

ICSE

Indian Certificate of Secondary Education Examination

LABORATORY REQUIREMENT

VOCATIONAL SUBJECTS

CLASSES IX & X



**COUNCIL FOR THE INDIAN SCHOOL CERTIFICATE EXAMINATIONS,
NEW DELHI**

May 2023

Published by:

Council for the Indian School Certificate Examinations
Pragati House, 3rd Floor
47-48, Nehru Place
New Delhi-110019

Tel: (011) 26413820/26411706

E-mail: council@cisce.org

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Council for the Indian School Certificate Examinations (CISCE)

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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.

FOREWORD

“Laboratory and discovery are related terms. Do away with laboratories and the physical sciences will be stricken with barrenness and death.”

Louis Pasteur

According to the National Education Policy (NEP) 2020, curriculum, pedagogy, continuous assessment and learner support are the cornerstones of high-quality learning. To enhance the capacities of teachers in the teaching of practical-based subjects and to provide learners with an outcome-based environment, teaching and learning practices must be supplemented with engaging and supportive laboratory experiences.

A well-equipped laboratory helps in enhancing the learner’s comprehension of theoretical concepts and acquisition of basic experimental skills through enquiry-based approach and hands-on experience.

The document entitled “**Laboratory Requirements**” (at the ICSE level)” was last brought out in the year 2014, wherein, details regarding the materials and equipment required for the conduct of practicals were provided for the three Science subjects, i.e., Physics, Chemistry and Biology. Since then, there have been several modifications in the syllabi of these subjects. Furthermore, with the addition of a number of new Practical-based subjects at the ICSE level, over the past few years, it has become imperative that this document be revised and updated.

The revised document entitled “**Laboratory Requirement**” has been reviewed with respect to the latest ICSE syllabus for science and other practical based subjects (including Vocational subjects). This revised document will provide broad guidelines to CISCE affiliated schools regarding the basic materials/equipment for the conduct of practicals in school laboratories.

I would like to thank all the resource persons who have contributed towards the preparation of this document. We warmly welcome comments and suggestions from the subject experts for further improvement of this document.

May 2023

Gerry Arathoon
Chief Executive & Secretary

Page No.

01	Assistant Beauty Therapist
05	Assistant Hair Stylist
08	Basic Data Entry Operator
09	Dietetic Aide
11	Cashier
12	Early Years Physical Activity Facilitator
13	Auto Service Technician



ASSISTANT BEAUTY THERAPIST

CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required
1.	All-in-one eyelash brush/comb
2.	All-purpose comb
3.	Applicator brush
4.	Armchair
5.	Barber brush
6.	Bath comb
7.	Blackhead remover
8.	Bleach brush
9.	Body massage bed
10.	Bowls
11.	Brushing machine 10 in 1 (vacuum, high frequency galvanic, wood lamp, magnifying glass, steamer)
12.	Complete makeup brush set
13.	Computer with internet
14.	Crimpers
15.	Curling iron
16.	Curling rods (small, medium, large)
17.	Cuticle knife, buffers, pedicure rasp (hard skin removal), nail scissors, clippers, hard skin remover, nipper (for pedicure)
18.	Cutting scissors
19.	Cutting sheets
20.	Decorative pin boxes
21.	Double-wax heater
22.	Dustbin



S. No.	Equipment Required
23.	Electric curler
24.	Exfoliation machine
25.	Eye brow pencil sharpener
26.	Facial bed
27.	Facial steamer
28.	Facial scraper
29.	Foot spa
30.	Frosting cap
31.	Galvanic machine
32.	Garbage bins/bags
33.	Hairbrush
34.	Hair clip set
35.	Hair connector
36.	Hair cutting comb
37.	Hairdresser chair/stool
38.	Hair dryer
39.	Hair pin boxes
40.	Hair steamer
41.	Hand mirrors
42.	Highchair
43.	Hydraulic chair x 5
44.	Infrared lamp
45.	Invisible pin box
46.	Jumbo roller set
47.	Ladies/kids cut catalogues
48.	Large size rollers
49.	Large stools
50.	Large tooth comb
51.	Magazines/books with racks
52.	Magnifying glass



S. No.	Equipment Required
53.	Makeup catalogues
54.	Makeup palate
55.	Manicure set
56.	Manicure table
57.	Makers set (as required)
58.	Measuring cup sets
59.	Measuring glass sets
60.	Measuring spoon sets
61.	Medium size rollers
62.	Mixing bowl set
63.	Modular mirrors
64.	Mop
65.	Needle for striking
66.	Paraffin heater
67.	Pedicure set
68.	Perming cap
69.	Pin curl clip boxes
70.	Razor with blades
71.	Roller brush set 5 in 1
72.	Roller pins
73.	Shampoo bowl set
74.	Shampoo unit
75.	Shower cap
76.	Small scissors
77.	Small size hair roller wires
78.	Small stools
79.	Spatula
80.	Spray bottle
81.	Steriliser
82.	Stone therapy set



S. No.	Equipment Required
83.	Straightening iron
84.	Tail comb
85.	Thinning scissors
86.	Timer
87.	Tinting brush with comb
88.	Tweezer
89.	Whiteboard
90.	Wide-toothed comb
91.	Working and facial trolleys

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS



CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required
1.	All-purpose comb
2.	Barber brush
3.	Bath comb
4.	Anatomy and physiology charts
5.	Hand-held dryer and attachments
6.	Trolley
7.	Scalp steamer
8.	Climazone
9.	Round brushes (various diameters)
10.	Flat brushes
11.	Paddle bristle brushes
12.	Vented dressing comb
13.	Back comb
14.	Hot rollers with pins
15.	Bendy rollers
16.	Velcro rollers
17.	Pin curl clips
18.	Hood dryer
19.	Wraps
20.	Foil
21.	High/low lighting cap
22.	Perm curlers (various sizes)
23.	End papers
24.	Cotton wool
25.	Towels (white and brown)
26.	Tissue papers
27.	Disposable gloves
28.	Apron and capes
29.	Colour brushes

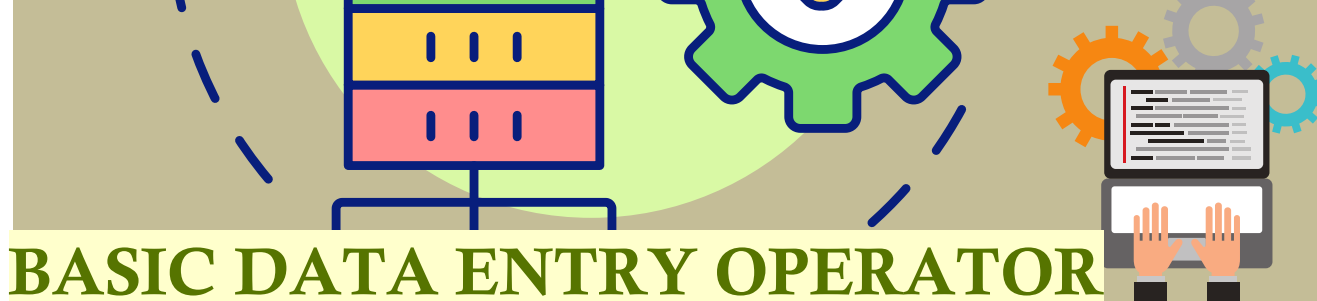


S. No.	Equipment Required
30.	Bowls
31.	Head steamer
32.	Computer with internet
33.	Crimpers
34.	Curling iron
35.	Curling rods (small, medium, large)
36.	Clippers
37.	Cutting scissors
38.	Cutting sheets
39.	Decorative pin boxes
40.	Dustbin
41.	Electric curler
42.	Exfoliation machine
43.	Frosting cap
44.	Derma scope
45.	Garbage bins/bags
46.	Hair clip set
47.	Hair connector
48.	Hair cutting comb
49.	Hairdresser chair/stool
50.	Hair dryer
51.	Hair pin boxes
52.	Hair steamer
53.	Hand mirrors
54.	Highchair
55.	Hydraulic chair x 5
56.	Invisible pin boxes
57.	Jumbo roller set
58.	Ladies/kids cut catalogues
59.	Large size rollers
60.	Large stools
61.	Magazines/books with racks
62.	Measuring cup sets
63.	Measuring glass sets
64.	Measuring spoon sets



S. No.	Equipment Required
65.	Medium size rollers
66.	Mixing bowl set
67.	Mop
68.	Needle for striking
69.	Perming cap
70.	Pin curl clip boxes
71.	Razor with blades
72.	Roller brush set 5 in 1
73.	Roller pins
74.	Shampoo bowl set
75.	Shampoo unit
76.	Shower cap
77.	Small scissors
78.	Small size hair roller wires
79.	Small stools
80.	Spatula
81.	Spray bottle
82.	Steriliser
83.	Straightening iron
84.	Tail comb
85.	Thinning scissors
86.	Timer
87.	Tinting brush with comb
88.	Whiteboard
89.	Wide tooth comb
90.	Working and facial trolleys

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS



CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required	Quantity
Hardware		
1.	Computer with latest configuration or minimum Pentium Processor with 2GB RAM, 512 GB HDD, 17" LED monitor, NIC card, 3 button mouse, 105 keys keyboard and built-in speakers and microphone	15
2.	Laser printer black	01
3.	Inkjet printers (colour & black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 port switches	01
7.	Air conditioner 1.5 tonne	02
8.	Telephone line (for internet)	01
9.	Fire extinguisher	01
Software		
1.	Operating System Linux and Windows	
2.	Anti-virus latest version	
3.	LibreOffice or MS Office latest version	
Furniture		
1.	Classroom chairs and desks	25
2.	Computer tables	15
3.	Straight back, revolving & adjustable chairs (computer chairs)	15
4.	Printer tables	02
5.	Trainer table	01
6.	Trainer chair	01
7.	Steel cupboards with drawers	02
8.	Cabinet with drawers	01
9.	Steel <i>almirah</i> (big)	01
10.	Steel <i>almirah</i> (small)	01

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS



DIETETIC AIDE

CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required
1.	Food preparation lab
2.	Sinks for utensil washing
3.	Food trolley
4.	Storage cupboards
5.	Refrigerator
6.	Cooking gas, burners, and lighters
7.	Microwave
8.	Dining utensils
9.	Measuring cups
10.	Weight machine for food 10–50 gram sensitivity
11.	Blenderizers
12.	Kitchen utensils and equipment
13.	Measuring spoons
14.	Stadiometer
15.	Measuring tape
16.	Gas burner
17.	Cylinder
18.	Common household measures
19.	Flip books and models for food groups
20.	Cutlery – cooking and serving
21.	Storage and garbage bins
22.	Charts of food groups
23.	Dry and fresh cooking ingredients with storage
24.	Computer and internet access
25.	Teaching board (smartboard)
26.	Aprons and head scarfs
27.	Gloves (disposable)
28.	Liquid soap bottle
29.	Nutritional brochures



S. No.	Equipment Required
30.	Registers
31.	Pens
32.	Pencils/erasers/sharpeners
33.	Marker pens
34.	Dusters
35.	Paper
36.	Cleaning solution
37.	Scrubbers and liquid soap
38.	Tissue paper
39.	Fire extinguisher
40.	Electric or induction cooking stove

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS

CASHIER



CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required
1.	Shelves for stacking products
2.	Shopping cart
3.	Retail signage board
4.	Offer/policy signage
5.	Big poster (at POS) for offer-related advertisement
6.	Gondola
7.	Products for display (dummy cameras and mobiles)
8.	Danglers
9.	Coupons and vouchers
10.	Carry bags
11.	Physical bill copy
12.	Barcode machine
13.	Customer feedback form
14.	<p>Safety and security equipment on site:</p> <ul style="list-style-type: none"> (i) Fire extinguisher (ii) Security cameras (iii) LCD screens (iv) Safety sign boards (v) Personal protective equipment (PPE) like gloves, helmets, jackets, harness, etc. (vi) Locking systems
15.	<p>Housekeeping equipment on site:</p> <ul style="list-style-type: none"> (i) Vacuum cleaner (ii) Mops (iii) Cleaning chemicals (iv) Cleaning robots (v) Air purifiers (vi) Filtering machines (vii) Spill absorbents

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS



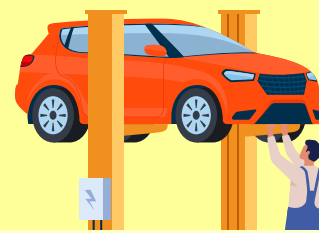
EARLY YEARS PHYSICAL ACTIVITY FACILITATOR

CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

Only basic tools, equipment and accessories should be procured by the school so that the routine tasks can be performed by the students, regularly for practice and for acquiring adequate practical experience. A set of weight plates, bars, and other weights with one cable machine may be procured for training and regular field visits should be organized to provide opportunities to the students/trainees for observation and hands-on practice.

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS



AUTO SERVICE TECHNICIAN

CLASSES IX – X

LIST OF EQUIPMENT AND MATERIALS

S. No.	Equipment Required
<i>Tools, Equipment and Training Material</i>	
1.	Compressor
2.	Spark plug cleaning machine
3.	Screwdriver (star & minus)
4.	Double-end ring spanner
5.	Open and close (fix) spanner
6.	Socket (<i>goti</i>) spanner
7.	Plier
8.	Monkey plier
9.	Outer and inner plier
10.	Toolbox
11.	T-spanner (tommy) set
12.	Allen key set
13.	Tappet puller
14.	Tappet gauge
15.	Multimeter
16.	Tachometer
17.	Hammer
18.	Compressor gauge
19.	Oil measure container, funnel
20.	Oil can
21.	Tools trolley
22.	Magnetic bar
<i>Basic Toolbox</i>	
1.	Workshop tool/equipment: drain pan, oil can, jack hydraulic, bench vice, ramp, pneumatic tool, equipment stands, etc.
2.	Pressure indicators: oil pressure gauges, tire pressure gauges etc.
3.	Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches, etc.



S. No.	Equipment Required
4.	Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons, etc.
5.	Measuring equipment: vernier calipers, micrometer, feeler gauges, multi-meter, flow meter, temp gauge, dial gauge, etc.
6.	Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, roller brake tester, chassis dynamometer, suspension activation, security activator, etc.
7.	Tools for other tasks such as cleaning of vehicles, tools, equipment, and workshop
8.	Personal protective equipment: gloves, safety shoes, goggles, ear plugs, boiler suit
9.	Workshop safety: fire extinguishers
10.	First-aid kit
Consumable Items	
1.	Cotton waste, petrol/diesel, lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs, etc.
2.	Worn out/defective/spurious samples: seal, gaskets, clutch plate, brake shoes, brake pads, spark plug, oil filter, air cleaner, etc.
Teaching Aids	
1.	Charts, CBTs, LCD projector and videos
2.	Cleaning equipment and solutions
3.	SOP charts on safety norms and drills
4.	Charts of dos and don'ts in work area
5.	Audio/video on English, Hindi or local language courses
6.	Reference books
7.	Workbooks
8.	Study for soft skills
9.	CBTs on working on a computer
10.	Computer system
11.	UPS
12.	Vehicle service manuals, vehicle handbook, job card, work order, completion material requests, technical reference books



S. No.

Equipment Required

Quantity

List of Cut Section Working Model

Name of Working Automotive Model

1.	Four-stroke working petrol engine or diesel engine model	01
2.	Old second-hand radiator	01
3.	Old second-hand pressure cap	01
4.	Old second-hand thermostat	01
5.	Old second-hand disc brake	01
6.	Old second-hand four-wheeler vehicle	01
7.	MPFI working model system	01
8.	Old second-hand motorcycle	01

NOTE: LIST OF EQUIPMENT AND MATERIALS ARE SUBJECT TO CHANGE BASED ON CHANGES IN THE SYLLABUS