

PRIVATE SECONDARY EDUCATION AUTHORITY

MONITORING OF NORMS AND STANDARDS IN A FACILITY RECKONED AS:

COMPUTER LABORATORY UP TO GRADE 9/11/13 – year 2021/2022

Subject Appellation and Level:

- **COMPUTER SCIENCE – Grades 12 to 13 – HSC/AL CIE Syllabus code 9608**
- **COMPUTER SCIENCE – Grades 10 to 11 – SC/OL CIE Syllabus code 2210**
- **INFORMATION AND COMMUNICATION TECHNOLOGY – Up to Grade 9 & 9+(EP) NCF**

Name of School : _____ Date of Verification : _____

Number of Computer Labs. at school: _____ Computer Lab. being monitored : _____

Is the Lab. New / Relocated / Existing ? _____

Number of sections and students using this facility (as per Timetable of the Lab.):

Grade	Extended Program				Regular							
	7	8	9	9+	7	8	9	10	11	12	13	
No. of Sections												
No. of Students												
No. of Groups												

Educator in Charge: _____ Qualifications: _____

Specialist Room Attendant: _____ Qualifications: _____

IMPORTANT NOTES:

The following conditions should be fulfilled to ensure a reasonable standard:

- The room and floor area provided should be appropriate.
- A minimum score of 75 % should be obtained in each of the four Sections A to D.
- At least 10 computers with the required specifications are provided.
- Record of use of the Lab. should be kept as required.

Minimum requirements for a class of 25 students are specified.

(Further explanatory notes are given at Annex A)

DETERMINATION OF THE SCHOOL'S ENTITLEMENT OF:

- NUMBER OF COMPUTER LABORATORIES
- TOTAL NUMBER OF COMPUTERS

ENTITLEMENT CRITERIA

The Entitlement of Computers, school-wise, is based on:

- a) The Finalised Student Population for the current year, and
- b) The Number of Weekly Computer Periods (Up to Grade13 including EP classes) in the Computer Laboratory, as specified in the following table:

Criteria	Maximum No. of Computers and Labs. Entitled
Up to 349 students and at least 30 Computer periods on a weekly basis in the lab.	25 PCs – 1 Lab.
350 - 700 students and at least 60 Computer periods on a weekly basis in the lab.	50 PCs – 2 Labs.
701 students and above and at least 90 Computer periods on a weekly basis in the lab.	75 PCs – 3 Labs.

Limiting factors:

Factors that may limit the number of PCs and Labs. **reckoned** in spite of the **entitlement**:

- 1) A floor area below 2.0 m² per computer. (Re. note 3 at *Annex A*)
- 2) A working-table area below 0.8 m² per student. (Re. *Furniture and Accessories*)
- 3) Number of functional PCs fulfilling all the requirements to be reckoned - as laid down in this form - falling below 10 in any Computer Lab.

DETERMINATION OF ENTITLEMENT

With reference to the *Finalised Student Population Survey* and the *Timetables* of ALL the Computer Labs. at school in the current year (signed Timetables for all Labs. to be submitted):

FINALISED STUDENT POP.	Regular:..... + Ext. Prg. (EP): + = TOTAL:.....											
GRADES	EP 7	EP 8	EP 9	EP 9+	7	8	9	10	11	12	13	TOTAL
No. of Periods per week in Computer Lab. 1												
No. of Periods per week in the Computer Lab. 2, if any												
No. of Periods per week in the Computer Lab 3, if any												
ENTITLEMENT OF COMPUTERS											
ENTITLEMENT OF COMPUTER LABS.											

Item	Description	Requirements	Marks per Unit	Marks Item-wise	Existing	Score (for PSEA use only)
A. PHYSICAL FACILITIES weightage: 30 %						
1. Floor Area and Room NOTES: i) For existing Computer Labs., the previously approved Floor Area shall be accepted and rated pro-rata. ii) For new Computer Labs., the specified minimum floor area of 50 m ² shall be required for 25 PCs and a minimum of 30m ² for 10 PCs.	Concrete Building	A min. area of 50 m ² required	100	5 000		
	CONDITIONS OF ROOM:			1 500		
	Ceiling	Plastered & crack-free	10%	Rated pro-rata on area		
	Walls	Plastered & painted	10%			
	Flooring	Flat, tiled/ appropriate	10%			
	Set Up	Conducive	10%			
	Shape	Convenient	10%			
	Cleanliness	Maintained	10%			
	Proper Storage and Classification	Indexing & Accessibility	10%			
	Lighting	Adequate Natural/ Assisted	10%			
Ventilation		10%				
Utilities	Electricity	10%				
			Sub-Total Sect A	6 500		

Item	Description	Quantity Required	Marks Per Unit	Marks Item-wise	Existing	Score (for PSEA use only)
<p>2. Furniture and accessories</p> <p>*NOTE on ii) Working table area of 0.8m² per student includes space for:</p> <ul style="list-style-type: none"> • Monitor • Shelf for CPU • keyboard • Mouse and mouse pad • Student's copybook • Student's textbook <p>*NOTE: Conditions Problems identified with the conditions of Furniture and Accessories, if any, shall be evaluated on how far they affect teaching and learning on a scale of 1 to 10 before effecting deductions on marks for conditions. The marks may be totally forfeited in case of even a single grave problem with conditions.</p>	(i) Table & chair for teacher (table: 1.25x0.75m)	1 set	200	200		
	ii) Working Tables/ Computer-stations* (see NOTE in first column)	20 m ² (0.8 m ² per student)	40/m ²	800		
	iii) Chairs	25	24	600		
	iv) Wall/ceiling Fans (stand or table fans not reckoned) or Air Conditioning Unit/s	4	100	400		
	(v) Whiteboard (243 cms X 106 cms)	1	300	300		
	(vi) Cupboard:	2	125	250		
	(vii) Wall Clock	1	100	100		
	(viii) Power Point (3-pin + earthing)	30	14	420		
	(ix) Shelves	2m	25	50		
	Conditions i - ix*			1000		
			Total Section A	10 620		

B. INSTRUCTIONAL TOOLS & RECORDS												
3. Practicals	20 practical sessions per class in the academic year spread over all three school terms.				20	175	3 500	Average for all sections Reckoned:				-----
	(Records to be kept class-wise and signed by teachers)							-----				
GRADE	Ext. Prg.				Regular							
	7	8	9	9+	7	8	9	10	11	12	13	
Class/Group A												
B												
C												
D												
E												
Total												
NOTE: Reckoned pro-rata for the current academic year - max. 20 per class or group on 8.5 months.												
4. Audio-visual Lessons Related to Syllabus Topics	10 sessions per class in the academic year spread over all three school terms.				10	175	1 750	Average for all sections reckoned:				-----
	(Records to be kept class-wise and signed by teachers)							-----				
GRADE	Ext. Prg.				Regular							
	7	8	9	9+	7	8	9	10	11	12	13	
Class/Group A												
B												
C												
D												
E												
Total												
NOTE: Reckoned pro-rata for the current academic year - max. 10 per class or group on 8.5 months.												
5. Time-Table	Time-Table of practicals in this Lab.				1 displayed	90	90					
6. Stock-Book	Up to date & signed. New items highlighted.				1	200	200					

7. Teaching and Learning Aids Item (iii) WALL-CHARTS (Min. Size: A₃) 1) PC and peripherals 2) Components of the CPU 3) Networking 4) Storage devices 5) Software and applications 6) Computer security 7) Internet and communication 8) PC Maintenance & Upgrading <u>Items (iv) & (vi)</u> LCD Projector & Screen A connectable LED TV of 55" may replace the LCD Projector and the Screen.	(i) Reference Books (Published in the past 3 years)	10	70	700		
	(ii) Magazines (Published in the past 2 years)	10	100	1000		
	(iii) Wall-charts <i>(See list in first column)</i>	8	65	520		
	(iv) LCD Projector Mounted ready for use <i>(See note in first column)</i>	1	1200	1200		
	(v) Teacher's PC (Connected to Projector)	1	1200	1200		
	(vi) Screen	1	460	460		
	(vii) Internet Access	PCs should be connected to the Internet			Rated in Section D	
	(viii) Scanner (May be in-built in Printer)	1			Rated in Section D	
	(ix) Networking	All 25 PCs			Rated in Section D	
				Total Section B	10620	

C. SAFETY ITEMS						
Items	Description	Qty.	Marks Per Unit	Marks item-wise	Existing	Score (for PSEA use only)
1. First Aid Kit	Equipped to treat cuts, burns and eye problems	1	500	500		
2. Fire Extinguisher	Capacity: 2Kg – dry powder type (serviced on time)	1	520	520		
3. Emergency Exit (clearly indicated)	Additional door for quick exit in case of emergency	1	520	520		
4. Safety Chart	Clear instructions about safety. (permanently affixed at appropriate places)	4	125	500		
5. i) Main Switch /Circuit Breaker ii) ELCB/RCD	Separate for the Computer Lab. and located inside the Lab. at an accessible location	1 1	300 200	300 200		
6. Shielding of Electrical Cabling and Wiring	Measures taken for protection of students by shielding cables and wires	Excellent Satisfactory Not at all	100% 50% 0%	500		
7. Condition and quality of Cables, Wires and Fittings	No source of hazard arising from damaged cables/wires and fittings.	Minor problems Major problems	50% 0%	500		
			Total Section C	3 540		

D. COMPUTER HARDWARE & SOFTWARE PROVIDED IN THE LABORATORY

Requirements are as specified in bold in the column headings – A PC is reckoned only if it is fully functional and meets the MINIMUM requirements.

(Pls. use a **tick** where requirements are met and a **cross** where not met. Also specify wherever required).

D1 PCs - PROCESSOR								- MONITOR				For PSEA Use only Reckoned OR Not Reckoned
S/N	Branded <i>(specify brand)</i> or Clone <i>(existing PCs only - see note below*)</i>	Intel Core i5 <i>(lesser versions exceptionally reckoned)</i>	Memory RAM Cap. - min. 4 GB <i>(recom. 8 GB)</i>	Operating System: Windows 10** with Microsoft Office 365***	Connected to Printer <i>(specify ordinary or network printer)</i>	Connected to Internet	Network - wired or wi-fi	Brand <i>(specify)</i>	L C D <i>LED reco.</i>	Screen Size - PC min. 17" Laptop min.15.6"	Display Quality <i>(no problem with display)</i>	
PC1												
PC2												
PC3												
PC4												
PC5												
PC6												
PC7												
PC8												
PC9												
PC10												
PC11												
PC12												
PC13												
PC14												
PC15												
PC16												
PC17												
PC18												
PC19												
PC20												
PC21												
PC22												
PC23												
PC24												
PC25												

*Note: For all new PC purchases it is recommended that vendor be listed in the Gartner's Market Guide for Enterprise Desktops and Notebooks (gartner.com) – latest report.

** Windows 7 has no support and updates but will be exceptionally reckoned. A high performing Antivirus software is also recommended on each PC.

*** An *Academic Version* of Microsoft Office 365 exists which is customized for school use and supports Online Teaching and Learning – recommended.

D2 – PRINTERS – NOT RECKONED IF OUT OF INK/TONER

EITHER One Network Printer for 25 PCs

Make	Specifications Inkjet OR Laser	Network Port	No. of PCs connected	Colour Or Mono- chrome	Print Quality	For PSEA use only <i>Reckoned/ Not Reckoned</i> & Other Remarks

OR One Ordinary Printer for every cluster of 5 PCs or part thereof.

Printer No.	Make	Specifications	Colour Or Mono- chrome	No. of PCs connected	For PSEA use only <i>Reckoned/ Not Reckoned</i> & Other Remarks
1					
2					
3					
4					
5					

D3 – SCANNER – May be a separate unit or incorporated in a printer

Make	Specifications	No. of PCs connected	Colour Or Mono- chrome	Scan Quality	For PSEA use only <i>Reckoned/ Not Reckoned</i> & Other Remarks

Marking for Section D [From Tables at D1, D2 and D3 above]

EQUIPMENT	NO. REQUIRED	NO. EXISTING	NO. RECKONED	MARKS PER UNIT	MAX. MARKS	SCORE (for PSEA use only)
PCs	Min. 10 Max. 25			200	5 000	A
Networking (wired or wi-fi)	On all available PCs			100	2 500	B
Adjustment of Score on PCs and Networking if no. of PCs reckoned in the Lab. is limited to less than 25 by the PC entitlement.				Marks Scored (A+B) X 25 No. of PCs that can be provided in the lab. within entitlement		ACTUAL SCORE ON PCs & NTW:
Printers (ordinary)	1 for every cluster of 5 PCs, or part thereof.			500	2 500	
OR				OR		
Network Printer	1			2 500		
Scanner	1			120	120	
				Sub-Total Section D (excluding marks on conditions & quality)	10 120	

MARKING CONDITIONS & QUALITY OF HARDWARE IN SECTION D

CRITERIA	RATINGS	MAX. MARKS	SCORE
Conditions and quality of hardware provided for Computers and Peripherals	PCs – 15/unit	375	
	Printers: • Ord. - 25/unit • Ntwk. - 125	125	
TOTAL		500	

MARK SCHEME AND SCORE

SECTION	WEIGHTAGE	TOTAL MARKS	MARKS SCORED	% SCORE
A. Physical Facilities	30%	10 620		
B. Records and Instructional Tools	30%	10 620		
C. Safety Items	10%	3 540		
D. Equipment and Consumables	30%	10 120 + 500 (conditions) = 10 620		
OVERALL	100%	35 400		

OVERALL RECAP FOR THE SCHOOL

YEAR	ENTITLEMENT	RECKONED		
COMPUTER LABS.				
COMPUTERS				
NO. OF COMPUTERS LABWISE		LAB. 1	LAB. 2	LAB. 3
NETWORKING OF COMPUTERS				
NO. OF PRINTERS (<i>specify NTWK. or ORDIN.</i>)				

REMARKS AND SHORTCOMINGS

(With particular reference to conditions at page 1, PC entitlement and score obtained)

Signature of PSEA Supervisor / Senior Supervisor (s)

Signature of Manager

Date:-----

Date:-----

COMPUTER LABORATORY - EXPLANATORY NOTES

1. **TERMINOLOGY**: The word 'Computer' or PC in this assessment form refers to Laptop and Computer System (*i.e. comprising CPU, monitor, and other peripherals*).
2. **FUNCTIONALITY**: The computer is reckoned as *functioning* only if the operating system and all the vital hardware are functioning.
3. **SPACE**: An allocation of 2.0 m² per computer is required. The minimum size of a Computer Lab. is 30 m² based on the minimum of 10 PCs.
4. **LAB. ATTENDANT**: A Computer Lab. of the required size with at least 10 computers will qualify for a Computer Lab. Attendant.
5. **PRINTERS**: Each Computer Laboratory should be equipped with:

Either

A Network Printer (A network printer has a network port)

Or

One Printer (ordinary) networked to a maximum of Five Computers.

IMPORTANT NOTES:

- a) A computer which is not connected to a printer will not be reckoned.
- b) A "Printer (ordinary) on Network" is not reckoned and rated *in lieu* of a Network Printer.

6. **LICENSING OF SOFTWARE:**
 - **All PCs should be properly licensed both for the Operating System (e.g. Microsoft Windows or other) as well as Applications (e.g. Microsoft Office, or other) which are installed on the PCs.**
 - **A software compliance licensing document should be kept and made available for inspection.**
7. **PC SPECIFICATIONS:**

Computer technology being fast developing, the minimum requirements in terms of PC specifications will be updated when the need is felt to keep abreast of changes.