



केन्द्रीय विद्यालय KENDRIYA VIDYALAYA
भारतीय राजदूतावास EMBASSY OF INDIA
लाजिम्पाट, काठमांडू, नेपाल LAZIMPAT, KATHMANDU, NEPAL

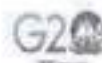
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(An Autonomous Body Under the Ministry of Education, Govt. of India)

CBSE Affiliation No.6200001, CBSE School Code: 90225, KV Code: 1897



Name of Work:- PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU.

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Principal, Kendriya Vidyalaya
Embassy of India Campus,
Kathmandu.

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NOTICE INVITING E-TENDER

Kendriya Vidyalaya Embassy of India Campus, Kathmandu on behalf of the President of India invites **open tender** /bid from consultants of repute in **two bid system** from the eligible Architects & consulting firms who fulfill the eligibility criteria as per the brief particulars of scope for the appointment of the Consultant for the following work:

NIT No./Tender No.	:	02/2025-26
Name of Work	:	PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU.
Estimated Project Cost	:	Nrs. 2,10,00,000/- (indicative only, may vary upon actual design and estimation)
Estimated cost for consultancy work	:	Maximum 5% of ECPT
Earnest Money	:	Nrs. 21,000/-
Performance Guarantee	:	Nrs. 52,500/-
Security Deposit	:	2.5% of the contract value of consultancy work
Period for completion	:	33 Months after award of work (including 7 weeks for planning work)
Last date & time for submission of bids	:	10.09.2025 15:00 Hrs.
Date & Time of opening of Eligibility Bids	:	10.09.2025 16:00 Hrs.
Date & Time of opening of Financial Bids	:	The time and date of opening of financial bid will be communicated to the eligible bidders, who qualify in Technical Bid, at a later date
Date & Time of Pre-Bid Meeting	:	08/09/2025 at 11:00 AM onwards


Principal, Kendriya Vidyalaya
Embassy of India Campus,
Kathmandu.

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR TENDERING

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. **Criteria of eligibility for submission of Bid documents:**
 - 2.1 To become eligible for participating in the bid process, the bidders (Consulting firm with experience of Design, construction supervision and contract management of Civil Engineering projects) shall satisfy the following work experience criteria.
 - 2.2
 - (a) Should have satisfactorily completed the works as mentioned below during the last Seven years ending last date of the month previous to the one in which tenders are invited.
 - (i) three similar works each costing not less than Nrs. 4.2 Lakh
or
 - (ii) two similar works each costing not less than Nrs. 6.3 Lakh
or
 - (iii) one similar work costing not less than Nrs. 8.4 Lakh

The similar work shall mean "Providing comprehensive Consultancy Services for Design, construction supervision and contract management of residential/ institutional/ office building of any Central / State Govt. or Public undertakings (PSUs)

Note: -

- 1) For the purpose of similar works, works executed in Nepal and India shall be considered.
- 2) Evaluation of the performance of contractors for eligibility shall be done by the competent authority on the basis of documents submitted or a committee constituted by him.
- 3) All the eligible similar works executed and submitted by the bidders and ongoing works as well for the works may be got inspected by a committee which may consist of client or any other authority as decided by NIT approving authority. The marks for the quality shall be given based on this inspection, if inspection is carried out and performance of works as assessed by committee.
- 4) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple interest rate of 07% per annum, calculated from the date of completion to previous day of last date of submission of tenders.
- 5) The executed works should be in the sole name of firm/bidder and the works executed in joint ventures, consortium or special purpose vehicles shall not

be accepted.

2.3 In case, the eligible work has been executed by a Joint Venture through one or more individual firm(s), then cost of completed work shall be distributed among the individual firm(s) in proportion to their share in Joint Venture and that will be considered as work experience for individual firm(s) for prequalification in bidding

3. Eligibility criteria for Financial Eligibility

- 3.1 Should have had average Annual Financial Turn Over of Nrs.3.15 Lakhs on Consultancy works during the last three consecutive years ending 31st March 2025 in balance sheets duly audited by Chartered accountant. (copy of certificate from certified CA to be submitted).
- 3.2 Should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive balance sheets ending 31st March 2025, duly certified and audited by chartered accountant. (The balance sheet in case of Pvt./ Public Ltd. company means its standalone finance statement and consolidated financial statement both) (The copy of certificate from CA to be submitted).
- 3.3 Should have a Banker's Certificate from a Commercial Bank for Nrs. 4.2 Lakh or Net worth Certificate of Minimum Nrs. 1.57 Lakh from certified CA (copy of Original Banker's Certificate to be submitted).
4. This information and instructions for bidders posted on website/tender notice shall form part of bid document.
5. The bid document consisting of scope of work, the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from Kendriya Vidyalaya Kathmandu website www.kvkathmandu.kvs.ac.in.
6. The bid can only be submitted after deposition of original EMD (Earnest Money Deposit) in the office of Principal, Kendriya Vidyalaya, Embassy of India Campus, Kathmandu within the period of bid submission and upon submission of the mandatory documents such as Insurance Surety Bonds, Account Payee Demand Draft or Bankers Cheque or Fixed Deposit Receipts or / and Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of VIDYALAYA VIKAS NIDHI, Kendriya Vidyalaya, Embassy of India Campus, Kathmandu and other documents as specified.



7. **Certificate of Financial Turnover:** At the time of submission of bid, contractor may submit Affidavit / Certificate from certified CA mentioning Financial Turnover of last 3 years financial period ending March 2025 or for the period as specified in the bid document and further details if required may be asked from the bidder after opening of technical bids. There is no need to submit entire voluminous balance sheet.
8. Bidder must ensure to quote rate of each item. The column meant for quoting rate in figures.
9. In addition to this, while quoting any of the rates if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0"(Zero).

However, if a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
10. The Technical cum Eligibility bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
11. **Pre-bid conference shall be held with the intending bidders in the office of Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu on 08/09/2025 at 11:00 AM onwards to clear the doubt of intending bidders, if any. Bidders should send all their queries by email to the Principal Kendriya Vidyalaya latest by 11.00 hrs. on 07/09/2025. As a result of pre-bid conference, certain modifications etc. may be required. All modifications/addendums/corrigendum issued regarding this bidding process, shall be uploaded/informed on website www.kvkathmandu.kvs.ac.in only and shall not be published in any Newspaper.**



12. The Vidyalaya reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

List of Documents to be scanned and uploaded within the period of bid submission.

1.	EMD & Earnest Money Deposit Receipt duly filled in (as per Performa at Annexure-I).
2.	Certificate of financial turnover from certified Chartered Accountant (Form A)
3.	Banker's certificate (Form B) or net worth certificate (Form B1)
4.	Certificates of work experience (Form C)
5.	VAT registration certificate, if already obtained by the bidder. If the bidder has not obtained VAT registration as applicable, then he shall scan and upload following undertaking along with bid documents. "If work is awarded to me, I/we shall obtain VAT registration Certificate as applicable within one month from the date of receipt of award letter or before release of any payment by Vidyalaya, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or for any action taken by Vidyalaya or VAT department in this regard."
6.	Structure and organization of the bidder (Form D)
7.	Details of architectural / technical persons to be employed for the work in (Form-E).
8.	Proforma of Affidavit – (Form 'F')
9.	Signed copy of Letter of Transmittal
10.	Permanent Account Number (PAN)/ as issued by the Income Tax Department.
11.	Any other document as specified in the NIT.

Note: - Certified copy of all the documents as specified in NIT/tender notice shall have to be submitted by the lowest bidder before due date of submission in the office of tender opening authority.



Annexure-I

RECEIPT OF DEPOSITION OF ORIGINAL EMD (Optional)

Receipt No.....#...../date.....#.....
1. Name of Work: PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU.
2. NIT No. : 02/2025-2026
3. Estimated Cost of consultancy work : Maximum 5% of ECPT Amount of Earnest Money Deposit : Nrs. 21,000/- Last date of submission of Bid : 10/09/2025 upto 03.00 pm
1. Name of Contractor :#.....
2. Form of EMD#.....
3. Amount of Earnest Money Deposited#.....
4. Date of submission of EMD#.....
Signature, Name and Designation of EMD receiving officer (In-charge/AAO) with Officer stamp of Vidyalaya

(# to be filled by EMD receiving (In-charge/AAO) as the case may be)



1.0 General

- 1.1 Item rate online bids are invited on behalf of President of India from the Consultants of repute **in two bid system** for the work of

"PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU."

- 1.2 The rough estimated cost of project is NPR. 2.10 Crore. This estimate, however, is given merely as a rough guide and indicative only and may change based on actual design and estimation.
- 2.0 The time allowed for carrying out the work will be **33 weeks** out of which 7 weeks for the planning of work and 6.5 months for execution
- 3.0 The site for the work shall be made available upon award of contract.
- 4.0 After submission of the bid the Consultant cannot re-submit any revised bid.

5.0 Earnest Money

- 5.1 The Original EMD (Earnest Money Deposit) in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of **VIDYALAYA VIKAS NIDHI, Kendriya Vidyalaya, Kathmandu** shall be submitted within the period of bid submission.
- 5.2 The original EMD should be deposited in the office of The **Principal, Kendriya Vidyalaya, Kathmandu** inviting bid within the period of bid submission or along with bids in separate envelop.

(Technical bid in one envelop with all mandatory documents & Financial bid in other envelope)

- 5.3 A part of earnest money (EM) is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lakh, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any scheduled bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.



- 5.4 Copy of certificate of work experience and other documents as specified in the bid document shall be submitted in EMD envelope within the period of bid submission.
- 5.5 Documents submitted by intending bidders shall be considered only of those bidders, who's original EMD and other necessary documents as mentioned in NIT are found in order.
- 6.0 The bid submitted shall become invalid and Tender processing fee (if any) shall not be refunded if:
- (i) The bidder is found ineligible.
 - (ii) The bidder does not deposit original EMD with KV office with in specified time.
 - (iii) The bidder does not submit all the documents as stipulated in the bid document.
 - (iv) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
- 7.0 The contractor whose bid is accepted will be required to **furnish performance guarantee of NRs. 52,500/- within the period specified in Schedule F**. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee.
- 8.0 Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, & plants, water, electricity access, facilities for workers and all other services required for execution of the work.

otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

- 9.0 The competent authority on behalf of the President of India does not bind itself to accept the highest Composite Score bid or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
- 10.0 Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the Consultants who resort to canvassing will be liable for rejection.
- 11.0 The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
- 12.0 The Consultant shall not be permitted to bid for works if his near relative is posted a Divisional Accountant or as an officer in any capacity in the Embassy of India or Kendriya Vidyalaya, Eol campus, Kathmandu. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted officer in the Embassy or in KV. Any breach of this condition by the Consultant would render him liable to be removed from the approved list of Consultants of this Department.
- 13.0 No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a consultant for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the Consultant or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the Consultant's service.
- 14.0 The bid for the works shall remain open for acceptance for a period of **Seventy-Five (75) days** from the date of receipt of technical bid in case bids are invited on 2 bid/envelop system. If any bidders withdraw his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
- 15.0 This notice inviting Bid shall form a part of the contract document. The successful bidders/Consultant, on acceptance of his bid by the Accepting Authority shall within 07 days from the stipulated date of start of the work, sign

the contract consisting of:-

The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

- 16.0 Running payment shall be made by the Engineer-in-charge to the Consultant on receipt of bill from the Consultant as per stage of work.

The final bill shall be submitted by the Consultant. Final bill of whole work shall be finalized and paid by the Engineer-in-charge on satisfactory completion of work and submission of requisite documents.

17.0 Eligibility Criteria

Intending bidder is eligible to submit the bid provided, he/she has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority and fulfilling the eligibility criteria of the NIT.

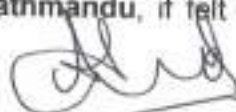
18.0 Evaluation of the Bids

The evaluation shall be done in two parts in the following manner: -

- 18.1 Technical Evaluation – It shall be based upon the valid documents submitted as prescribed in the NIT/ Tender notice and will be processed by committee in technical bid including the outcome of pre-bid meeting as mentioned.

- 18.2 Financial Evaluation – The financial bid of the qualified bidders shall be opened after the Technical Evaluation.

- 20.0 The pre bid meeting shall be held on **08/09/2025** at 11.00 Hrs. in the office of **The Principal, Kendriya Vidyalaya, Kathmandu** to clear the doubts of intending bidders, if any. The bidders should send by email all their queries before pre bid meeting latest by 03:00 PM on **08/09/2025** to **The Principal, Kendriya Vidyalaya, Kathmandu** (Telephone No: 01- 4511259, Email ID: principalkvkathmandu@gmail.com). As a result of pre bid meeting, certain modifications may be required. Addendum /Corrigendum shall be uploaded by **The Principal, Kendriya Vidyalaya, Kathmandu**, if felt necessary by him, which shall form part of bid document.



Principal, Kendriya Vidyalaya
Embassy of India Campus,
Kathmandu

ELIGIBILITY CRITERIA, TECHNICAL EVALUATION, FINANCIAL EVALUATION AND FINAL SELECTION PROCESS

2.0 Eligibility criteria.

2.1 Should have satisfactorily completed the works as mentioned below during the last Seven years ending last date of the month previous to the one in which tenders are invited.

- (i) three similar works each costing not less than Nrs. 4.2 Lakh
or
- (ii) two similar works each costing not less than Nrs. 6.3 Lakh
or
- (iii) one similar work costing not less than Nrs. 8.4 Lakh

Definition of Similar Project:

The similar work shall mean "Providing comprehensive Consultancy Services for construction of residential/ institutional/ office building of any Central / State Govt. or Public undertakings (PSUs).

Note: -

- 1) For the purpose of similar works, works executed in Nepal & India only shall be considered.
- 2) Evaluation of the performance of contractors for eligibility shall be done by the NIT approving authority/ committee designated by the Vidyalyaya on the basis of documents submitted or a committee constituted by him. All the eligible similar works executed and submitted by the bidders and ongoing works as well for the works may be got inspected by a committee which may consist of client or any other authority as decided by NIT approving authority. The marks for the quality shall be given based on this inspection, if inspection is carried out and performance of works as assessed by committee.
- 3) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple interest rate of 07% per annum, calculated from the date of completion to previous day of last date of submission of tenders.
- 4) The executed works should be in the sole name of firm/bidder and the works executed in joint ventures, consortium or special purpose vehicles shall not be accepted.

2.2 In case, the eligible work has been executed by a Joint Venture through one or more individual firm(s), then cost of completed work shall be distributed among the individual firm(s) in proportion to their share in Joint Venture and that will be considered as work experience for individual firm(s) for prequalification in bidding.

2.3 **Annual Turnover:** The applicant should have had average annual financial turn over of NRs. 3.15 Lakh on consultancy works during the last three consecutive years ending 31st March 2025. This should be duly audited by a Certified Chartered Accountant. Year in which no turnover is shown would also be considered for working out the average. The bidder is required to submit the

information in Form 'A'.

- 2.4 Profit/Loss Statement: The applicant should not have incurred any loss in more than two years during the **last five years** ending 31st March 2025, duly certified by the Certified Chartered Accountant. The bidder is required to submit the information in Form 'A'.
- 2.5 Should have a **Banker's Certificate** from a Commercial Bank for NRs. 4.2 Lakh or Net worth Certificate of Minimum NRs. 1.57 Lakh from CA (copy of Original Banker's Certificate to be submitted).
- 2.6 Technical capability: The bidding entity is required to submit a complete list of consultants, specialists and experts (each with a minimum of experience as prescribed in NIT), who shall be engaged for engineering and detailed design of the project by the bidder. **The experience shall be duly supported by proper document.** Bidders will be solely responsible for the correctness and accuracy of such documents produced in support of qualification and experience. Needless to say, that the minimum requirement of the personnel listed in NIT has to be fulfilled, otherwise, bid will be summarily rejected. The bidder is required to submit the information in Form 'D' & 'E'.
- 3.0 The technical bid of bidders meeting the eligibility criteria shall be evaluated.
- 4.0 **Technical evaluation**
- 4.1 In addition to the documents mentioned in eligibility criteria under para additional documents as given in para 4.2 and 4.3 shall be uploaded/submitted by the bidder for evaluation of the technical bid.
- 4.2 **Work experience:** The bidder is required to submit the list of similar nature project completed in the last five years. (it should be certified by an officer not below the rank of Executive Engineer or equivalent).
- 4.3 **Person & Establishment:** The bidder is required to submit the complete list Only the name of personnel who are to be deployed for this work should be included along with their CV.
- 5.0 Financial Evaluation
- 5.1 The financial bid of the qualified bidders shall be opened after the technical evaluation (time and venue for financial bid opening will be intimated separately)



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SECTION-I

BRIEF PARTICULARS OF THE WORK AND SCOPE OF CONSULTANCY

1. SALIENT FEATURES OF THE WORK

PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU

The Basic requirements of Vidyalaya are as under:

S.No.	Facilities	Remarks
1	Laboratory-I Physics	Minimum 600 Sq (30 ft x 20ft) with space for working tables, cupboards, storage of Lab items etc. CBSE norms enclosed as Annexure -III
2	Laboratory-II Biology	Minimum 600 Sq (30 ft x 20ft) with space for working tables, cupboards, storage of Lab items etc. CBSE norms enclosed as Annexure -
3	Conference Hall	Seating Capacity of 80 to 90 students with provision for small platform for the guest/performers
4	Toilet block (Boys & Girls)	With two toilets for Boys and Girls respectively similar to the toilets in the ground floor

Salient Feature of the project:

1. The initial concept drawings have been prepared at the time of initial construction by consultant and the same are enclosed as Annexure-I for reference purpose only. The interested bidder may plan their proposal as per prevailing norms.
2. The proposed project has structural restriction due to recommendations given by the structural consultant. The copy of report/recommendations is enclosed as Annexure-I
3. **The approximate total built-up Area of the Building 450.00 Sqm.**
4. The planning of customized/ ready-made furniture, required for functional space as per requirement of client, is also in the scope of consultant. (if any)

Note: - **Nothing extra shall be paid/ deducted for built up area increase/ decrease up to 10% of total built up area given in the bid document. Variation of area beyond plus/ minus 10% of total built up area, the rates shall be analyzed on prorata basis on the quoted rate of bidder for the final area with respect to total built up area given in the bid document.**

2. SCOPE OF CONSULTANCY WORK

The following works are broadly proposed to be included in the scope of work.

- 1) The existing ground floor drawings have been prepared by consultant at the time of construction and the same are enclosed as **Annexure-I**. However, any revisions/modifications in concept plan, if required, as suggested by any owner shall be incorporated by the comprehensive consultant as a scope of work. The consultant is required to review these drawings vis-à-vis latest guidelines and bye laws applicable.
- 2) The scope of consultancy job is to providing comprehensive consultancy services for construction of additional one-story extension with steel structure and truss roof i/c sanitary and electrical works with allied services etc. on first floor to new block of Kendriya Vidyalaya school at Embassy of India Campus, Kathmandu.

This includes Preparation of Preliminary Architectural Drawings as per clients/owners requirements, and Preliminary Estimate, Detailed Drawings, Detailed Estimate, **Structural Design & Drawings including Proof Checking from authorized licensed structural engineer of Govt. sector/Semi govt/PSU**, Sanitary & Electrical Service design and drawings, internal and external services, etc.

- 3) Preparation of details Architectural Drawings of the project.
- 4) Carrying out the structural design & drawings for the construction project in compliance to relevant BIS codes.
 - a. Proof checking of the structural design & drawings as per relevant IS codes for the construction project shall be done through authorized licenced structural engineer of Govt sector/semi- govt/PSU or as decided by Engineer-in- charge.

- 5) consultant will also check the design basis and other relevant parameters, preparation of detailed design/ drawings/ guidelines etc. as per relevant IS codes and sound engineering practices.
- 6) Design & drawings of Water Supply, Sewerage etc
- 7) Design & drawings of Electrical services (including cabling work), as per scope of work.
- 8) Preparation of the detailed Cost Estimate for entire project/work in the format of CPWD after finalization of specifications of materials /work and relevant detailed drawings required for the detailed estimate in consultation with the Owner/Client. Preparation of NIT as per provisions of CPWD Works Manual 2023 with up-to-date correction slips in consultation with the Engineer-in-Charge. If Bid of civil services & electrical services are called separately then NIT of that part also to be prepared including selection of L1 bidder.
- 9) The consultant is also required to attend the progress review meetings as and when required by the department.
- 10) Verify independently the data input/load calculations and structural calculations for all the components of the scheme by independent software or their own computer program and give the comparative statements of differences if any between the Design Consultants output and their own with an explanatory note wherever so required.
- 11) After carrying out the structural design of relevant components of the buildings, After satisfactory compliance of the comments / modifications to his satisfaction, the proof consultant will certify/ approve the **"Good for construction drawings"** in six sets
of minimum **A-3 size** drawings as well as in soft copy of same immediately for use at site. The consultant will supervise/monitor the execution of work up to completion of project.
- 12) The consultant shall be paid consultancy fees as per payment schedule.

Consultant shall obtain the approval of the employer of all designs & details and of any subsequent changes including deviations. Hard as well as soft copies of the detailed computations of all designs and drawings shall be made available to the employer in duplicate for checking and approval, which the employer may check or get proof checked through any other agency. The Consultant be fully responsible for the correctness and accuracy for all its submissions. The consultant and his sub-consultants shall certify in writing that the designs are in accordance with the up to date and relevant I.S. Codes, NBC-216 and sound engineering practices.



3. BROAD ROLE OF THE CONSULTANT:

1. Consult user authority to assess the functional requirements to finalize the building layout.
2. Prepare preliminary design and drawings for the proposed buildings including internal & external services, landscaping, etc. obtain approval of the department and nodal authority and submit drawings for approval.
3. Prepare preliminary estimate (if required) of cost on are basis supported with details of rates adopted. Preparation of preliminary estimate to be based on CPWD guidelines for framing preliminary estimate, CPWD DPAR 2023 and market for non-scheduled items.
4. The consultant is expected to prepare preliminary design/ submission drawings for the proposed building and facilities based on the suggested areas. No extra payment for modification arising out of variation shall be payable.
5. Architectural planning and design
 - a. Preparation of Building layout plan.
 - b. Preparation of elevation and sections
 - c. Preparation of typical details.
 - d. Preparation of room wise furniture layout/ furnishing.
 - e. Any other designing and detailing required for comprehensive planning and designing of the proposed building.
6. Structural Planning and design
 - a. Framing and preparation of structural design
 - b. Structural analysis and design.
 - c. Preparation of preliminary structural drawings.
 - d. Proof checking of structural design from authorized licenced structural engineer or Govt. sector/semi- Govt. /PSU.
 - e. Preparation of detailed structural "Good for Construction" drawings.
 - f. Submission of all design calculations in hard/ soft copies.
 - g. Any other designing and detailing required for comprehensive planning and designing of the proposed building.
7. Services Planning
 - a. Planning of all required services with broad scope like:
 - i. Internal and external plumbing.
 - ii. Waste water and sewage disposal
 - b. Planning and Design of services pertaining to E&M Work:
 - i. Provision for EI work.
 - ii Any other services required as per decision of employer/ department/ client.

8. The consultant shall provide all the details in respect of all services as per applicability not withstanding other detailing required to be done by the consultant as per the scope of the work covered elsewhere in the bid document.
9. The consultant shall provide take-off sheets for all the measureable items before preparing the NIT.
10. The consultant shall provide all the item rate analysis of market rate items along with the documentary proof in support of rates taken for such item.
11. The consultant shall provide the Good for Construction drawings, which the contract will only verify from site and take ownership of the same by stamping and signing the GFC drawings provided by the consultant. If there are minor modifications required in the drawings, then the consultant shall accord the same based on the site inputs from the contractor/ department.
12. The consultant shall provide the hard and soft copy of drawings as required by the engineer-in-charge.
13. The consultant shall provide minimum three equivalent makes (**preferably available in both India & Nepal**) of all items are to be provided in the tender document.
14. The consultant shall prepare the data sheet showing room-wise and building wise finishing, flooring and door window and other high end inventory schedule.
15. The consultant shall prepare the technical specification for civil work, electrical services, services equipment's, furniture, furnishing etc. for all items.
16. The consultant shall prepare and submit the floor-wise area statement.
17. The consultant shall prepare and submit the detailed cost estimate on prescribed format of CPWD, of the entire scope of the work after considering individual/ group of buildings/ structures, based on CPWD, prevailing DSR/DPR and on market rates as per the packaging of work decided by the competent authority.
18. The consultant shall prepare and submit the tender document along with schedule of quantities, specifications, special conditions etc. (for each individual building for which detailed design is prepared by him) as may be required for tendering for taking up the execution of the individual or group of the buildings as decided by the Engineer-in-charge based on the approved drawings/ services and schedule of specification. The document shall be prepared by

19. The drawings prepared by the consultant should have proper layer management and should be available to the department in Auto CAD format/ soft copy (in addition to the hard copies) with the flexibility to make any change. These drawings will be the property of the department.

4. TECHNICAL CAPABILITY:

The bidding entity is required to submit a complete list of consultants, specialists and experts, each with a minimum of experience as indicated below, who shall be engaged for engineering and detailed design of this project by the bidder. The qualification of the Consultants, Specialists etc. is also to be provided as indicated below along with the minimum experience certificate. Bidders will be solely responsible for the correctness and accuracy of such documents, produced in support of qualification and experience. Needless to say, that the minimum requirement of the personnel listed below has to be fulfilled, otherwise, bid will be summarily rejected. The bidder is required to submit the information in Form 'E' & 'F'.

S. No.	Consultant	Minimum Experience	Minimum Qualification
1.	Architect	10 Years	B. Arch.
2.	Structural Consultant	05 Years	M. Tech. Structure or BE/BTech Civil with 8 years' Experience.

The team of above consultants shall be deployed for complete duration of project. Any replacement of aforementioned consultant shall only be done after prior approval of the Engineer-in-charge.

In case of non-deployment of any of the consultant mentioned above during the currency of the agreement resulting to affect the progress of work, the necessary recovery of Rs. 50,000/- per person per month shall be recovered from the subsequent RA Bill of the agency. The decision of Engineer-in-charge shall be final and binding.



5. TIME SCHEDULE FOR THE CONSULTANCY WORK:

S. No.	Activities	Period from the date of commencement (in weeks)
1	Submission of Architectural drawings with plumbing, sanitary & E&M i/c Modifications in Preliminary Architectural Drawings, if any, incorporation of buildings in Master plan (if required)	02 weeks
2	Submission of detailed architectural drawings, design/ drawings for all relevant Civil & Electrical services along with detailed cost estimate, particular specifications and draft tender document on basis of drawings prepared for the project. including Preparation of bid documents and NIT up to approval Stage.	02 weeks
3	To complete the tendering procedure & selection/ appointment of L1 bidder for the above construction work. Submission of the detailed working drawings (Good for Construction) after getting the same duly proof checked as required including revised/modified drawings, if required due to the modification suggested by the Engineer-in-charge during execution.	03 weeks
4	Supervision of the construction work during execution as per scope of work till completion of the work & ascertaining and verifying the measurements of the work during execution for the interim payments of RA bills i/c Monitoring the progress of work including completion.	24 weeks
5	Submission of requisite details/ completion certificate and as built drawings /service drawings within 1 weeks from the date of completion of construction work.	2 weeks from the date of completion of work

Notes:

1. Amount @ 1% of final bid amount per month will be withheld from the bills for the delay in activities from S. No. 1 to 5 in payment & time schedule for activities above subject to maximum 5% of final Bid value. This amount will be released/adjusted after sanction of EOT by competent authority under clause "Compensation for delay" under Clauses of Contract.
2. Payment of fee as per the various stages of the above Payment Schedule shall be considered as due only when the entire work up to that stage is completed in all respects for all the buildings, structures, landscaping, and external development and service connections etc. as applicable for that stage of the work. The payment schedule is to be followed but for certain unavoidable conditions explained by the consultant, the department reserves the right to

3. For running payments, the consultants shall submit necessary bill in duplicate. The payment due to the consultant will be made within one month of submission of bills of the corresponding stage after satisfactory performance.

The consultant will work in coordination with Senior Architect, Project Delhi and Engineer-in-charge of the work.

6. PAYMENT SCHEDULE

The consultant shall be paid fees referred in the manner laid down in schedule for the stages of payment. For intermediate stage the fees shall be calculated on pro-rata basis for the work carried out. The fees shall be adjusted subsequently to ensure that the total fees payable to the consultant does not exceed the total contract amount of fees for that subhead. The employer shall, however, have the liberty to omit, postpone or not to execute any work but the consultant shall not be entitled the liberty to omit, postpone or not execute any work. The consultant shall not be entitled for any compensation or damages for such omission, postponement or non- execution of the work, except the fees which has become payable to him for the upto date services actually rendered by them

The consultancy fees as per the schedule of quantity shall be deemed to be inclusive of fees payable by the Consultant to any other sub-consultant and associates etc. engaged and inclusive of all taxes including VAT/GST and nothing extra shall be payable by the employer to the consultant on this account.

The fees payable to the consultant shall be in full discharge of functions to be performed by the consultant and no claim whatsoever against the employer in respect of any proprietary right or copy right by the consultant or any other party will be entertained. The consultant shall indemnify and keep indemnified the employer against any such claims and against all costs and expenses paid by the employer in defending against such claims. The payment to sub consultants and sub consultant for proof checking of various drawings and services have to be paid by consultant. However, proof checking for structural design will be done by the IITs/NITs/DTU as per decision of Engineer-in- charge. Payment for proof checking will be borne by the department.



Schedule of payment for the consultancy fees:

The payment to the consultant shall be done during various phases of the work as per the following,

Sr. No	Activity	consultancy fees (%)
1	Finalization of the Architectural and structural drawings and submission of NIT and tender documents etc. i.e. at the award stage of the work.	20 %
2	After selection of bidder & commencement of work.	10 %
3	After the 1/3 rd financial progress of work.	20 %
4	After the 2/3 rd financial progress of work.	20
5	The completion of project work and payment of final bill.	20 %
6	submission of as built drawings and service drawings etc.	10 %
	Total	100 %



SECTION-II

1.0 DEFINITIONS

- 1.1 For the purpose of this Agreement, the following works and expressions shall have the meaning hereby assigned to them, except where the context requires otherwise.
 - 1.1.1 The Engineer-in-Charge means the Engineer/Officer who shall supervise and be in-charge of the work and who shall sign the agreement of behalf of the President of India.
 - 1.1.2 "Bidder/ Architect Consultant/Firm" means the individual, proprietary firm, firm in partnership, limited company private or public or corporation undertaking the Consultancy works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company
 - 1.1.3 "Approved" shall mean approval granted by the Engineer-in-Charge in writing or accepted by him for incorporation in the works.
 - 1.1.4 Client means the Principal Kendriya Vidyalaya Embassy of India Kathmandu through the competent authority/ministry.
 - 1.1.5 "Department" means Kendriya Vidyalaya through Engineer-in-Charge until and unless stated otherwise.
 - 1.1.6 "Year" Means "Financial Year" until and unless stated otherwise.

2.0 ABANDONMENT OF WORK

- 2.1 If the consultant abandons the work for any reasons whatsoever or becomes incapacitated from acting as consultant as aforesaid, the Engineer-in-Charge may make full use of all or any of the drawings prepared by the Consultant and that the Consultant shall be liable to pay such damages as may be assessed by the Engineer-in-Charge subject to a maximum of 10% (Ten percent) of the total fee payable to the Consultant under this agreement. The department may make full use of all or any of the drawings prepared by the Consultant and proceed from the stage from where the Consultant left the work.
- 2.2 If at any time after acceptance of offer of consultancy, department decide to abandon or reduce the scope of work for any reason whatsoever, the department shall give notice to the Consultant in writing to that effect and he shall act accordingly. The Consultant have no claim to any payment of compensation of otherwise whatsoever. The Consultant shall be entitled to all such fee for the services rendered and liable to refund the excess payment, if any made to him over and above what is due in terms of this agreement.

3.0 DETERMINATION OR RESCISSION OF AGREEMENT

The Engineer-in-Charge without any prejudice to its right against the Consultant in respect of any delay by notice in writing absolutely determines the agreement in any of the following cases:



- I. If the Consultant being a firm/company shall pass a resolution or the Court shall make any order that the firm/company shall be wound up or a receiver or a manager on behalf of the creditor shall be appointed or if circumstances shall arise which entitled the Court or creditor to appoint a receiver or a manager or which entitles the Court to make up a winding order.
- II. If the Consultant is in breach of any terms of agreement.
 - (a) When the Consultant has made himself liable for action under any of the cases aforesaid, the Client shall have power to determine the agreement.
 - (b) Upon such determination, the Earnest Money Deposit, full Performance Guarantee and available Security Deposit shall be liable to be forfeited and shall be absolutely at the disposal of the Government.
 - (c) The firm, whose agreement is determined as above, shall not be allowed to participate in the tendering for the balance work.

4.0 RIGHTS & RESPONSIBILITY

- 4.1 The responsibilities about the efficiency and correctness of the proposal shall rest with the Consultant notwithstanding the fact that these were approved by the Client.
- 4.2 All plans, designs and data collected for this project shall be the property of Department. The Consultant shall have no right to them in any way without the written consent of the Engineer-in-Charge. The entire information as furnished to the Consultant as well as that gathered by the Consultant in the process of inspection shall be kept strictly confidential and not passed on to any unauthorized person. The Consultant shall also indemnify Department from and against all claims and proceedings for or on account of infringement of any patent rights, etc. in respect of each and every part of the work. Such indemnity shall be furnished to the Engineer-in-Charge upon quotation and before any payment is made.

6.0 EXTENSION OF TIME

If the Consultant is unavoidably hindered in carrying out the designs/drawings on account of delayed decision or approval by the Department which is necessary to carry out further work, he shall be allowed suitable extension of time by Engineer-in-Charge, whose decision shall be final and binding on the Consultant. No claim of the Consultant shall lie against the Department for such delayed approvals/decisions by the Department, except for grant of suitable extension of time.

7.0 ADDITIONS AND ALTERATIONS

The Client shall have the right to request in writing changes, additions, modifications in the scheme resulting in additional work in connection therewith and the Consultant shall comply with such request.

8.0 GENERAL CONDITIONS

- 8.1 The Architectural Consultant shall be fully responsible for the technical soundness of the proposal including those of specialists engaged, if any, by him.
- 8.2 The Engineer-in-Charge will have the liberty to supervise and inspect the work of consultant and/or his Sub-Consultants at any time by any officer nominated by him who shall be at liberty to examine the records/documents.
- 8.3 The building shall be designed as per requirement provisions of National Building Code 2016, and Barrier Free Accessible constructions, adoption of new Engineering Technologies in construction works as approved by CPWD, Pollution Control, Rain Water Harvesting as per norms and guidelines issued by MoH&UA and CPWD from time to time which are available on CPWD website www.cpwd.gov.in also.
- 8.4 The Consultant shall render every assistance, guidance and advise in general to the Engineer-in-Charge on any matter concerning the technical aspects of the project.
- 8.5 The Consultant shall promptly notify the Engineer-in-Charge of any change in the constitution of his firm. It shall be open to the Engineer-in-Charge to terminate the Agreement on the death, retirement, insanity or insolvency of any person being director in the said firm, or on the addition or introduction of a new Director not promptly informed in writing to the Engineer-in-Charge. But until its termination by the Engineer-in-charge as foresaid, this Agreement shall continue to be in full force and effect notwithstanding any changes in the constitution of the firm by death, retirement, insanity or insolvency of any of its Director or addition or introduction of any new Director. In case of death or retirement, the surviving or remaining Directors of the firm shall be jointly and severally liable for the due and satisfactory performance of all the terms and conditions of this Agreement.
- 8.6 The Consultant shall during the period of his assignment, and thereafter, till the satisfactory completion of the project, act as consultant and give related advice regarding the project.
- 8.7 The professional fees of the Consultant shall be inclusive of all cost related to visits to the site, attending meetings, conferences and making suitable presentations etc. Fee shall be inclusive of all prevailing taxes and levies.
- 8.8 Consultant's professional's fees are also inclusive of responsibilities of carrying out modifications in design and drawings.
- 8.9 The Consultant shall exercise all reasonable skill, care and diligence in the discharge of duties hereby agreed to be performed by them.

9.0 TIME FOR COMPLETION

- 9.1 The time of completion of the consultancy is **33 weeks** (total 33 weeks out of which 7 weeks for planning of work) from the date of start/ award of work whichever is earlier.
- 9.2 If the work remains un-commenced/or incomplete at any stage with reference to time schedule, and reason for delay cannot be substantiated, compensation @ 1% per month of delay to be computed on per day basis subject to maximum of ten percent of agreed fee shall

be levied on the Consultant. The decision of Engineer in-charge as to the period of delay on the part of the Consultant and the quantum of compensation for such delay shall be final and binding on the Consultant.

10.0 RESPONSIBILITY OF ACCURACY OF PROJECT PROPOSAL

- 10.1 The consultant shall be responsible for accuracy of the data collected and the designs, drawings and construction drawings prepared by him as a part of the project. He shall indemnify the department through a performance guarantee against any action arising out of such inaccuracies in the work, which might surface at any time at a later date of implementation of the project.



SECTION-III

LETTER OF TRANSMITTAL

From:

To
The Principal,
Kendriya Vidyalaya
Embassy of India Campus
Kathmandu, Nepal.

Subject: PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR
CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND
TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT
EMBASSY OF INDIA CAMPUS, KATHMANDU.

Having examined the details given in press notice and application document for
the above work, I / we hereby submit the relevant information.

I / we hereby certify that the statement made and information supplied in the
enclosed forms A to F and accompanying statement are true and correct.

I / we have furnished all information and details necessary for eligibility and have no
further pertinent information to supply.

I / we submit the requisite certified solvency certificate and authorize the Principal,
Kendriya Vidyalaya, Kathmandu to approach the Bank issuing the solvency certificate
to confirm the correctness thereof. I / we also authorize Principal, Kendriya Vidyalaya,
Kathmandu to approach individuals, employers, firms and corporation to verify our
credentials competence and general reputation.

I / we submit the following certificates in support of our suitability, technical knowledge
and capability for having successfully completed the following works:

Name of work:

Certificate from

Enclosures:

Seal of applicant

Date of submission:

Signature(s) of Applicants(s)



KENDRIYA VIDYALAYA
EMBASSY OF INDIA KATHMANDU

STATE: Kathmandu

DIVISION: Kathmandu

Item Rate Tender & Contract for Works

Tender for the work of:-

"PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU."

To be submitted by the bidders up to 3.00 PM on 10/09/2025.

To be opened in presence of tenderers/their authorized representative who may be present at 4.00 PM on 10/09/2025 in the office of the Principal Kendriya Vidyalaya Kathmandu

T E N D E R

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for Seventy Five (75) days from the date of its opening of tender and not to make any modifications in its terms and conditions.

I/WE have submitted/deposited EMD for the prescribed amount in the concerned office or along with the bid documents as per the bid document.

If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy, be at liberty to suspend we/us for one year and shall not be eligible to bid for Vidyalaya tenders from date of issue of suspension order.

Further, if I/we fail to commence work as specified, I/we agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works refer to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rate to be determined in accordance with the provision contained in clause 12.2& 12.3 of the tender form, I/we agree that in case of forfeiture of Performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar works (s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Performance Guarantee"

I/We hereby declare that I/We shall treat the tender documents, drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the state.

Dated *
Witness *
Address: *
Occupation *
(*to be filled by the contractor)
Contractor.....

Address.....

Signature of

Postal

Telephone No.

Fax: -

E-Mail: -



ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs (Rupees)

The letters referred to below shall form part of this contract Agreement : -

S #

ii) #

iii) #

(# to be filled by the Engineer -in-charge)

For & on behalf of the President of
India.

Dated.....

Signature:

.....
Designation: Principal, Kendriya
Vidyalaya, Eol, Kathmandu.



PROFORMA OF SCHEDULES A to F

SCHEDULE 'A' Schedule of quantity			Page- 49	
Schedule 'B'				
Schedule of Material to be issued to the Contractor				
S.No.	Description of Item	Quantity	Rates in figures & words of Which the material will be Charged to the contractor	Place of Issue
1	2	3	4	5
.....NIL.....				
Schedule 'C'				
Tools and plants to be hired to the contractor				
Sl. No	Description	Hire charges per day	Place of issue	
1	2	3	4	
.....NIL.....				
SCHEDULE 'D' Additional Conditions, /Technical Conditions and Requirements/documents for the work, if any, specifications for the work, if any: etc.			As per NIT	
SCHEDULE 'E' Reference to General Conditions of Contract			General Conditions of Contract 2023 for Construction. Amendments / Modified upto last date of submission of bid	
Name of Work			PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU	
Estimated cost for consultancy work			Nrs. 2,10,00,000/- (indicative only, may vary upon actual design and estimation)	
Earnest money			NRs 21,000/-	
Performance guarantee			NRs 52,500/-	
Security deposit			2.5% of tendered value of consultancy work	
SCHEDULE 'F' GENERAL RULES & DIRECTIONS:				
Officer inviting tender:			The Principal, Kendriya Vidyalaya, Embassy of India Campus, Kathmandu or successor there of	
Definitions:				
Engineer-in-Charge			The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of	

Accepting Authority	The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of
Percentage on cost of materials and labour to cover all overheads and profits:	NA
Standard Schedule of Rates	DSR 2023 with correction slips upto last date of receipt of Tender and market rates.
Department	Central Public Works Department.
Standard CPWD Contract Form	CPWD form 8 as Modified and corrected upto last date of receipt of Tender
Clause 1	
(i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance.	7 Days
(ii) Maximum allowable extension with late fee at 0.1% per day of performance guarantee amount beyond the period provided in (i) above	2 days
Clause 2	
Authority for fixing compensation under clause 2	The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of
Clause 5	
Number of days from the date of issue of letter of acceptance for reckoning date of start	7 days

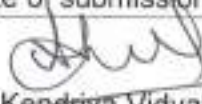
Mile Stone

Sl. No.	Time Allowed from the date of Start	Maximum Work done	Amount to be withheld in case of non-achievement of milestone
.....NIL.....			

Time allowed for execution of work from date of start	33 weeks including 7 weeks for planning work.
Authority to decide:	
(i) Extension of time	The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of
(ii) Rescheduling of milestones	The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of
(iii) Shifting of date of start in case of delay in handing over of site	The Principal, Kendriya Vidyalaya, Embassy of India campus, Kathmandu or successor there of
Clause 6	Yes, applicable

Clause 7	
Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	As per Payment schedule
Clause 7A Whether Clause 7A shall be applicable (No RA bill shall be paid till submission of EPFO, ESIC and BOCW Welfare Board)	NA
Clause 10A List of testing equipment/instruments to be provided by the contractor at site lab	N.A.
Clause 10B Whether Clause 10B (ii) shall be applicable	No
Clause 10C	Not Applicable
Clause 10CA	Not Applicable
Clause 10CC	Not Applicable

Clause – 11	
Specifications to be followed for execution of work:	C.P.W.D. Specification 2019 Vol. – I & II with corrections slips issued upto last date of submission of bid.
Clause-12 Type of Work	Original Work
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2, 12.3	100%
Clause-16 Competent Authority for deciding reduced rate	The Principal, Kendriya Vidyalaya, Embassy of India Campus, Kathmandu or successor there of
Clause-18 List of mandatory machinery, tools & plants to be deployed by the contractor at site	NIL
Clause-25	General Conditions of Contract 2023 for Construction with Amendments / Modified upto last date of submission of bid


 Principal, Kendriya Vidyalaya, Embassy of India campus Kathmandu.
 (For and on behalf of President of India)

ADDITIONAL TERMS AND CONDITIONS:

1. The Consultant whose bid is accepted will be required to furnish **performance guarantee of NRs 52,500/-** within the period specified in Schedule F from the date of issue of letter of acceptance. Performance Guarantee shall be refunded / released to the Consultant without any interest after successful completion of the project.
2. The Consultant whose bid is accepted, shall permit Engineer-in-charge at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running bill till the sum along with the sum already deposited as earnest money, will amount to security deposit of 2.5% of the tendered value of the work.
3. All compensations or the other sums of money payable by the consultant under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the Consultant by Government on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the Consultant shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks of Government Securities (if deposited for more than 12 months) endorsed in favour of the Engineer-in-charge, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the consultant at the rates mentioned above and the Earnest Money deposited at the time of tenders will be treated as part of the Security Deposit.
4. The consultants would be required to prepare documents on the basis of appropriate standards, criteria and specification. They would be required to liaise with all concerned agencies and adhere to time lines set by Vidyalaya. Implementation and progress of work should be prepared through perspective sketches, renderings and design brief should be described in words, diagrams and graphics.

AMENDMENT OF BID DOCUMENT:

1. At any time, prior to the date of submission of Bids, the Vidyalaya may, for any reason, whether at its own initiative, or in response to clarifications requested by a prospective Bidder during the Pre-bid meeting, modify bid documents by amendments/ corrigendum.



2. The amendments/corrigendum will only be published on the K.V. website <http://kvkathmandu.kvs.ac.in> and these amendments shall be binding on all the bidders. Hence bidders are instructed to check the Vidyalaya web site regularly.
3. In order to give the Bidders a reasonable time to take the amendment into account in preparing their bids, the Vidyalaya may, at its discretion extend the deadline for the submission of bids suitably, notice regarding which will be posted on Vidyalaya website <http://kvkathmandu.kvs.ac.in>

ADDITIONS AND ALTERATIONS:

1. The Engineer-in-charge shall have the right to ask in writing changes, additions, modifications or deletions in the design and drawing of any part of the work and to request in writing auditioned work in connection therewith and the Consultant shall comply with such request. That if the Engineer-in-charge, deviates substantially from the original scheme which involves for its proper execution, extra services, expenses and extra labour on the part of the Consultant for making changes and additions to the drawings, specifications or other documents due to rendering major part or the whole of their work infructuous, the Consultant may then be compensated for such extra services and expenses on quantum merit basis at percentage applicable under this agreement and to be determined mutually unless such changes, alterations are due to the Consultants own commission and/or discrepancies including changes required at the time of approval at various forums and due to changes required by the Consultants of all internal, external utilities and services. The decision of the Engineer-in-charge shall be final on whether the deviations and additions are substantial and require any compensation to be paid to the Consultant. However, for any modification or alteration which does not affect the entire design, planning, etc., no amount will be payable.
2. That if the Consultant abandons the work for any reason whatsoever, or becomes incapacitated from acting as Consultant as aforesaid, or in the event of the contract being determined or rescinded under provisions of any of the clauses / conditions of the agreement the Engineer-in-charge may make full use of all or any of the drawings/details prepared by the Consultant and that the Consultant shall be liable to refund all the fees paid to him till then and in addition the Performance Guarantee shall stand forfeited in full and shall be absolutely of the disposal of Engineer-in-charge.
3. The Consultants shall indemnify and keep indemnified the Engineer-in-charge against any inaccuracy in the consultancy job provided by them and against any such claim/cost and expenditure paid by the Engineer-in-charge in defending itself against such claims for which the Consultant will give a professional Indemnity Bond.

4. The copyright, ownership and property rights for all the data, drawings, reports and computer software, etc. developed by the Consultant under this agreement, shall vest with the Engineer-in-charge.
5. If at any time after the execution of the agreement and commencement of work, the Engineer-in-charge for any reason whatsoever, does not require the whole or part of the scheme as specified in the agreement to be performed by the Consultant, the Engineer-in-charge shall give one month's notice in writing to this effect to the Consultant, who shall thereupon have no claim to any payment or compensation, whatsoever, on account of any profit or advantage which they might have derived as a consequence of fulfilment of the agreement in full, but which they did not derive as a consequence of the curtailment of work. The Consultant shall be entitled to payment on a pro rata basis, for work submitted by them upto the time of such notice, as decided by the Engineer-in-charge and the decision of the Engineer-in-charge in the matter shall be final and binding. The Consultant shall return the balance amount to the Engineer-in-charge in case of any excess payment.

A handwritten signature in black ink, consisting of a stylized 'A' or 'D' shape with a horizontal line extending to the right.

FORM 'A'

FINANCIAL INFORMATION

I. Financial Analysis: - Details to be furnished duly supported by figures in balance sheet / profit & loss account for the last five years ending March, 2025 duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Year	Gross Annual turnover on consultancy Works	Profit / Loss
2020-21		
2021-22		
2022-23		
2023-24		
2024-25		

Signature of Chartered Accountant with Seal

Signature of Applicant(s).



FORM 'B'

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

"It is certified that as per the audited balance sheet and profit & loss account during the financial year 2024-25, the Net Worth of M/s.....(Name & Registered Address of individual/firm/company), as on 31st March 2025 is Rs. after considering all liabilities. It is further certified that the Net Worth of the company has not eroded by more than 30% in the last three years ending on (31st March 2025)."

(Signature of Chartered Accountant)

.....

Name of Chartered Accountant

.....

Membership No.

Date and Seal



FORM 'BI'

**FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED
ACCOUNTANT**

It is to certify that as per the Audited Balance Sheet and Profit & Loss Account during the Financial Year, the Net Worth of M/s.....(Name and Registered Address of Individual/Firm/Company), as on(the relevant date) is Rs..... after considering all liabilities. It is further certified that the Net Worth of the Firm/Company has not eroded by more than 30% in last three years ending on (the relevant date).

Unique Document Identification Number (UDIN)

Date & Seal

(Signature of Chartered
Accountant)Name

.....

Membership No.

.....



FORM 'C'

DETAILS OF CONSULTANCY WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION OF BID.

S. No	Name of work / project & location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation cases pending / in progress with details *	Name and address / telephone number of officer to whom reference may be made for verification.	Whether the work was done on back to back basis- Yes /No.
1	2	3	4	5	6	7	8	9	10

* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Applicant(s)



BLANK

FORM 'D'

STRUCTURE & ORGANISATION

1. Name & address of the applicant
2. Contact Details:
 - i) Telephone Number
 - ii) Fax Number
 - iii) Mobile Number
 - iv) Email ID
3. Legal status of the applicant (attach copies of original document defining the legal status)
 - (a) An Individual
 - (b) A proprietary firm
 - (c) A firm in partnership
 - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)
Organization / Place of Registration Registration No.
 - 1.
 - 2.
 - 3.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization.
7. Has the applicant, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
8. Has the applicant, or any constituent partner in case of partnership firm, ever been debarred / black listed for tendering in any organization at any time? If so, give details.
9. Has the applicant, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
10. In which field of Civil Engineering construction, the applicant has specialization and interest?
11. Any other information considered necessary but not included above.

Signature of Applicant(s)

FORM 'E'

DETAILS OF ARCHITECTURAL / TECHNICAL PERSONNEL
TO BE EMPLOYED FOR THE WORK

S. No.	Designation	Total No.	No. available for this work	Name	Qualifications	Professional experience * & details of work carried out	How these would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9

* CV should be attached for each personnel, which should specify relevant experience required for evaluation.

(Handwritten signature)

**Form of Bank Guarantee for Earnest Money Deposit/ Performance
Guarantee/ Security Deposit/ Mobilization Advance**

(on non-judicial stamp paper of minimum Rs. 100)

WHEREAS the Engineer-in-charge (Name of Division (Kendriya Vidyalaya
Embassy of India Kathmandu on behalf of the President of India (hereinafter called
"The Government") has invited bids under (NIT number)
dated for
..... (Name of work) The Government has further
agreed to accept irrevocable Bank Guarantee of Rs. (Rupees
..... only) valid upto (date)* as Earnest Money
Deposit from (name and address of contractor) (hereinafter
called "the contractor") for compliance of his obligations in accordance with the terms
and conditions of the said NIT.

OR**

WHEREAS the Engineer -in -charge (Name of Division(
.....Vidyalaya on behalf of the President of India (hereinafter called "The
Government") has entered into an agreement bearing number With
..... (name
and address of contractor) (hereinafter called "the contractor") for execution
of work(Name of work) The Government has further
agreed to accept irrevocable Bank Guarantee of Rs.(Rupees
..... only) valid upto (date)* as Performance
Guarantee/ Security Deposit/ Mobilization Advance from the said contractor for
compliance of his obligations in accordance with the terms and conditions of the
agreement.

2. We, (indicate the name of bank) (hereinafter referred to as "the
bank"), hereby undertake to pay to the Government an amount not exceeding Rs.
..... (Rupees Only) on demand by the Government within 10
days of the demand.
3. We, (indicate the name of bank) , do hereby undertake to pay the
amount due and payable under this guarantee without any demur, merely on a
demand from the Government stating that the amount claimed is required to meet
the recoveries due or likely to be due from the said contractor. Any such demand
made on the Bank shall be conclusive as regards the amount due and payable by
the Bank under this Guarantee. However, our liability under this guarantee shall
be restricted to an amount not exceeding Rs. (Rupees only).
4. We, (indicate the name of bank) , further undertake to pay the
Government any money so demanded notwithstanding any dispute or disputes
raised by the contractor in any suit or proceeding pending before any Court or
Tribunal, our liability under this Bank Guarantee being absolute and unequivocal.
The payment is made by us under this Bank Guarantee shall be a valid discharge.

of our liability for payment there under and the Contractor shall have to claim against us for making such payment.

5. We, (indicate the name of bank.....), further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor from time to time or to postpone for any time or time to time any of the powers exercisable by the Government against the said contractor and to for bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. We (indicate the name of bank), further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the contractor and notwithstanding any security or other guarantee the Government may have in relation to the contractor's liabilities.
7. The guarantee will not be discharged due to the change in the constitution of the Bank or the contractor.
8. We, (indicate the name of bank), undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This bank guarantee shall be valid upto unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees.....only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stands discharged.

Date.....

Witnesses: 1. Signature Name & Address	Authorized signatory Name Designation Staff Code No. Bank Seal
2. Signature Name & Address	



* Date to be worked out on the basis of validity period of 180 days from the date of submission of tender.

** in paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/ security deposit/ mobilization advance, as the case may be.

A handwritten signature or mark, possibly initials, consisting of a stylized 'd' or 'a' with a horizontal line extending to the right.

SCHEDULE OF QUANTITY

Name of Work: PROVIDING COMPREHENSIVE CONSULTANCY SERVICES FOR CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU.

S. No.	Description of Item	Qty.	Unit	Rate In (%) age	Rate in words
1	Providing comprehensive consultancy services for "CONSTRUCTION OF ADDITIONAL ONE STOREY EXTENSION WITH STEEL STRUCTURE AND TRUSS ROOF ON FIRST FLOOR TO NEW BLOCK OF KENDRIYA VIDYALAYA SCHOOL AT EMBASSY OF INDIA CAMPUS, KATHMANDU" as per scope defined in NIT document	1	Job		

Note: -

- The quoted rate shall be inclusive of all the prevailing taxes including VAT, nothing extra shall be paid.
- The duly filled and signed schedule of quantity shall be submitted in a separate envelope along with tender documents.
- The percentage quote shall be limited to 2 decimals only (for example 1.02, 3.45 etc.)

Date: _____

Signature of the Bidder

Name : _____

Name of the firm _____

& Seal





SAC(EE-1) PATNA	FILE NO. 1031	EXTENSION OF K.V. AT KATHMANDU	DRAWN BY
DRG NO. SAC(EE-1)/PATNA/1031/103	SCALE 1:200	G. FLOOR, PLAN, ELEVATION, SECTION PRELIMINARY DRAWING	T. N. GIRI

11.0 CONCLUSION

The failure of columns was due to small cross-section size is primarily due to inadequate load capacity, weak ductility, and poor seismic detailing. To improve seismic resilience, increasing column dimensions and following NBC and IS 13920 (for ductile design) are essential.

Also, the seismic joints in the school building were found to be inadequate, making the structure more vulnerable during earthquakes. Seismic joints are essential for allowing independent movement between adjacent structural units, preventing pounding effects, and reducing stress concentrations. However, in this case, the insufficient joint width caused excessive force transfer between connected sections of the building. As a result, stress accumulates at the junctions, increasing the risk of cracks, joint failure, and even partial collapse.

To address this issue, seismic joints should be designed with appropriate width as per building code requirements (such as NBC or IS code), considering the expected lateral displacements during earthquakes. Proper detailing, including flexible joint covers and adequate gap maintenance, can significantly improve the building's seismic performance.

REFERENCES

- Nepal Building Code (NBC 105: 2020).
- IS 1893 (Indian Standard for Earthquake-Resistant Design).
- Post-2015 Gorkha Earthquake Damage Assessments.

**Essential Standard Operating Procedure
(SOP) Required for Affiliation with CBSE
Biology Laboratory**



CENTRAL BOARD OF SECONDARY EDUCATION

1. Introduction:

In the study of Biology, practicals are given special consideration as they are necessary to stimulate creativity, curiosity and critical thinking among students. Moreover, practicals help increase students' engagement, thus boosting their interest in the subject. School labs are an excellent place for students which help them enhance their learning by understanding the theoretical concepts of science taught in classrooms. Well-designed laboratories make science experiments fun and help students achieve good academic results. They help to close the gap in the achievement of learning outcomes so that classroom transactions will shift towards competency-based learning and education. Hence, a well-equipped Science Laboratory is required in every school to:

- Make learning Holistic, Integrated, Enjoyable, and Engaging
- Develop conceptual understanding giving a strong emphasis on Experiential learning in all stages of science education to move toward Competency-focussed education.
- Provide opportunities to students for hands-on learning to observe, experiment and innovate
- Fulfill curricular expectations in a holistic manner
- Create and facilitate a culture of research from the school level itself
- Promote collaborative learning

2. Curricular expectations

At the Senior Secondary stage, learners who have opted for biology as one of the disciplines for study are expected to:

i.	Identify and develop an understanding of concepts, principles, theories, and laws governing the physical world around a biological entity.
ii.	Develop the ability to acquire and use the methods and processes of science, such as observing, questioning, planning investigations, hypothesizing, and collecting, analysing and interpreting data, communicating explanations with evidence, justifying explanations, and thinking critically to consider and evaluate alternative explanations in the biological perspectives.
iii.	Build upon the perceptive of essential tools and techniques used in concepts to analyse various issues in biology.
iv.	Conduct experiments also involving quantitative measurements in biology.
v.	Appreciate how biology concepts evolve with time, giving importance to its historical perspective.
vi.	Develop a scientific temper concerning biological phenomena (objectivity, critical thinking, creative skills, freedom from fear and prejudice) and Nurture natural curiosity, aesthetic sense, and creativity in biological processes and phenomena.
vii.	Imbibe the values of honesty, integrity, cooperation, concern for life and preservation of the environment.
viii.	Develop respect for human dignity and rights, equity and equality.

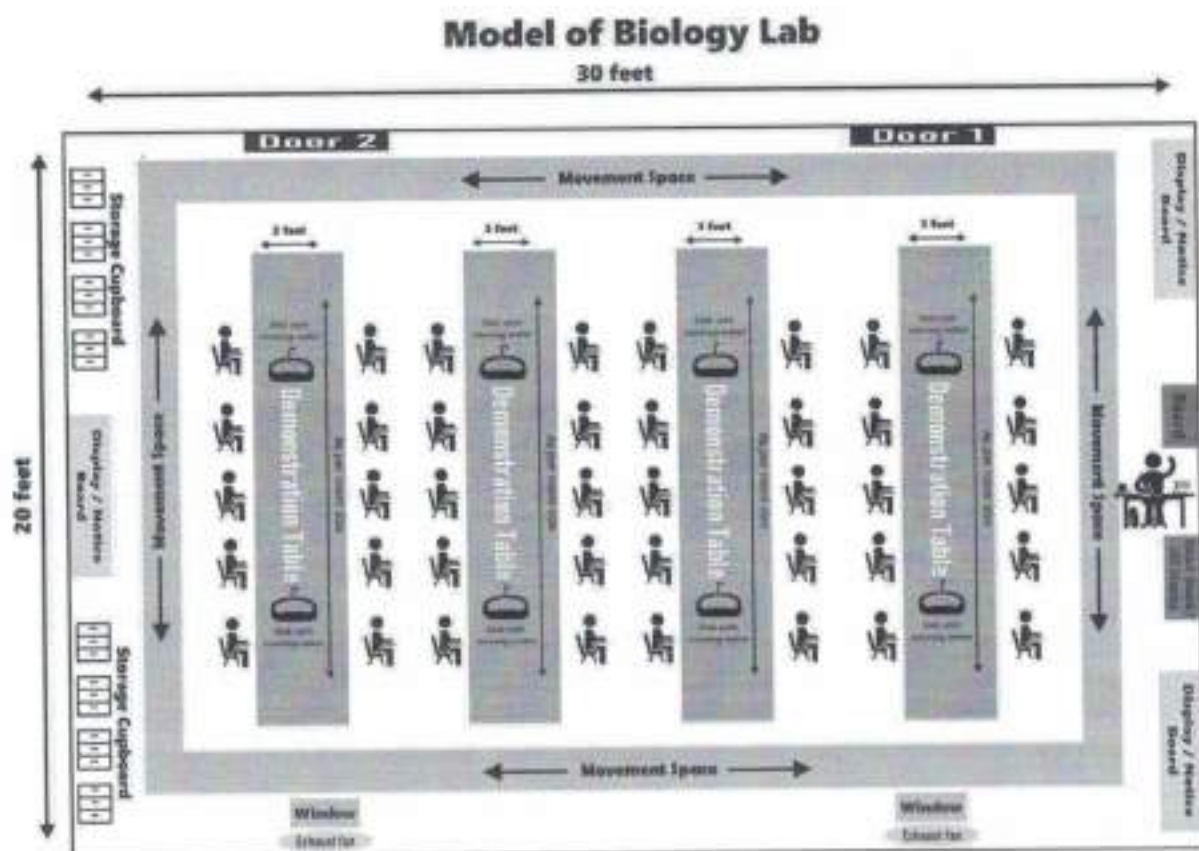
ix.	Connect biological concepts to real-life problems and develop innovative problem-solving abilities to solve problems related to life situations through an understanding of biological concepts.
x.	Widen skills to illustrate linkages of elementary aspects of biology with complex phenomena.
xi.	Integrate and interrelate biological concepts with other areas of knowledge by underlying common principles.

3. Pedagogy of Science education as recommended by National Education Policy 2020:

- Chapter 4 of NEP 2020 'Curriculum and Pedagogy in Schools: Learning Should be Holistic, Integrated, Enjoyable, and Engaging' has laid a wide emphasis on Experiential learning in all stages of science education in Para 4.6.
- Chapter 7 of NEP 2020 in Para 7.5 has mentioned the importance of well-equipped science laboratories for strong science education.
- According to Para 12.1 Effective learning requires a comprehensive approach that involves appropriate curriculum, engaging pedagogy, continuous formative assessment, and adequate student support. The curriculum must be interesting and relevant, and updated regularly to align with the latest knowledge requirements and to meet specified learning outcomes which can be made possible by well-equipped science laboratories.

To align with the recommendations of NEP and for the convenience and clarity of all stakeholders, CBSE has prepared SOPs for laying down the requirements for Biology Laboratory in schools. The present SOP also illustrates adequately the safety rules for students and instructions for teachers in this regard. The SOP also attempt to sensitize schools about proper management of waste generated during the practical exercise carried out by the students. It is hoped that the SOPs will be helpful for schools and students in adopting basic rules for safe behaviour and hygiene, to avoid accidents in the laboratory.

4. Model Layout of Biology Laboratory



5. Infrastructure needed for Biology Laboratory:

Recommendations for Infrastructure

S. No.	Category / Materials needed	Requirements
1	Physical Infrastructure	<ul style="list-style-type: none">• Minimum Lab. Room size 600 Sq.ft.
2	Storage	<ul style="list-style-type: none">• A separate room or cupboards within lab for consumables and non- consumables items in the lock and key mechanism, thus ensuring a safety, dust and vermin-free environment.
3	Teaching facility	<ul style="list-style-type: none">• Preferably an intelligent board with an internet Facility or white / green board.
4	Demonstration Table	<ul style="list-style-type: none">• The demonstration table should also have a sink along with a water tap. In the laboratory, seats are made available to the students, so students sit at the allotted place and note the instructions from the teacher.• 40 seating facilities (lab stools)
5	Display / Notice Board	<ul style="list-style-type: none">• Do's & Don'ts/ rules for the laboratory use/ safety procedures• List of practical activities• Timetable- (laboratory timetable)• Emergency Contact numbers
6	Gas/ heating	<ul style="list-style-type: none">• Preferably gas pipeline. (2 heating burners)
7	Sink with Water supply	<ul style="list-style-type: none">• 8 sinks with water supply
8	Waste management	<ul style="list-style-type: none">• 02 bins to be installed for biodegradable and non - biodegradable waste.• Flammable chemicals bottles must be packed separately. Empty chemical bottles can be packed in cartons/sacks. Disposal must be sent to the Material Management Division of the school.
9	Fire extinguisher	<ul style="list-style-type: none">• To be installed at a prominent place within the laboratory or in the corridor outside the laboratory.
10	Exhaust fans	<ul style="list-style-type: none">• 2 in number
11	Medical First Aid Kit	<ul style="list-style-type: none">• 2 in number

6. Minimum requirement of equipment / items for a Biology laboratory

a) List of Non-Consumable Items (for a batch of 40 students):

Sl. no	Non-Consumable	Requirement	Sl. no	Non-Consumable	Requirement
1	Beaker 100ml / 250ml / 500ml	Twenty	25	Watch glass	Forty
2	Chart stand	one	26	Water bath	one
3	Conical flask	Twenty	27	Wash bottle	Twenty
4	Digital balance	Twenty	28	White cavity tiles	Forty
5	Dropping bottle	Twenty	29	Pipette stand	one
6	Forceps	Forty	30	All Pins	Four packets
7	Funnel	Forty	31	Burette (50ml)	Forty
8	Glass showcase	one	32	Burette 50 ml	Forty
9	Heater	one	33	Perforated beaker	250 ml - twenty
10	Hot plate	one	34	Capillary tube	Twenty
11	Human skeleton (Artificial)	one	35	Test tube holders	Forty
12	Leaf clamp apparatus	one	36	Tripod Stand	Forty
13	Measuring cylinder 50ml/100ml/250ml	Twenty	37	Thermometer	Forty
14	Micro viewers	Eight	38	Trough	Forty
15	Microscope compound	Eight	39	Wire gauge	Forty
16	Microscope dissecting	Eight	40	Burette Stand	Forty
17	Mortar and pestle	Eight	41	Blade for section cutting	Eight
18	Petri dish	Forty	42	Chart display stand	Forty
19	Pipette (graduated 10ml)	Forty	43	Enamel Tray	Forty
20	Reagent bottle	Eight	44	Laboratory Coat	Forty
21	Skeleton (joints)	one set	45	Scissors 4"	Forty
22	Slide box	two	46	Scissors 6"	Forty
23	Test tube holders	Forty	47	Scalpel	Forty
24	Test tube stand	Forty	48	Staining Rack	Forty

List of Non-Consumable Items (for a batch of 40 students):

Sl. no	Non-Consumable	Requirement
49	Charts	<ul style="list-style-type: none"> Controlled pollination, and Pedigree charts Roundworm, Earthworm, and Tapeworm Pigeon, Rat, Scoliosis, Starfish, Frog, and lizard camel, and Cockroach Mendels inheritance , and the life cycle of the mosquito Racemose Inflorescence, Cymose Inflorescence, Modifications of Roots and stem Posters / portraits of Scientists
50	Models	<ul style="list-style-type: none"> Claws and beaks, forelimbs modifications, Brain, Ear, and Eye Human Torso model, and Human Skeleton Model Root nodules of leguminous plants Cuscuta on host, lichens, homologous and analogous organs.
51	Slide permanent	<ul style="list-style-type: none"> Asexual reproduction, Plant tissues, Animal tissues Stages of mitosis, Meiosis, T.S. of the testis, T.S. of ovaries Pollen tube germination, T.S. Blastula Disease-causing agents, Bread mould, Amoeba, Hydra
52	Specimens	<ul style="list-style-type: none"> Only plant specimens which are in the syllabus are: Aquatic plants, xerophytic plants, monocot plants, Dicot plants, moss, liverworts, fern Stem root and leaf modifications, Plant diseases., mushroom
53	Pictures / posters / Charts	<ul style="list-style-type: none"> Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom Yeast, liverwort, moss, fern, pine, one monocotyledonous plant One dicotyledonous plant and one lichen, Amoeba, Hydra, liver fluke, Ascaris, leech, earthworm, prawn Silkworm, honey Bbee, snail, starfish, shark Rohu, frog, lizard, pigeon and rabbit.

b) List of Consumable Items (for a batch of 40 students at any given time)

S.no	Consumable products	Requirement	S.no	Consumable products	Requirement
1	Acetic acid	250ml	39	Hydrochloric acid	100 ml
2	Acetone	250 ml	40	Detergent	20 gms
3	Alcohol	500 ml	41	Iodine	100 ml
4	Aluminum Sulphate	20 g	42	Methylene blue	10 ml
5	Benedict's solution	100 ml	43	Micro cover slip	Eight
6	Muslin cloth	20 metres (50 cm per student)	44	Micro glass slides	Eight
7	Brushes	Forty	45	Million's reagent	100 ml
8	Matchbox	One box	46	Needle	Forty
9	Ammonium solution	250 ml	47	Nitric acid	50 ml
10	Acetocarmine powder	5 ml	48	Petroleum ether	100 ml
11	Cavity block	Forty	49	Potassium nitrate	20 g
12	Cavity slide	10	50	Safranin solution	50 ml
13	Cellotape / paper tape	one	51	Bile salts	Five gms
14	Chromatography paper	Two sheets	52	Soap	one
15	Cobalt chloride	50 g	53	Starch	50 g
16	Cork	10	54	Starch iodide paper	one packet
17	Cotton Roll	one roll	55	Sucrose	100 g
18	Dettol	100 ml	56	Test tube - Boiling	Twenty
19	Dropper	20	67	Test tube - Ordinary	Eight
20	Dusters	5	68	Test tube Graduated	Forty
21	Filter paper	Five boxes of 24 pieces each	69	Toothpicks	Five jars
22	Formaldehyde	500 ml	70	Aluminum foil	Four foils
23	Glycerine	500 ml	71	Barium Chloride	Five gms
24	Grease	100 g	72	Dicot stem	Ten
25	Boric acid	Five gms	73	Urea	Ten gms
26	Monocot stem	Ten	74	Milk	10 ml
27	Ethanol	50 ml	75	Seeds/Pulses	50 gm
28	Fehling solution A	20 ml	76	Rice	50 gm
29	Fehling solution B	20 ml	77	Spinach Leaves	50 gm
30	Glucose	20 gms	78	Potato	50 gm
31	Lens cleaning solution	one	79	Sugar	50 gm
32	Lens cleaning paper	one	80	Egg	one
33	Magnesium Sulphate	Ten gms	81	Onion root tips	50 gms
34	Onion root tips	Five root tips	82	Peas	500 gms
35	Plain stickers	Eight	83	Pineapple	50 ml
36	Robert solution	10 ml	84	Banana	one
37	Sodium Chloride	Ten gms	85	Apple	one
38	Sodium Hypobromide	10 ml	86	pH paper	one packet each of a narrow range and a broad range

7. Safety guidelines

In order to ensure the safety of students in Science Laboratories, the following provisions are mandatory:

➤ List of general SOP applicable at all times

- Two wide doors for unobstructed exits from the laboratory.
- An adequate number of fire extinguishers near laboratory.
- Periodically checking vulnerable points in the laboratory about the possibility of mishaps.
- It should be ensured that gas fittings in the biology laboratory fulfill the desired norms and standards.
- Periodical checking of electrical fittings/ insulations for replacement and repairs.
- Timely and repeated instructions to students for carefully handling chemicals and equipment in the laboratory.
- Display of do's and don'ts in the laboratory at prominent places.
- Safe and secure storage of all chemicals and equipments.
- Proper labelling and upkeep of chemicals and equipments.
- Proper safety and protection provisions include a fume hood, goggles and gloves while doing practical work.
- Careful supervision of students while doing practical work.
- Advance precautionary arrangements to meet any emergencies.
- Conduct any additional experimental work only under supervision and with due advance permission.
- Availability of First Aid and basic medical facilities in the school.
- Proper location of the laboratories.

➤ General work procedure for students

- When entering a laboratory, avoid touching equipment, chemicals, electrical and electronic devices, or other materials until you are instructed to do so.
- Follow all written and verbal instructions carefully given by the teacher/ instructor.
- Do not start any practical work unless you are clear about its directions. Ask your teacher before proceeding with the activity.
- Be cautious at all times in the laboratory. Call the teacher immediately if you notice any risky conditions.
- Never work alone in the laboratory. The presence of a teacher or supervisor is necessary.
- In case of spillage, breakage or injury, report to the teacher instantly: stay calm.
- When removing an electrical plug from its socket, switch off and grasp the plug, not the electrical cord. Hands must be dry when touching an electrical switch, plug or outlet/ socket.
- Never return unused equipment to their original container.
- Do not immerse hot glassware in cold water, as the glassware may break. Put the heated glassware in a different place to be cooled.
- Never look into a container that is being heated. Always observe containers from sideways.
- If the Bunsen burner goes out accidentally, immediately turn off the control device/ gas supply.
- Wash your hands with liquid soap and water on leaving the laboratory.

**Essential Standard Operating Procedure
(SOP) Required for Affiliation with CBSE
Physics Laboratory**



CENTRAL BOARD OF SECONDARY EDUCATION

1. Introduction

Laboratories aim to create opportunities to provide students with hands-on experience of laboratory experiments, which could bridge the gap between theoretical concepts and their application in everyday life. The laboratory performance is based on the idea that science focuses on hands-on, minds-on observational activities and that these activities help students make connections between various scientific concepts and real-life experiences. If students are to make use of any technology/ scientific skills in their classrooms, they must learn to make observations, formulate hypotheses, conduct experiments, collect data, use appropriate tools, analyse the data and interpret the obtained results. The practicals enable students to connect to other science areas, communicate the information effectively, and argue their conclusions logically. Students can learn these skills if they can participate in various laboratory exercises.

In the study of Physics, practicals are given special consideration as they are necessary to stimulate creativity, curiosity and critical thinking among students. Moreover, practicals help increase students' engagement, thus boosting their interest in the subject. School labs are an excellent place for students which help them enhance their learning by understanding the theoretical concepts of science taught in classrooms. Well-designed laboratories make science experiments fun and help students achieve good academic results. It helps to close the gap in the achievement of learning outcomes, and classroom transactions will shift towards competency-based learning and education. Hence, a well-equipped Science Laboratory is required in every school to:

- Make learning Holistic, Integrated, Enjoyable, and Engaging
- Develop conceptual understanding giving a strong emphasis on Experiential learning in all stages of science education to move toward Competency-focussed education.
- Provide opportunities to students for hands-on learning to observe, experiment and innovate
- Fulfill curricular expectations in a holistic manner
- Create and facilitate a culture of research from the school level itself
- Promote collaborative learning.

2. Curricular expectations:

As per the NCERT Learning Outcomes at Senior Secondary Stage, at this stage Learners are expected to:

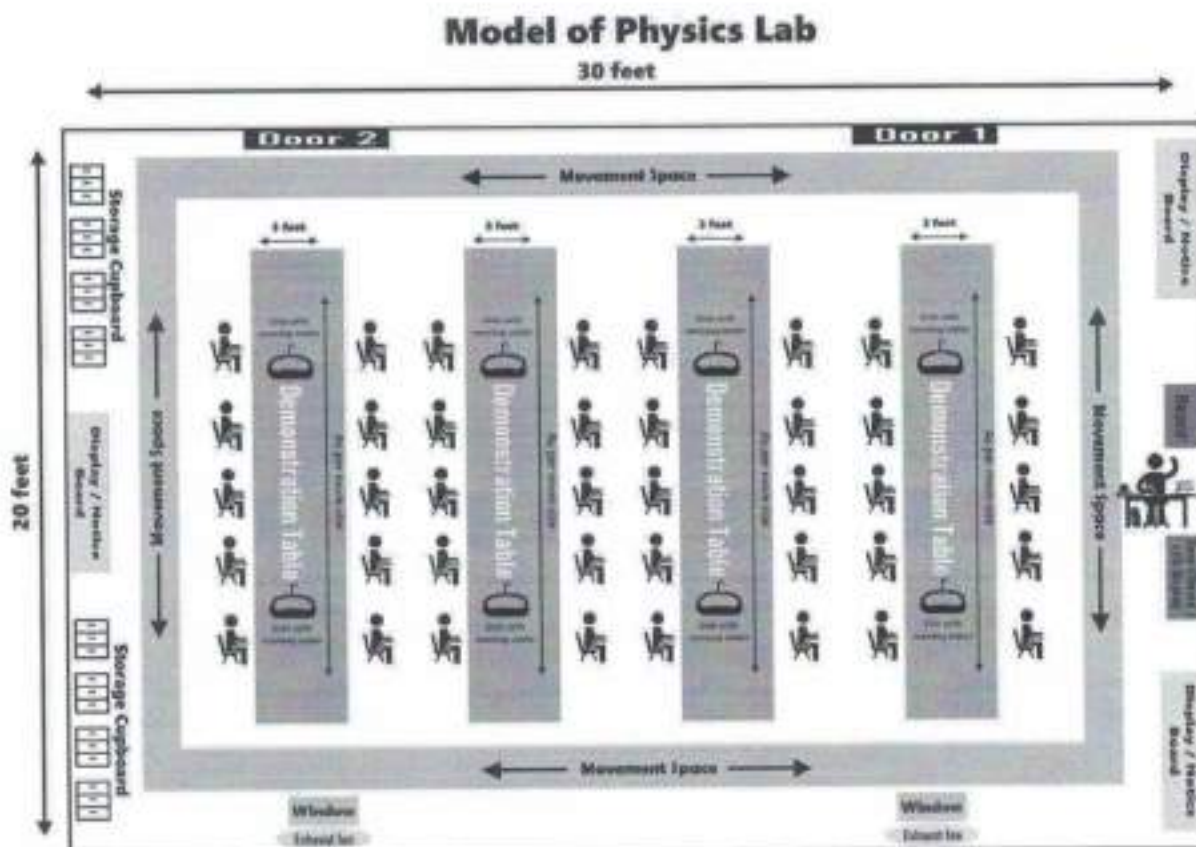
- develop interest to study physics as a discipline;
- strengthen the concepts developed at the secondary stage to acquire firm ground work and foundation for further learning of Physics more effectively and learning the relationship with real life situations;
- apply reasoning to develop conceptual understanding of Physics concepts;
- realize and appreciate the interface of Physics with other disciplines
- get exposure to different processes used in Physics-related industrial and technological applications;
- develop process-skills and experimental, observational, manipulative, decision-making and investigatory skills;
- synthesize various science/physics concepts to solve problems and thinking critically in the process of learning Physics;
- understand the relationship between nature and matter on scientific basis, develop positive scientific attitude, and appreciate the contribution of Physics towards the improvement of quality of life and human welfare;
- comprehend the contemporary knowledge and develop aesthetic sensibilities.
- appreciate the role and impact of Physics and technology, and their linkages with
- overall national development.

3. Pedagogy of Science education as recommended by National Education Policy 2020:

- Chapter 4 of NEP 2020 'Curriculum and Pedagogy in Schools: Learning Should be Holistic, Integrated, Enjoyable, and Engaging' has laid a wide emphasis on Experiential learning in all stages of science education in Para 4.6.
- Chapter 7 of NEP 2020 in Para 7.5 has mentioned the importance of well-equipped science laboratories for strong science education.
- According to Para 12.1 Effective learning requires a comprehensive approach that involves appropriate curriculum, engaging pedagogy, continuous formative assessment, and adequate student support. The curriculum must be interesting and relevant, and updated regularly to align with the latest knowledge requirements and to meet specified learning outcomes which can be made possible by well-equipped science laboratories.

To align with the recommendations of NEP and for the convenience and clarity of all stakeholders, CBSE has prepared SOPs for laying down the requirements for Physics Laboratory in schools. The present SOP also illustrate adequately the safety rules for students and instructions for teachers in this regard. The SOP also attempt to sensitize schools about proper management of waste generated during the practical exercise carried out by the students. It is hoped that the SOPs will be helpful for schools and students in adopting basic rules for safe behaviour and hygiene, to avoid accidents in the laboratory.

4. Model Layout of Physics Laboratory



5. Infrastructure needed for Physics Laboratory:

Recommendations for Infrastructure

S. No.	Category / Materials needed	Requirements
1	Physical Infrastructure	<ul style="list-style-type: none">• Minimum Lab. Room size 600 Sq.ft.
2	Storage	<ul style="list-style-type: none">• A separate room or cupboards within lab for consumables and non- consumables items in the lock and key mechanism, thus ensuring a safety, dust and vermin-free environment.
3	Teaching facility	<ul style="list-style-type: none">• Preferably an intelligent board with an internet Facility or white / green board.
4	Demonstration Table	<ul style="list-style-type: none">• The demonstration table should also have a sink along with a water tap. In the laboratory, seats are made available to the students, so students sit at the allotted place and note the instructions from the teacher.• 40 seating facilities (lab stools)
5	Display / Notice Board	<ul style="list-style-type: none">• Do's & Don'ts/ rules for the laboratory use/ safety procedures• List of practical activities• Timetable- (laboratory timetable)• Emergency Contact numbers
6	Gas/ heating	<ul style="list-style-type: none">• Preferably gas pipeline. (2 heating burners)
7	Sink with Water supply	<ul style="list-style-type: none">• 8 sinks with water supply
8	Waste management	<ul style="list-style-type: none">• 02 bins to be installed for biodegradable and non - biodegradable waste.• Flammable chemicals bottles must be packed separately. Empty chemical bottles can be packed in cartons/sacks. Disposal must be sent to the Material Management Division of the school.
9	Fire extinguisher	<ul style="list-style-type: none">• To be installed at a prominent place within the laboratory or in the corridor outside the laboratory.
10	Exhaust fans	<ul style="list-style-type: none">• 2 in number
11	Medical First Aid Kit	<ul style="list-style-type: none">• 2 in number
12	Heating facility	<ul style="list-style-type: none">• One Heater should be available in the lab to conduct Heat related experiments

6. Minimum requirement of equipment / items for a Physics laboratory

a) List of Non-Consumable Items (for a batch of 40 students):

S. No	Materials Required	Requirement	S. No	Materials Required	Requirement
1	Ammeters different range	10	27	Rheostat	10
2	Battery eliminator	10	28	Resistance coil different range 1-5 ohms)	20
3	Daniell cell	8	29	Resonance apparatus	8
4	Drawing board	30	30	Spherometer	30
5	Friction apparatus complete set with weight box	8	31	Screw gauge	20
6	Galvanometer	10	32	Wooden scale (1-50 cm, 1-100 cm)	10 each
7	Parallelogram apparatus	10	33	Stopwatch	8
8	Key one way	20	34	Sonometer	8
9	Jockey pencil type	10	35	Sprit level	4
10	Two-way key	8	36	Thermometer	10
11	Lacianche cell	8	37	Tuning fork (250 Hz, 480 Hz and 512 Hz) with pad	5 each
12	Meter bridge	8	38	Vernier calliper	20
13	Multimeter digital	4	39	Voltmeter (different range)	20
14	Multimeter manual	4	40	Beakers	10
15	Magnetic compass	10	41	Connecting wires	1 Kg
16	Optical bench (1 meter long)	10	42	Charts for display (bio visuals)	20
17	Prism (Indian glass)	30	43	Portraits (as per choice)	20
18	Potentiometer	8	44	Concave mirror	10
19	Plier	5	45	Convex mirror	10
20	Cutter	5	46	Convex lens	10
21	Screwdriver	5	47	Concave lens	10
22	Scissor	5	48	Wedge knife edge (for sonometer)	10
23	Resistance box (different range 0.1 to 10 ohm) • 1 to 10 ohms • 1 to 100 ohms • 1 to 1000 ohms • 1 to 100000 ohms	5 each	49	Glass slab	30
24	Dry cell 10g (chargeable)	10	50	Pendulum box	20
25	Dry cell charger	8	51	Cork rubber 1.5 inches	20
26	Helical spring apparatus with weights	8	52	Hanger weights 500 gm	8 set

S. No.	Materials Required	Requirement	S. No.	Materials Required	Requirement
53	Insulated copper wire	500 gm	71	Laptop/ desktop set	2 setup
54	Meter tape (1-100 meter)	4 roll	72	Balance (Physical)	2
55	Soldering iron	4	73	Boyle's law apparatus	2
56	Spring balance (0-250 gm)	10	74	Fortnis Barometer	2
57	U-shaped magnet	5	75	Metallic Cylinders	2
58	Copper calorimeter	2	76	Metal Sphere	2
59	Epidiascope	2	77	SG Bottles	2
60	Newton's Disc	2	78	Grave sand apparatus	2
61	Telescope	2	79	Young's Modulus	2
62	Camera	2	80	Spectrometer	2
63	Barometer tube	2	81	Hydrometer	2
64	Lactometer	2	82	Spirit Level	2
65	Stove (Oil)	2	83	Potentiometer	2
66	Electric bell	2	84	Silk and cat skin pieces	2
67	Proof Plane	2	85	Gold leaf electroscope	2
68	Binoculars	2	86	Tuning fork	2
69	Soldering rods	2			
70	P-N junction diode set up	4			

b) List of Consumable Items (for a batch of 40 students at any given time):

S. No.	Equipment	Requirement
1	Ammonium Chloride	500 gm
2	All Pins 1.5 "	2 Packets
3	Copper Sulphate	500 gm
4	Drawing Pins	6 Packets
5	Thread Rolls	1 Roll

7. Safety guidelines

In order to ensure the safety of students in Science Laboratories, the following provisions are mandatory:

➤ List of general SOP applicable at all times

- Two wide doors for unobstructed exits from the laboratory.
- An adequate number of fire extinguishers near laboratory.
- Periodically checking vulnerable points in the laboratory about the possibility of mishaps.
- It should be ensured that gas fittings in the laboratory fulfill the desired norms and standards.
- Periodical checking of electrical fittings/ insulations for replacement and repairs
- Timely and repeated instructions to students for carefully handling equipment in the laboratory.
- Display of do's and don'ts in the laboratory at prominent places.
- Safe and secure storage of all equipments.
- Proper labelling and upkeep of equipments/items.
- Proper safety and protection provisions include a fume hood, goggles and gloves while doing practical work.
- Careful supervision of students while doing practical work.
- Advance precautionary arrangements to meet any emergencies.
- Conduct any additional experimental work only under supervision and with due advance permission.
- Availability of First Aid and basic medical facilities in the school.
- Proper location of the laboratories.

➤ General work procedure for students

- When entering a laboratory, avoid touching equipment, chemicals, electrical and electronic devices, or other materials until you are instructed to do so.
- The students should be careful when doing electricity experiments.
- He/she should not touch any wires if his/her hands are wet, even for low voltage equipment.
- Do not start any practical work unless you are clear about its directions. Ask your teacher before proceeding with the activity.
- Be cautious at all times in the laboratory. Call the teacher immediately if you notice any risky conditions.
- Never work alone in the laboratory. The presence of a teacher or supervisor is necessary.
- In case of spillage, breakage or injury, report to the teacher instantly: stay calm.
- When removing an electrical plug from its socket, switch off and grasp the plug, not the electrical cord. Hands must be dry when touching an electrical switch, plug or outlet/ socket.
- Never return unused chemicals to their original container.
- Do not immerse hot glassware in cold water, as the glassware may break. Put the heated glassware in a different place to be cooled.
- Never look into a container that is being heated. Always observe containers from sideways.
- If the Bunsen burner goes out accidentally, immediately turn off the control device/ gas supply.
- Never leave a lit burner unattended.
- Wash your hands with liquid soap and water on leaving the laboratory.