an **Indian Architect** (e.g. - Charles Correa, B.V. Doshi, Raj Rewal, Laurie Baker, etc.). Prepare a report giving examples of the projects done by the architect, along with images & sketches **OR** prepare a Powerpoint presentation (of not less than 15 slides) on the same.

SAMPLE TABLE FOR PROJECT WORK

S. No.	Unique Identification Number (Unique ID) of the candidate	PROJECT 1					PROJECT 2					TOTAL MARKS
		A	B	C	D	E	F	G	H	I	J	
		Teacher	Visiting Examiner	Average Marks (A + B ÷ 2)	Viva-Voce by Visiting Examiner	Total Marks (C + D)	Teacher	Visiting Examiner	Average Marks (F + G ÷ 2)	Viva-Voce by Visiting Examiner	Total Marks (H + I)	(E + J)
		7 Marks	7 Marks	7 Marks	3 Marks	10 Marks	7 Marks	7 Marks	7 Marks	3 Marks	10 Marks	20 Marks
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

*For breakup of the 7 Marks to be awarded separately by the Teacher and the Visiting Examiner, please refer to the table giving the criteria for mark allocation for *each* project.

NOTE: VIVA-VOCE (3 Marks) for each Project is to be conducted only by the Visiting Examiner and should be based on the Project only.