

# **GURU GHASIDAS VISHWA VIDYALAYA,**

(A Central University Established by the Central Universities Act, 2009 N0.25 of 2009)

BILASPUR (C.G.) 495009



(Engineering Section- Phone 260207)

Tender Notice No 48/Engg./2012, Dt 08/05/2012

## **TENDER-FORM**

**NAME OF WORK**

भौतिकी भवन  
(भूतल पीछे के भाग का)  
शेष निर्माण कार्य  
(चतुर्थ आमंत्रण)

Name of Contractor .....

Due date of receipt of Tender 24/05/2012

Up to 3.00 p.m.

(Only by Registered post/speed post services)

Cost of Tender Form

10,000/-

(कृपया निविदाकर्ता प्रत्येक पेज पर सील लगावें एवं हस्ताक्षर करें)

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Tender Notice No 48/Engg./2012, Dt 08/05/2012

## **CERTIFICATE OF TENDER FORM**

### **It is hereby certified that:**

- 01- This tender form contains 81 of pages from SI. No. **01** to **66** including this page.
- 02- The last date & time for issue of the tender form to the eligible contractor is according to notification **48/ Engineering/2012/dated 08/05/2012** of this tender form.
- 03- Sealed tenders should reach the office of the Registrar latest by 3:00 p.m. on **24/05/2012** and shall be opened on the same working day at 4.00 p.m..
- 04- No word /sentence is being corrected/inserted, omitted or overwritten in this tender document.

**I/c UNIVERSITY ENGINEER**  
Guru Ghasidas Vishwavidyalaya  
Bilaspur (C.G.)

**REGISTRAR (Acting)**  
Guru Ghasidas Vishwavidyalaya  
Bilaspur (C.G.)



**गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)**

(A Central University established by the Central Universities Act, 2009 No. 25 of 2009)

क्र.-48 / यां0 / 2012 बिलासपुर,

दिनांक 08 / 05 / 2012

**// संक्षिप्त निविदा सूचना (चतुर्थ आमंत्रण) //**

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) की ओर से निम्नलिखित कार्यो हेतु दिनांक 24/05/12 को 3:00 बजे तक रजिस्टर्ड/स्पीड पोस्ट के माध्यम से मुहरबंद निविदा आमंत्रित की जाती है। निविदा प्रपत्र दिनांक 10/05/12 से 20/05/12 तक किसी भी कार्यालयीन दिवस पर विश्वविद्यालय यंत्री, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) के कार्यालय में आवेदन पत्र के साथ जीवित आयकर, वाणिज्यकर, उपयुक्त श्रेणी में ठेकेदारी पंजीयन, अनुभव प्रमाण पत्र एवं रूपये 10,000.00 का डी0डी0 प्रस्तुत कर प्राप्त किया जा सकता है। निविदा प्रपत्र वि0वि0 की वेबसाइट [www.ggu.ac.in](http://www.ggu.ac.in) से भी प्राप्त की जा सकती है, परंतु ऐसे डाउनलोडेड निविदा प्रपत्र का मूल्य रु, 10,000.00 डी.डी. (वापसी योग्य नहीं) कुलसचिव, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) के पदनाम से देय बैंक ड्राफ्ट के रूप में निविदाकर्ता को निविदा के साथ जमा कराना होगा। निविदा दिनांक 24/05/12 को 4:00 बजे प्रशासनिक भवन सभागार में खोली जावेगी। निविदा से संबंधित अन्य जानकारी वि0वि0यंत्री कार्यालय से प्राप्त की जा सकती है।

क्र	कार्य का नाम	ठेके की अनु.राशि (रूपये)	अमानत राशि (रूपये)	समय अवधि	ठेकेदार की श्रेणी
1	भौतिकी विभाग (भूतल पीछे के भाग का) शेष निर्माण कार्य।	347.00 लाख	6,94,000/-	09 माह	CPWD/CGPWD/MES/BSNL/ RAILWAY भारत सरकार के अन्य सार्वजनिक उपक्रमों में उचित श्रेणी में पंजीकृत तथा पात्र ठेकेदार।

कुलसचिव

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)  
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)

निविदा आमंत्रण सूचना

NOTICE INVITING TENDER

1. **Percentage rate** tenders are invited on behalf of the Registrar, G.G.V.Bilaspur from the approved and eligible contractors of CPWD and those of approved list of BSNL, M.E.S., Railways and C.G.State P.W.D. and other PSUs under Govt of India for the work of : **भौतिकी विभाग (भूतल पीछे के भाग का) शेष निर्माण कार्य।**

ठेकेदारों का पंजीकरण निविदाओं की बिक्री की अंतिम तिथि को वैध होना चाहिए। यदि केवल निविदाओं की बिक्री की अंतिम तिथि बढ़ायी जाती है, तो ठेकेदार का पंजीकरण निविदाओं की बिक्री की मूल तिथि को वैध होना चाहिए। यदि आवेदन प्राप्त की अंतिम तिथि एवं निविदाओं की बिक्री की तिथि, दोनों बढ़ायी जाती है, तो ठेकेदार का पंजीकरण दोनों तिथियों में से कोई यानी निविदाओं की बिक्री की मूल तिथि या निविदाओं की बिक्री की बढ़ायी गई तिथि, को वैध होना चाहिए।

The enlistment of contractors should be valid on the last date of sale of tender. In case only the last date of sale of tender is extended, the enlistment of contractor should be valid on the original date of sale of tenders. In case both the last date of receipt of application and sale of tenders are extended, the enlistment of contractor should be valid on either of the two dates i.e. original date of sale of tender or on the extended date of sale of tenders.

- 1.1 कार्य की अनुमानित लागत **रु. 347.00 लाख** है तथापि, यह अनुमानित लागत मोटे तौर पर एक मार्ग निर्देश मात्र है।  
The work is estimated to cost **Rs. 347.00 lakhs** this estimate, (civil works cost **302 lakh** and electrical works cost **45 lakhs**) however, is given merely as a rough guide.

- 1.1.1 मिश्रित लागत वाली निविदा आमंत्रण सूचना को अनुमोदित करने वाला तथा मुख्य डिसिप्लिन का सक्षम प्राधिकारी, निविदाएं मंगवाने के लिए निविदा आमंत्रण सूचना का समेकन करेगा और वह उस मंडल को भी नामित करेगा जो निविदाएं आमंत्रित करने से संबंधित सभी मामलों को डील करेगा। मिश्रित निविदा के मिश्रित अनुमान की लागत को दर्शाने के साथ-साथ प्रत्येक घटक की अलग-अलग अनुमानित लागत का उल्लेख भी किया जाए। निविदादाता की पात्रता, विभिन्न घटकों की लागत को मिलाकर मिश्रित अनुमानित लागत के अनुरूप होगी।

The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the tenders. He will also nominate Division which will deal with all matters relating to the invitation of tenders.

For composite tender, besides indicating the combined estimated cost put to tender, should clearly indicate the estimated cost of each component separately. The eligibility of tenderer will correspond to the combined estimated cost of different components put to tender.

- 1.2 Tender will be issued to eligible CPWD registered contractors. Non CPWD registered contractors and CPWD contractor registered in class II shall also be eligible provided they produce definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-

three similar works each of value not less than **40% of estimated cost** or two similar works each of value not less than **50% of estimated cost** or one similar work of value not less than **80% of estimated cost** in the period of last seven years ending **31.01.2012** (Similar work' means 'Building works with RCC framed structure with or without electrical works). The value of executed works

shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of receipt of applications for tender.

2. सफल निविदाकारों के साथ, निर्धारित निविदाकार उक्त प्रपत्र जो करार का हिस्सा होगा, निविदाकार उक्त प्रपत्र जो करार का हिस्सा होगा के विभिन्न निबंधन एवं शर्तों के अनुसार अपनी दरें बतायेगा।

Aggreement shall be drawn with the successful tenderer on standard form. Tenderer shall quote his rates as per various terms and conditions of the said form, which will be part of agreement.

3. दर की वैधता अनुबंध की तिथि से 12 माह के लिये होगी।  
validity of rate is for 12 months from date of aggreement.

4. कार्य हेतु कार्य स्थल उपलब्ध है।  
The site for the work is available.

अथवा Or

कार्य हेतु कार्यस्थल नीचे लिखे अनुसार भागों में उपलब्ध करा दिया जाएगा :-

The site for the work shall be made available in parts as specified below:- #

5. प्रपत्र जारी करने हेतु आवेदन 21/05/12 (षाम 5:30 बजे तक) प्राप्त किए जाएंगे तथा निविदा दस्तावेज 21/05/12 तक जारी किए जाएंगे। विश्वविद्यालय की वेब साइट से फार्म प्राप्त करने के लिये कोई अंतिम तिथि नहीं है।

Applications for issue of forms shall be received by 21/05/2012 (5:30 PM) and tender documents shall be issued till 21/05/2012 There is no last date for downloading tender form from University website.

रेखांक, विनिर्देश, कार्य के विभिन्न वर्गों के लिए मात्राओं की अनुसूची के सहित निविदा कागजात एवं टेके की शर्तों का सैट जिनका उस टेकेदार द्वारा अनुपालन किया जाना है, जिसकी निविदा स्वीकृत हो जाए तथा अन्य आवश्यक कागजात 21/05/12 से 21/05/2012 तक रविवार एवं सार्वजनिक छुट्टियों को छोड़कर, प्रतिदिन कार्यालयीन दिवस के बीच विश्वविद्यालय यंत्री, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) के कार्यालय में देखे जा सकते हैं। मानक प्रपत्र को छोड़कर, निविदा कागजात उक्त कार्यालय से ऊपर निर्दिष्ट समय के दौरान निविदा की लागत के तौर पर रु. 10,000/- की डी.डी. (वापसी योग्य नहीं) से भुगतान कर प्राप्त किए जा सकेंगे।

Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen in the office of the University Engineer, Guru Ghasidas University, Bilaspur(C.G.) between working hours from 20/05/12 to 02/05/2012 everyday except on Sundays and Public Holidays. Tender documents, excluding standard form, will be issued from his office, during the hours specified above, on payment of Rs. 10,000/- by draft as cost of Tender.

6. The tender and the earnest money shall be placed in separate sealed envelopes each marked- "Tender" and "Earnest Money" respectively.

The tenderer who takes the tender form from website, shall put the DD of Rs. 10,000/- & EMD along with the required documents in first envelope & the filled tender form in 2<sup>nd</sup> envelope. first sealed envelope marked- DD, EMD & Documents, 2<sup>nd</sup> sealed envelope marked- Tender. Without proper submission of Documents, DD & EMD, the tender may not be considered.

7. The contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (five percent) of the tendered amount within the period specified in schedule 'F'. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) 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 (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.

8. कार्य का व्यौरा इस प्रकार है ।

The description of the work is as follows भौतिकी भवन (भूतल पीछे के भाग का ) शेष निर्माण कार्य ।

निविदाकारों द्वारा जाँच के लिए कार्यों से संबंधित अन्य नक्शों तथा कागजातों की प्रतियां उपर्युक्त अधिकारी के कार्यालय में खुली रहेगी

Copies of other drawings and documents pertaining to the works will be open for inspection by the tenderers at the office of the above mentioned officer.

निविदाकारों को सलाह दी जाती है कि वे निविदा प्रस्तुत करने के पहले कार्यस्थल एवं उसके आस पास की जगह, जमीन की प्रकृति एवं अनमूदा (जहां तक व्यवहार्य हो), कार्य स्थल का रूप एवं प्रकृति, कार्य स्थल तक पहुंचने के साधन, स्थान जो उन्हें चाहिए उसका निरीक्षण व जाँच कर लें तथा जोखिम, आकस्मिकता एवं अन्य परिस्थितियों से, जो निविदा को प्रभावित कर सकती है, संबंधित आवश्यक जानकारी स्वयं प्राप्त कर, संतुष्ट हो लें। यह माना जायेगा कि निविदाकार को कार्यस्थल के बारे में पूरी जानकारी है, चाहे उसने इसका निरीक्षण किया हो या नहीं, तथा बाद में किसी भ्रॉति या अन्य बातों के लिए कोई अतिरिक्त प्रभार अनुमत्त नहीं होगा। कार्य निष्पादन हेतु सभी प्रकार की सामग्री, औजार एवं संयंत्र, जल, बिजली लाने के साधन, कामगारों के लिए सुविधाएं तथा अन्य अपेक्षित सेवाओं का प्रबन्ध करने तथा उनके रख रखाव का उत्तरदायित्व स्वयं निविदाकार का होगा, जब तक अन्यथा विशेष रूप से करार में इसका उल्लेख न किया गया हो। निविदाकार द्वारा निविदा प्रस्तुत करना यह सूचित करता है कि उसने इस सूचना एवं अन्य सभी करार-दस्तावेजों को पढ़ लिया है तथा उसे किए जाने वाले कार्य का अभिप्राय एवं विनिर्देशों, शर्तों व दरें जिन पर सरकार द्वारा उन्हें सामान, औजार एवं संयंत्र आदि दिए जाएंगे तथा स्थानीय स्थितियां और अन्य कारक जो कार्य में निष्पादन पर प्रभाव डालें, के बारे में पूरी जानकारी है ।

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders 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 tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer 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. विध्वविद्यालय न्यूनतम या किसी अन्य निविदा को स्वीकार करने के लिए अपने आप को आबद्ध करता है और प्राप्त हुए किसी भी निविदा या सभी निविदाओं को बिना कारण बताए अस्वीकार करने का अधिकार अपने पास सुरक्षित रखता है । ऐसी सभी निविदाओं को जिनमें विहित शर्तें पूरी नहीं की गई हों अथवा निविदाकार द्वारा सशर्त छूट दिए जाने सहित किसी शर्त को रखा गया हो, अस्वीकार कर दिया जाएगा ।

The GGV does not bind itself to accept the lowest or any other tender, and reserves to itself the authority to reject any or all of the tenders received without the assignment of any reason. All tenders, in which any of the prescribed conditions are not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected”.

10. निविदाओं के मामले में किसी भी प्रकार के प्रत्यक्ष या अप्रत्यक्ष प्रेरण का पूर्णतया निषेध है तथा उन ठेकेदारों की निविदाएं, जो प्रेरण का सहारा लेंगे, अस्वीकार कर दी जाएंगी।

Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

11. विश्वविद्यालय पूरी निविदा या उसके किसी भाग को स्वीकार करने का अधिकार अपने पास सुरक्षित रखते हैं तथा निविदाकार, कथित दर पर निष्पादन के लिए बाध्य होगा।  
The GGV on behalf of the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
12. ठेकेदार को विश्वविद्यालय में, (उद्यान / नर्सरी कैटेगरी के ठेकेदारों के लिये –डिवीजन) जो ठेके देने और उसके निष्पादन के लिए उत्तरदायी है। जिसमें उसका नजदीकी रिश्तेदार मंडल लेखाकार या अधीक्षण इंजीनियर एवं कनिष्ठ इंजीनियर (दोनों को मिलाकर) की श्रेणियों के बीच किसी भी हैसियत के अधिकारी के रूप में तैनात हो, कार्यों के लिए निविदा देने की आज्ञा नहीं होगी। यह उन व्यक्तियों के नामों को भी सूची देगा जो किसी भी हैसियत में उसके साथ कार्य कर रहे हों या जिन्हें उसके द्वारा बाद में भर्ती किया गया हो तथा जो केन्द्रीय लोक निर्माण विभाग या शहरी विकास मंत्रालय में कार्यरत किसी राजपत्रित अधिकारी के नजदीकी रिश्तेदार हो। यदि ठेकेदार इस शर्त को भंग करेगा तो उसका नाम इस विभाग की ठेकेदारों की अनुमोदित सूची से हटा दिया जाएगा।  
The contractor shall not be permitted to tender for works in the CPWD Circle (Division – in case of contractor of Horticulture / Nursery category) responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). 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 Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
13. भारत सरकार के किसी इंजीनियरी विभाग में इंजीनियरी या प्रशासनिक कार्यों में लगे हुए राजपत्रित रैंक के किसी इंजीनियर को या किसी अन्य राजपत्रित अधिकारी को सरकारी नौकरी से सेवा मुक्त होने पर एक साल तक, भारत सरकार की पूर्व लिखित अनुमति बिना ठेकेदार की हैसियत से काम करने की अनुमति नहीं है। यदि किसी समय यह पाया गया कि ठेकेदार या उनका कोई कर्मचारी, ऐसा व्यक्ति है जिसने निविदा प्रस्तुत करने से पहले या ठेकेदार की सेवा में लगने के पहले भारत सरकार से अनुमति नहीं ली थी, तो यह ठेका रद्द किया जा सकता है।  
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 contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. The contract is liable to be cancelled if either the contractor 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 tender or engagement in the contractor's service.
14. कार्यों के लिए निविदा, निविदाओं के जमा होने की अंतिम तारीख से 90 दिन तक स्वीकृति हेतु खुली रहेगी। यदि निविदाकार उक्त अवधि के पहले या स्वीकृति पत्र जारी होने के पहले, जो भी पहले हो, से पहले अपनी निविदा वापिस ले लेता है या निविदा की शर्तों और निबंधनों में कोई संशोधन करता है जो विभाग को स्वीकार्य नहीं है, तो विश्वविद्यालय किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना ऊपर किए गए उल्लेख के अनुसार उक्त धरोहर राशि का 50 का प्रतिशत जब्त करने के लिए स्वतंत्र होगी। इसके अतिरिक्त, निविदाकार को पुनः निविदा प्रक्रिया में भाग लेने की अनुमति नहीं दी जाएगी।  
The tender for the works shall remain open for acceptance for a period of Ninety days from the date of opening of Tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance which ever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the University shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the tenderer shall not be allowed to participate in the retendering process of the work.
15. यह निविदा आमंत्रण सूचना, करार दस्तावेज का एक हिस्सा होगी। सफल निविदाकार/ठेकेदार, स्वीकरकर्ता प्राधिकारी द्वारा निविदा स्वीकार किए जाने के बाद कार्य प्रारम्भ किए जाने की निर्धारित तिथि से 15 दिनों के भीतर निम्नलिखित को शामिल करते हुए संविदा पर हस्ताक्षर करेगा:-  
This Notice inviting tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of :-

- क) निविदा आमंत्रण सूचना, अतिरिक्त शर्तों सहित सभी कागजात, विनिर्देश एवं नक्शे, यदि कोई हों, जो निविदा आमंत्रण के समय निविदा के रूप में जारी किए गए हों तथा इस बारे में किए गए किसी पत्राचार सहित इसकी स्वीकृति।
- a) The notice inviting tender, all the documents including Particular specifications & special conditions and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- ख) मानक प्रपत्र लागू होगा।  
Standard format will be applicable.

मिश्रित संविदाओं के लिए  
For Composite Tenders

16.1.1: The tender document will include following three components:

Part A :- NIT including schedule A to F for major component of the work, Standard General Conditions of Contract for CPWD 2008 or latest addition as applicable with all amendments / modifications.

Part B:- General/specific conditions, specifications and schedule of quantities applicable to major component of the work.

16.1.2 : The tenderer must associate with himself, agencies of the appropriate class eligible to tender for the minor components individually.

16.1.3 : The eligible tenderers shall quote rates for all items of major component as well as for all items of minor components of work. It will be obligatory on the part of the tenderer to sign the tender document for all the components (The schedule of quantities, conditions and special conditions etc.) in appropriate page % above/ at per/below of schedule.

16.1.4 : After acceptance of the tender by competent authority, the Registrar GGV shall issue on behalf of Vishwavidyalaya.

16.1.5: Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.

16.1.6 : Security Deposit will be worked out for estimated cost. The Earnest Money will become part of the security deposit of the major component of work.

17 विश्वविद्यालय द्वारा वि०वि० हित में निविदा में दी गई नियम व शर्त में आंशिक संशोधन करने, एवं किसी नियम / शर्त को शिथिल करने का पूर्ण विशेषाधिकार विश्वविद्यालय के पास सुरक्षित रहेगा एवं निविदा कर्ता पर बंधनकारी रहेगा।

18 वि०वि० के पास यह अधिकार सर्वथा सुरक्षित रहेगा कि निविदा में उल्लेखित किसी भी कार्य को संपादित करावे अथवा बिना कोई कारण बताये वि०वि० हित में ऐसे किसी भी कार्य को कराने से मना कर देवे। साथ ही वि०वि० के पास यह भी अधिकार सर्वथा सुरक्षित रहेगा कि निविदा में उल्लेखित किसी भी कार्य को बिना कोई कारण बताये कराने से मना कर देवे।



- 19 किसी भी विवाद की स्थिति में पहली अपील **कुलसचिव**, गुरु घासीदास विश्वविद्यालय बिलासपुर (छ.ग.) को विवाद उत्पन्न होने की तिथि के एक सप्ताह के अंदर तथा द्वितीय अपील दो सप्ताह के अंदर **कुलपति महोदय**, को किया जा सकेगा । माननीय कुलपति, गुरु घासीदास वि०वि०, बिलासपुर (छ०ग०), निर्णय हेतु प्रकरण को किसी भी आर बी ट्रेटर के पास भेज सकेगे (आर बी ट्रेडन एक्ट के अनुसार)। ऐसे प्रकरण में कुलपति जी के स्वयं का निर्णय या आर बी ट्रेटर का निर्णय सर्वमान्य होगा ।
- 20 न्यायालयीन विवाद की स्थिति में बिलासपुर(छ०ग०) न्यायालय का क्षेत्राधिकार ही मान्य होगा ।

सहायक यंत्री

प्र०वि०वि०यंत्री

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)  
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR(C.G.)

कार्यों के लिए प्रतिशत दर निविदा  
Percentage Rate Tender & Contract for Works

(A) कार्य के लिए निविदा :

Tender for the work of भौतिकी भवन (भूतल पीछे के भाग का ) शेष निर्माण कार्य ।

(i) क) दिनांक **24/05/12** को 3:00 बजे तक कुलसचिव, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) में प्रस्तुत की जानी है ।

To be submitted by 3:00 PM on **24/05/12** to Registrar GGV. Koni, Bilaspur (C.G.)  
(time) (date)

(ii) ख) उन निविदाकारों के समक्ष खोली जाएगी जो दिनांक **24/05/12** को **4:00** बजे प्रशासनिक भवन सभागार, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) के कार्यालय में उपस्थित रहेगे ।

To be opened in presence of tenderers who may be present at **4:00 pm-** hours on **24/05/12** in the office of the conference hall, Adm. Building, Guru Ghasidas University, Bilaspur (C.G.)

सेवा में प्रेषित Issued to : \_\_\_\_\_  
(ठेकेदार) (Contractor)

कागजात जारी करने वाले अधिकारी के हस्ताक्षर :

Signature of officer issuing the documents \_\_\_\_\_

in Designation

विश्वविद्यालय यंत्री, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)

University Engineer, GGU Bilaspur (C.G.)

जारी करने की तारीख Date of Issue : \_\_\_\_\_

**Registrar(Acting)**  
GGV. Bilaspur (C.G.)

## निविदा TENDER

मैंने/हमने कार्य के लिए निविदा आमंत्रण सूचना, अनुसूची क,ख,ग,घ, ङ, और च, लागू विनिर्देश, नक्शे एवं डिजाइन, सामान्य नियम एवं निर्देश, ठेके के उपबंध, विशिष्ट शर्तों, दर अनुसूची एवं अन्य कागजात तथा ठेके की शर्तों, में दिए गए नियम तथा निविदा कागजात में उल्लिखित अन्य बातों को पढ़ व जांच लिया है।

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.

मैं/हम, एतत् द्वारा भारत के राष्ट्रपति के लिए अनुसूची 'च' में विनिर्दिष्ट समय के भीतर विनिर्दिष्ट कार्य, यथा-मात्राओं की अनुसूची तथा सभी संबंधित विनिर्देशों, डिजाइनों, नक्शे के अनुरूप तथा सामान्य नियमावली के नियम-1 और ठेके की शर्तों के खंड-11 में उल्लिखित लिखित अनुदेशों एवं ऐसी सामग्रियों, जो प्रदान की जाती है और उसके संबंध में, ऐसी शर्तें जो लागू हों, के अनुरूप निष्पादन हेतु निविदा देता हूँ/देते हैं।

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.

हम निविदा को, इसके जमा होने की निर्धारित तारीख से 90 दिनों के लिए खुला रखा जाने के लिए सहमत हैं।

We agree to keep the tender open for Ninety (90) days from the due date of its opening.

रु. 6,94,000/- की धनराशि, धरोहर राशि के रूप में नकद/ ट्रेजरी चालान रसीद/अनुसूचित बैंक की मांग जमा रसीद/ अनुसूचित बैंक की सावधी जमा रसीद /अनुसूचित बैंक का डिमांड ड्राफ्ट/ अनुसूचित बैंक द्वारा जारी बैंक गारंटी के रूप में इसके साथ भेजी जा रही है। यदि मैं / हम निर्धारित निष्पादन गारंटी को निर्धारित समय अवधि में प्रस्तुत करने में असफल रहते हैं तो मैं/ हम यह मंजूर करते हैं कि **कुलसचिव, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छोगो)** या उनके कार्यालय के उत्तराधिकारी किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि जब्त करने के लिए पूर्णतया स्वतंत्र होंगे। इसके अलावा, यदि मैं/हम विनिर्दिष्ट कार्य प्रारंभ करने में असफल रहते हैं तो मैं/ हम यह मंजूर करते हैं कि **कुलसचिव, गुरु घासीदास विश्वविद्यालय, बिलासपुर (छोगो)** या उनके कार्यालय के उत्तराधिकारी कानून में उपलब्ध किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि, तथा निष्पादन गारंटी जब्त करने के लिए पूर्णतया स्वतंत्र होंगे अन्यथा उक्त धरोहर राशि निविदा कागजात के अनुसार उसमें निहित शर्तों व निबंधनों के अनुसार कार्यों के निष्पादन एवं आदिष्ट विचलनों को अनुसूची 'च' में वर्णित प्रतिशत से अनधिक व निविदा प्रपत्र के खण्डों 12.2 व 12.3 में निहित प्रावधानों के अनुसार निश्चित की जाने वाली दरों पर उस सीमा से अधिक के विचलनों के करने के लिए उनके द्वारा प्रतिभूति-निपेक्ष के रूप में रोक ली जाएगी। इसके अतिरिक्त मैं/हम सहमत हैं कि बयाना राशि या बयाना राशि तथा उपर्युक्त निष्पादन गारंटी जब्त हो जाने के मामले में मुझे/हमें कार्य की पुनः निविदा प्रक्रिया में भाग लेने से रोक दिया जाएगा।

A sum of **Rs. 6,94,000/-** is hereby forwarded in cash/receipt treasury challan / deposit at call receipt of scheduled bank / fixed deposit receipt of scheduled bank / demand draft of a scheduled bank/bank guarantee issued by a scheduled bank as earnest money. If I/We fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said Registrar, GGV, Bilaspur (C.G.) or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Registrar, GGV or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/we agree that in case of forfeiture of earnest money or both earnest money

and performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

मैं/हम एतत् द्वारा घोषणा करते हैं कि मैं/हम निविदा कागजातों, नक्शे और कार्य से संबंधित अन्य अभिलेखों को गुप्त/गोपनीय कागजात के रूप में रखेंगे और उनसे प्राप्त/ली गई जानकारी किसी अन्य को, जिन्हें मैं/हम सूचित करने के लिए प्राधिकृत हो, से भिन्न किसी को, नहीं बताएंगे या जानकारी को किसी ऐसे रूप में प्रयोग नहीं करेंगे जो राज्य की सुरक्षा के लिए प्रतिकूल हो।

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 therefrom to any person other than a person to whom I/We am/are authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

I/we have done myself/ourselves fully satisfied to read & examine the notice inviting quotation, general conditions contract, all special conditions & specifications of work, applicable specifications, drawings, designs, applicable schedule of rates, descriptions, all the rules in respect of contract and all other contents in the notice and here by agreed for execution of the said specified work for the University Authority within the time period in accordance with that at the rate

(in figures).....

(in words).....

Percent below/at par/above with the applicable Schedule of Rates.

Dated.....

Signatures of the contractor

Postal Address:

Witness:

Address:

Occupations:

नीचे दिए गए पत्र इस ठेका करार का हिस्सा होंगे।

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

- a)
- b)
- c)

**कुलसचिव (प्रभारी)**

**Registrar (Acting)**

हस्ताक्षर Signature .....

तारीख Dated .....

**अनुसूचियां SCHEDULES  
FOR MAJOR (CIVIL) COMPONENT**

**अनुसूची 'क' SCHEDULE 'A'**  
मात्राओं की अनुसूची (संलग्न)

Schedule of quantities (Enclosed)

**अनुसूची 'ख' SCHEDULE 'B'**  
ठेकेदार की निर्गत की जाने वाली सामग्रियों की अनुसूची  
Schedule of materials to be issued to the contractor.

क्रम. सं. मद विवरण S.No. Description of item	मात्रा Quantity	जिस दर पर सामग्रियां ठेकेदार को प्रभारित होगी वह दर अंकों एवं शब्दों में Rates in figures & words at which the material will be charged to the contractor	निर्गत स्थान Place of Issue	
1	2	3	4	5

----- NIL -----

**अनुसूची 'ग' SCHEDULE 'C'**

ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयंत्र  
Tools and plants to be hired to the contractor

क्रम सं. Sl. No.	विवरण Description	भाड़ा प्रभार प्रतिदिन Hire charges per day	निर्गत स्थान Place of Issue
1	2	3	4

----- NIL -----

**अनुसूची 'घ' SCHEDULE 'D'**  
कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची

Extra schedule for specific requirements/documents for the work, if any.

-----Nil-----

## अनुसूची (ड) SCHEDULE 'E'

मूल्य वृद्धि के लिए सीमेंट, इस्पात, अन्य सामग्री आदि के घटकों की अनुसूची

Schedule of component of other materials, Labour POL etc. for price escalation –

**Note- No Escalation shall be given by GGV., Neither any claim for the escalation will be entertain.**

### Clause 10 CC --- This clause is not applicable.

Component of civil (Except materials covered under clause 10 CA) /Electrical construction materials expressed as percent of total value of work

**Xm 30%**

Component of labour expressed as percent of total value of work.

**'Y' 25%**

Component of P.O.L. expressed as percent of total value of work.

**'Z' Nil%**

## अनुसूची 'च' SCHEDULE 'F'

ढेके की सामान्य शर्तों का संदर्भ

Refrence to General Conditions of contract.

कार्य का नाम Name of work : भौतिकी भवन (भूतल पीछे के भाग का ) शेष निर्माण कार्य।

कार्य की अनुमानित लागत Estimated cost of work : **Rs. 347.00 lakhs**

(i) धरोहर राशि Earnest money: : **Rs 6,94,000/-**

(ii)निष्पादन गारंटी Performance guarantee :5% of tendered value.

निविदित मूल्य का 5 प्रतिषत

(iii) प्रतिभूति निक्षेप: Security Deposit: 5% of tendered value.

निविदित मूल्य का 5 प्रतिषत

### सामान्य नियम एवं दिशा निर्देश:

#### General Rules & Directions:

निविदा आमंत्रण करने वाला प्राधिकारी

Officer inviting tender -

**Registrar GGV Bilaspur**

कार्य की मदों की मात्रा के लिए अधिकतम प्रतिशत जिससे अधिक

निष्पादित मदों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के

निम्नानुसार होगा।

Maximum percentage for quantity of items of

work to be executed beyond which rates are to

be determined in accordance with Clauses

see below

12.2 & 12.3.

#### Definitions:

2(v) वि०वि०यंत्रि

**University Engineer, GGV. Bilaspur (C.G.)**

For Civil: GGV. Bilaspur (C.G.)

For Electrical GGV. Bilaspur (C.G.)

2(viii) स्वीकारकर्ता प्राधिकारी

Accepting Authority

**Registrar, GGV, Bilaspur(C.G.)**

2(x) अतिरिक्त और लाभों को पूरा करने के

लिए श्रम एवं सामग्रियों की लागत पर प्रतिशतता

Percentage on cost of materials and

labour to cover all overheads and profits.

**15%**

2(xi) दरों की मानक अनुसूची  
Standard schedule of Rates

For Civil: Delhi Schedule of Rate 2007(Civil) with  
correction  
slips issued upto date of receipt of tender.  
For Electrical: Delhi Schedule of rate 2007 for Internal  
Electrical works and schedule of rate 2007 for  
External Electrical works.

2(xii) विभाग  
Department

**GGV, Bilaspur (CG)**

9(ii) विश्वविद्यालय मानक के टेका फार्म  
University Standard contract Form

Standard Form

### **खण्ड Clause 1**

(i) स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय  
Time allowed for submission of performance guarantee from the date of issue of letter of acceptance : 20 days दिन

(ii) (उपर्युक्त i) में दी गई अवधि के पश्चात् अधिकतम अनुमेय एक्सटेंशन  
Maximum allowable extension beyond the period as provided in (i) above : 10 days दिन

### **खण्ड Clause 2**

खण्ड 2 के तहत प्रतिकार निश्चित करने वाला प्राधिकारी

Authority for fixing  
compensation under clause 2

**Building Committee**

### **खण्ड Clause 2A**

क्या खण्ड 2 क लागू होगा

Whether clause 2A shall be applicable **Yes**

### **खण्ड Clause 5**

कार्य आरंभ की तारीख की गणना के लिए स्वीकृति पत्र के जारी होने की तारीख से दिनों की संख्या

No. of days from the date of issue of letter of acceptance for reckoning date of start **22 days.**

लक्ष्य नीचे दी गई सारणी के अनुसार  
**Milestone(s) : - as per Table given below**

लक्ष्य (मील-पत्थर) सारणी

**Table of milestone(s)**

S No	Description of Milestone लक्ष्य का विवरण	Time allowed in days (From date of start) अनुमत्य समय, दिनों में (कार्य आरंभ की तारीख से )	Amount to be withheld in case of non-achievement of milestone लक्ष्य प्राप्त न होने की स्थिति में रोके जाने वाली राशि
1	Setting up batching plant and approval of design mix / approval of RMC plant	45 days	In the event of not achieving the necessary progress as assessed from the running payments, 1% of the tendered value of work will be withheld for failure of each milestone. Subject to maximum of 5% of tendered valued of the work.
2	Structure upto level-2	150 days	
3	Complete RCC structure excluding mummy, O.H. tank etc.	200 days	
4.	Completion of building including brick work, flooring, plastering, services installation (excluding fittings and fixtures & painting).	250 days	
5.	Completion of work and handing over	09 months	

कार्य निष्पादित करने के लिए अनुमत्य समय  
 Time allowed for execution of work **09 (Nine) Months**

Authority to decide

(i) Extension of Time **University Engineer,**  
 Guru Ghasidas University, Bilaspur (C.G.)

(ii) Rescheduling of mile stones **University Engineer,**  
 GuruGhasidas University, Bilaspur (C.G.)

**खण्ड Clause 6, 6A**

खंड लागू-(6 या 6 क) Clause applicable **6 A**

**खण्ड Clause 7**

अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे  
 भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के  
 अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य

Gross work to be done together with net payment/adjustment of advances for

**Rs. 33.55 Lakhs (For Civil Component)**

material collected, if any since the last **Rs. 5 Lakhs (For Electrical component)**  
 such payment for being eligible to interim payment

**खण्ड 10 d Clause10A**

कार्यस्थल प्रयोगशाला में टेकेदार द्वारा उपलब्ध कराये जाने परीक्षण उपकरण की सूची  
 List of testing equipment to be provided by the **See P 41 Para 11.0 (Part – B)**  
 Contractor at site lab.



**खण्ड Clause10B**

क्या खण्ड 10 ख लागू होगा  
Whether clause 10B shall be applicable Yes / हाँ

**खण्ड Clause10C**

Component of labour expressed as 25% (Twenty five per cent)  
Percent of value of work

**खण्ड Clause10CA**

Material covered under this clause	Nearest materials (Other than cement, reinforcement bars and structural steel) for which All India Whole Sale Price Index is to be followed.	Base Price of all materials covered under clause 10 CA *
1 Cement	NA	1. Rs. 5000.00 per MT
2 Steel reinforcement	NA	2. Rs. 31304.00 per MT
3 Structural steel	NA	3. Rs. 31009.00 per MT

**खण्ड Clause10CC**

: Not Applicable

खण्ड 10 ग, ग उन संविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शाई गई अवधि से अधिक अनुबंधित है।

Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column **18 months**

**खण्ड Clause 11**

कार्य निष्पादन के लिए अनुपालन **For Civil : CPWD specification 2009, Volume-I & II**  
Specifications to be followed for execution of work **with correction slips upto date of receipt of tender.**  
**For Electrical : CPWD specification for electrical works Part-I (Internal) 2005 and Part-II (external) 1994**  
- amended upto date of receipt of tender.

**खण्ड Clause 12**

12.2 &amp; 12.3

विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 भवन निर्माण कार्य के लिए लागू होंगे

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work **30%**

12.5 वह विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 नींव कार्य के लिए लागू होंगे

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work **100%**

**खण्ड Clause 16**

घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी  
Competent Authority for deciding Registrar/Building committee.  
Reduced rates.

**खण्ड Clause 18**

कार्यस्थल पर ठेकेदार द्वारा लगाये जाने वाली अनिवार्य मशीनरी औजार एवं सयंत्रों की सूची :-

List of mandatory machines, tools and plants to be deployed by the contractor at site. **See P 40 Para 9.0 (Part – B)**

**खण्ड Clause 36(i)****“Requirement of Technical Representative(s) and Recovery Rate**

SNo	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical representative)	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)	
						Figures	Words
1	Graduate Engineer	CIVIL	Principal Technical Representative	10-years	ONE	Rs.20000/- PM.	Rupees Twenty Thousand Per Month each
2	Graduate Engineer	CIVIL	Technical Representative	5-years	ONE	Rs.15000/- PM.	Rupees fifteen Thousand Per Month each
3	Graduate Engineer Or Diploma Engineer	CIVIL	Technical Representative	Nil Or 5-years	TWO Or TWO	Rs.10000/- PM.	Rupees Ten Thousand Per Month each
4	Graduate Engineer Or Diploma Engineer	ELECTRICAL	Technical Representative	Nil Or 5-years	ONE Or ONE	Rs.10000/- PM.	Rupees Ten Thousand Per Month each

सरकारी सेवा से सेवानिवृत्त वे सहायक अभियंता जो डिप्लोमाधारक हों, ग्रेजुएट अभियंता के बराबर माने जाएंगे।  
 “Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.”

**खण्ड Clause 42**

I) क) सीमेन्ट और बिटुमन की अनुमानमूल के.लो.नि.वि. द्वारा मुद्रित दिल्ली दर अनुसूची 2007 के आधार पर मात्रा निर्धारित करने के लिए अनुसूची/विवरण

I) (a) Schedule/statement for determining on the basis of Delhi Schedule of Rates 2007 theoretical quantity of cement & printed by C.P.W.D.bitumen

II) अनुमानमूलक मात्राओं में अनुमत विचलन  
 Variations permissible on theoretical quantities.

क) सीमेन्ट जिन कार्यों के लिए निविदा में अनुमानित मूल्य रु. 5 लाख से अधिक न हो 3 प्रतिशत जमा/घटा

a) Cement for works with estimated cost put to tender not more than Rs. 5 lakhs 3% plus/minus.

जिन कार्यों के लिए निविदा में अनुमानित मूल्य रु. 5 लाख से अधिक हो 2 प्रतिशत जमा/घटा  
 for works with estimated cost put to tender more than Rs. 5 lakhs 2 % plus/minus.

ख) बिटुमन सभी कार्यों के लिए 2.5 प्रतिशत केवल जमा और घटा के पक्ष में शून्य

b) Bitumen for all works 2.5% plus only & Nil on minus side.

ग)	इस्पात प्रत्येक व्यास, कोट और श्रेणी के लिए पूनर्वलन और संरचनात्मक इस्पात काट	2 प्रतिशत जमा/घटा
c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus/minus
घ)	सभी अन्य सामग्रियां	शून्य
d)	All other materials	Nil.

**अनुमत्य विचलन से अधिक की मात्राओं के लिए वसूली दरें**

**RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION**

क्रम सं.	मद विवरण	अंको और शब्दों में वह दर जिस पर ठेकेदार से वसूली की जाएगी	
Sl No.	Description of item	Rates in figures and words at which recovery shall be made from the Contractor	
		अनुमत्य विचलन से अधिक आधिक्य Excess beyond permissible variation	अनुमत्य विचलन से अधिक उपयोग घटाया Less use beyond the permissible variation
1.	UV Cement	NIL	Rs.6000.00 per MT
2.	Reinforcement steel	NIL	Rs. 50000.00 per MT
	----- Two items only -----		

**PARTICULAR SPECIFICATION  
&  
SPECIAL CONDITIONS (CIVIL)**

**1. GENERAL**

1.1 The contractor shall work according to the programme of work as approved by the **University Engineer /Registrar/Building committee** for which purpose, the contractor shall submit a tentative programme of the work within 15 days from the stipulated date of start of the work.

1.2 The contractor shall take instructions from the University Engineer for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.

1.3 If as per municipal / GGV. rules the huts for labour are not to be erected at the site of work by the contractors, the contractors shall provide such accommodation at such locations as are acceptable to local bodies, for which nothing shall be payable.

1.4 Unless otherwise provided in the Schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing shall be payable to him on this account. However, payment for centering, shuttering, if required to be done for floor heights greater than 3.5m, shall be admissible at rates arrived at, in accordance with clause 12 of the agreement, if not already specified otherwise.

1.5 The working drawings appearing at para 8.1(iii) of conditions of contract in the form prescribed form shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any

difference noticed between architectural and structural drawings, final decision, in writing of the University Engineer shall be obtained by the contractor before proceeding further.

1.6 Samples for particular items of work shall be prepared, for prior approval of the University Engineer before taking up the same on mass scale and nothing shall be payable on this account.

1.7 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restriction / instructions and nothing extra shall be payable on this account.

1.8 The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the University.

1.9 Other agencies may also be executing simultaneously on some other related works such as- electrical cable laying, street lighting and horticulture works for the same project. The contractor shall extend necessary co-operation to them without any claim on this account.

1.10 Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required and no extra payment shall be made for fixing the pipes in a different manner.

1.11 Any cement slurry added over base surface for bond or for continuation of concreting, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.

1.12 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the University Engineer. Double handling of materials or excavated earth if required shall have to be done by the contractor at his own cost.

1.13 No claim for idle establishment & labour, machinery & equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

## **2.0 WATER PROOFING TREATMENT**

The water proofing items shall be got done through the firms approved by University or other wise as directed by University.

### **2.1 GUARANTEE FOR WATER PROOFING TREATMENT**

The contractor shall give Ten years performance guarantee in the prescribed proforma for the water proofing treatment. In addition 10% (Ten percent) of the cost of these items shall be retained as security, to watch the performance of the work executed. However, half of this amount (withheld) shall be released after five years, after the completion of the work, if no defect comes to notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

## **3.0 ACP CLADDING AND STRUCTURAL GLAZING.**

### **3.1 scope of work :**

The scope of work includes structural analysis and design, preparation of shop drawings, setting out, lubrication, supply, installation, aligning, fixing and protection of the curtain

glazing and aluminium composite panel cladding etc. It also includes performance testing and guarantee for the works as described above, for the system, materials and performance requirements, for a period of **not less than** 10 years from the date of completion of the work.

The **rates of work under this section** includes cost of all inputs of labour, materials including wastages, T&P, equipments, cranes or cradles, scaffolding, other enabling temporary structures and services and all other incidental charges, if any, not specifically mentioned here, but as required for complete design, engineering, fabrication, assembling, delivery, anchorage, installation, protection of curtain glazing, aluminium composite panel cladding etc. and making the curtain glazing, aluminium composite panel cladding etc. water tight, all complete, and all in accordance with the true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown in the drawings and/or described in the specifications provided that the same can be reasonably inferred therefrom.

The curtain glazing, aluminium composite panel cladding shall have framing which shall be structurally and mechanically designed to achieve the architectural elevations as well as performance parameters specified herein. Anchorage shall include all supporting bracket & anchor fasteners, as required to rigidly secure the structural framing to the RCC/Masonry/structural steel members of the building.

## **STANDARDS:**

3.2 Materials and workmanship shall, in general, comply with the latest editions of the following standards as a minimum.

ANSI	Z97.1	Safety Glazing materials used in Buildings
ASTM	C1036	Specification for float glass
ASTM	C1172	Specification for Laminated Architectural Glass
ASTM	C864	Specification for compression Seal Gaskets
ASTM	C1115	Specification for Silicone Rubber Gaskets
ASTM	C920	Specification for Sealants
ASTM	C509	Specification for sealing material
CPSC16	CFR 1201	Specification for Safety Glass
BSCP 118		Structural use of Aluminium
AS 1664		--Do--

## **3.3 International Standards**

In general, the Contractor shall follow the latest Indian/International Standards issued by BIS. Other specification relevant to this item of work like ASTM, SAA, AAMA, BSS, ISO & SSIR can also be adopted if particular standards are not available in BIS codes. The contractor shall also state reasons for adopting particular standards/codes. Nothing in this clause shall relieve the contractor of his obligations to provide high standard of quality and workmanship as required.

**3.4** The contractor shall also submit guarantee in the enclosed format for replacement of glass during the guarantee period of not less than 10 years from the date of completion of work. **All the Guarantees shall be submitted before final payment is released after the date of the completion of work and shall not in any way limit any other rights, which the University Engineer may have under the Contract.**

3.5 If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of issue of notice to the contractor, (at least temporarily if it requires specialized materials and equipment for such rectification works which may entail some more time), to the satisfaction of the University Engineer, till the permanent rectification of the defects/replacement of defective materials is carried out by the contractor, in maximum four months period.

If not attended to, the same shall be got done by the University Engineer through other agency at the risk and cost of the contractor and the cost, which shall be final and binding on the contractor, shall be recovered from the amount withheld towards the guarantee as mentioned above or any other amount due to the contractor.

### **3.6 Scope of Shop Drawings**

- a) Shop drawing shall incorporate scaled and dimensioned plans, elevations, sections and complete size details for all the works.
- a. The shop drawings shall indicate the required dimensional profiles and modules, function, design and performance standards and in general cover all dimensions and details required to fabricate and install the curtain wall at site.
- b) The contractor shall verify and co-ordinate the shop drawings with all applicable and inter-related trades, drawings and specifications.
- c) All dimensions/modules, etc. shall be field checked and the drawings shall be modified, if required, based on actual measurements at site.
- d) Details shall show and specify all metal sections, types of finishes, areas to be sealed and sealant materials, gaskets, applicable construction materials including fasteners and welds, all anchorage assemblies and components, fabrication and erection tolerances for the work.
- e) All details shall be subject to the approval of the University Engineer, after incorporating all the modifications as suggested by the University Engineer or otherwise.

### **4.0 Stainless Steel Railing/Handrails**

- 4.1 Supply and installation of satin finish stainless steel railing (Ozone or equivalent ) having 50 mm dia OZBF-SS-ACC-HR-50-SS-P (PIPE) 1.6 mm thick tube handrail modular and component based system having unified stem keys as connector, centre rod 12 mm @ 300 c/c including a\end caps for railing & centre rod, SS balustrade OZBF –WS-11 members to be fixed on top of stair steps or floor edge at a minimum distance of 1000 mm to be complete with all necessary bends and joints and erected with chemical grouts of approved make or equivalent as per drawing and instruction of University Engineer (Height 1000 mm as per sketch)

#### **4.2 GENERAL**

The contractor shall apply all materials, labour, tools, ladders, scaffolding and other equipments necessary for the completion and protection of all stainless steel work.

#### **4.3 MATERIAL**

All stainless steel pipes and plates shall conform to AISI 304 in 18/8 composition 18 will be chromium and 8 will be Nickel and carbon content will be 0.03 maximum and the relevant clauses associated with this grade of steel to be followed.

#### **4.4 SURFACE FINISH**

Surface finish of all the stainless steel materials will be in 240 grit satin finish / matt finish.

#### **4.5 ACCESSORIES**

Fixing will be done by stainless steel expansion bolts of approved size and make as per University Engineer and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus florlic acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

#### 4.6 COATING MASS

All stainless steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

#### 4.7 MEASUREMENT

All the stainless steel finished parts shall be weighed correct to a gram and paid on weight basis.

#### 4.8 RATE

The rate shall include the cost of all the materials, machinery and labour involved in all the operations described above including cartage, lifts and all taxes like Sales Tax / VAT, Excise duty, Octroi etc. as applicable.

Any incidental additional requirements for execution of this item to the satisfaction of University Engineer shall also be treated as included in the item and shown in attached drawing and nothing extra will be paid for such extra work.

### 5.0 PAINT BROUGHT BY THE CONTRACTOR

- 5.1 The contractors shall bring sufficient quantity of paint of brand & shade approved by University Engineer prior to the commencement of work & keep it in his stores at site of work under double lock & key.
- 5.2 The paint shall be issued to the contractor from time to time according to requirements for the work in the same manner as followed for issue of cement
- 5.3 Empty containers shall not be removed without the written permission of the University Engineer.

### 6.0 CONDITION FOR CEMENT :-

6.1 The Contractor shall procure 43 grade Ordinary Portland cement (conforming to IS : 8112) or Portland slag cement (conforming to IS : 455) or Portland Pozzolana Cement (PPC) (Fly ash based) – conforming to IS : 1489 (Part-I) as required in the work, from reputed manufactures of cement, having a production capacity of one million tonnes or more, such as ACC, L&T, JP REWA, Vikram, Shri Cement, Birla Jute, Prism, Ambuja, Lafarge and Cement corporation of India etc. i.e. agencies approved by Ministry of Industry, Government of India, and holding license to use ISI certification mark for their product. **The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufactures, given by the tenderer, fully or partially.** Supply of cement shall be taken in 50 Kg bags bearing manufacture's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the University Engineer and got issue in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the Contractor at his own cost within a week's time of written order from the University Engineer to do so.

If Portland Pozzolana cement or Portland slag cement is used, suitable modification in deshuttering time etc. shall be done if need be as per specifications and standards and as directed by University Engineer and nothing extra shall be payable on this account.

No extra payment / deduction shall be made from the payment to the contractor for using any of the above type of cement.

- 6.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the University Engineer.

6.3 For each grade / type, cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at his own cost as per sketch shown in General conditions of contract for Vishwavidyalaya with weather proof roofs and walls. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the University Engineer regarding the capacity required/needed will be final. However, the capacity of each godown shall not be less than 30 tonnes. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with University Engineer or his authorized person and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Proforma and signed daily by the contractor or his authorized agent in token of its correctness.

6.4 The cement shall be got tested by University Engineer and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below :-

- (a) By the contractor, if the results show that the cement does not conform to relevant BIS codes.
- (b) By the Department, if the results show that the cement conforms to relevant BIS codes.

6.4.1 All other charges of sampling, packing and transportation of sample shall also be borne by the contractors.

6.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained separately for each type of cement, as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein. However, for consumption lesser beyond permissible theoretical variation recovery shall be made in accordance with conditions of contract at Schedule A to F (CPWD-8), without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be.

6.6 For non-schedule items, the decision of the Superintending Engineer regarding theoretical quantity of cement, which should have been actually used, shall be final and binding on the contractor.

6.7 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the University Engineer.

## **7.0 CONDITIONS FOR REINFORCEMENT STEEL:-**

7.1 The contractor shall procure TMT bars of Fe415 grade as per BIS 1786 – 2008 from primary producers such as SAIL or TISCO or RINL as approved by Ministry of Steel. In case of non-availability of steel from primary producers, Superintending Engineer, Bhopal Central Circle may permit use of TMT reinforcement bars procured from secondary producers.

- a. The secondary producers must have valid BIS licence to produce HSD bars conforming to IS 1786: 2008. In addition to BIS licence, the secondary producer must have valid licence from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT Bars.
- b. The TMT bars procured from primary producers shall conform to manufacture's specifications.
- c. The TMT bars procured from secondary producers shall conform to the specifications as laid by Tempcore, Thermex, Evcon Turbo & Turbo Quench as the case may be.



d. TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of IS 1786 : 1985 pertaining to **Fe 500** grade of steel as specified in the tender. Samples shall also be taken and got tested by the University Engineer as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para (c) & (d) above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the University Engineer to do so.

In case contractor is permitted to use TMT reinforcement bars procured from secondary producers then:

- (i) The base price of TMT reinforcement bars as stipulated under schedule 'F' shall be reduced by Rs. 6000/- MT.
- (ii) The rate of providing & laying TMT reinforcement bars as quoted by the contractor in the tender shall also be reduced by Rs. 7.35 per kg.

7.2 The steel reinforcement shall be brought at site in bulk supply of 25 tonnes or more as decided by the Engineer in charge.

7.3 The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

7.4 For checking nominal mass tensile strength bend test re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Dia of bar	For consignment below 100tonnes	For consignment above 100tonnes
Under 10 mm	One sample for each 25 tonnes or part thereof	One sample for each 40tonnes or part thereof
10 mm to 16mm	One sample for each 35 tonnes or part thereof	One sample for each 45tonnes or part thereof
Over 16mm	One sample for each 45 tonnes or part thereof	One sample for each 50tonnes or part thereof

7.5 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below :-

- (a) By the contractor, if the results show that the steel does not conform to relevant BIS codes.
- (b) By the Department, if the results show that the steel conforms to relevant BIS codes.

7.6 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.

7.7 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein.

7.8 Steel brought to site and remaining unused shall not be removed from site without the written permission of University Engineer.

7.9 (i) Reinforcement including authorized spacer bars and lappages shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

(ii) The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in CPWD specifications 2009 will be considered for conversion of length of various sizes of TMT bars in to standard weight.

(iii) Record of actual sectional weights shall also be kept dia wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The

decision of the University Engineer shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.

(a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.

(b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment nothing shall be paid extra for the difference in Derived/ Actual Weight and standard weight.

7.10 TMT bars of Fe 500 grade as per BIS : 1786: - 2008 from primary producer may also be permitted by University Engineer for which neither deduction shall be made nor extra shall be paid to the contractor. However, every care should be taken to avoid mixing different types of grades of bars in the same structural members as main reinforcement to satisfy relevant clause of IS: 456. In case of buildings, wherever the situation necessitates, the change over shall be made only from any one level onwards. In case of foundations, all foundation elements (footings and grade beams) shall have the same kind of steel. In the case of columns, all structural elements up to the level of change, where the change over is taking place should have the same kind of steel as those in columns.

7.11 The reinforcing steel brought to site of work shall be stored as per CPWD specification 2009.

## **8.0 REINFORCED CEMENT CONCRETE WORK**

8.1 To ensure proper cover, only factory made round type cover blocks will be used to avoid displacement of bars in any direction.

8.2 For the execution of centering and shuttering, the contractor shall use propriety "Reebole" chemical mould release agent of "FOSROC" or equivalent as shuttering oil as recommended by the manufacture and nothing extra shall be paid on this account.

### **8.3 DESIGN MIX CONCRETE**

8.3.1 The RCC work shall be done with Design Mix Concrete unless otherwise specified. In the nomenclature of items wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. For the nominal mix in RCC, CPWD Specifications shall be followed. The Design Mix Concrete will be designed based on the principles given in IS: 456-2000. The contractor shall design mixes for each grade of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. In case of use of admixture and or white cement, the mix shall be designed with these ingredients as well. The specification mentioned here-in-below shall be followed for Design Mix Concrete.

8.3.2 The concrete mix design will be carried out by the contractor through one of the following laboratories / Test houses and ready mix concrete shall conform to accepted design mix.

1. NIT, Raipur.
2. G.E.C., Bilaspur.
3. MANIT Bhopal
4. G.E.C. Ujjain
5. MITS Gwalior.
6. National Council for Cement & Building materials, Ballabgharh.
7. IT GGV, Bilaspur, (C.G.)

8.3.3 In the event of all the above laboratories being unable to carry out the requisite design / testing the contractor shall have to get the same done from any other laboratory with prior approval of the University Engineer.

8.3.4 The contractor shall submit the mix design report from any of above approved laboratories for approval of University Engineer within 45 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the mix design is approved.

In case of white Portland cement and the likely use of admixtures where CC/RCC is done with concrete pumps in concrete with ordinary Portland/white Portland cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and /or admixtures also, for which nothing extra shall be payable.

In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the University Engineer.

The Mix shall be designed to produce the grade of concrete having required workability and characteristic strength not less than as specified.

The mix design for a specified grade of concrete shall be done for a target mean compressive strength  $T_{ck} = F_{ck} + 1.65 s$

Where,

$F_{ck}$  = Characteristic compressive strength at 28 days.

S= Standard deviation

The standard deviation for each grade of concrete shall be calculated separately.

The degree of quality control for this work is “Good” for which the standard deviation (s) obtained for different grades of concrete shall be as follows:-

Grade of Concrete	For “Good” quality of control
M 20	4.0
M 25	4.0
M 30	5.0
M 35	5.0

Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days. All cost of mix designing and testing connected therewith including charges payable to laboratory shall be borne by the Contractor.

8.3.5 The samples of cement, aggregate (fine & coarse) to be sent to the laboratories shall be sealed in the presence of the University Engineer and shall have his signature and cost of packaging, sealing, transportation, loading, unloading, cost of samples and the testing charges for Mix design in all cases shall be borne by the contractor.

8.3.6 Notwithstanding the approval granted by University Engineer in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, transportation and placement etc.

8.3.7 The University Engineer reserves the right to exercise control over the : ingredients, water and admixtures, purchased, stored and to be used in the concrete including conducting of tests for checking quality of Materials fit or unfit for use in production of mix.

8.3.8 The Contractor shall submit the test data of the material used for concrete mix-design in the laboratoroies, so the material being used at site be compared with those data / size etc.

8.3.9 In case of change of parameters of ingredients (sand, cement, coarse aggregate) fresh concrete mix-design to be done as mentioned in para 8.3.2 above and got approved from the University Engineer before execution.

8.3.10 The contractor shall make arrangement to install a mini laboratory at site for accelerated testing of design mix concrete as per IS : 9013. The department reserves right to take samples of design mix concrete from the mass production of the concrete for testing and compare with the laboratory's results.

8.3.11 Nothing shall be paid extra for installation and cost of batching plant and other arrangement for making necessary test of design mix concrete.

8.3.12 The rate for item of design mix cement concrete shall be inclusive of all the ingredients including admixtures if required, labour, machinery T & P etc. (except shuttering which will be measured & paid for separately) required for a design mix concrete of required strength and workability. The rate quoted by the agency shall be net & nothing extra shall be payable on account of change in quantities of concrete ingredients like cement and aggregates and admixtures etc. as per the approved mix design. Cost adjustment at the rate of Rs. 600/- per quintal shall be made for less use of cement in design mix than specified in the item.

8.3.13 Concrete shall be handled from the place of mixing to the place of final deposit / placement by methods, which prevent segregation, or loss of any ingredients and contamination.

8.3.14 Where concrete is conveyed by chutes, the chute shall be made of metal or fitted with metal lining. The approval of the University Engineer shall be obtained for the use of chutes in excess of 3 metres length and in such cases the concrete shall be remixed if so required by the University Engineer or closed bottom buckets shall be used. If concrete is placed by pumping, the conduit shall be primed properly. Once pumping is started, it shall not be interrupted as far as possible. Concrete shall not be dropped into place from a height more than 1.5m.

8.3.15 Concreting of any portion of the work shall be done in presence of the representative of the University Engineer and shall be done only after approval of the University Engineer.

8.3.16 Concreting shall be carried out continuously between construction joints shown on the drawings or as agreed by the University Engineer. The contractor shall closely follow the sequence of concreting where it is specified in the drawings. If concreting is interrupted before reaching the predetermined joint an approved construction joint shall be provided. Construction joints shall be minimized as far as possible. These shall be set at right angles to the general direction of the member. The surface film of the first placed concrete should preferably be removed while the concrete is still green to expose the aggregate and leave a sound irregular surface. However care shall be taken not to disturb the concrete already laid.

8.3.17 **Admixtures:** Wherever required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chloride content in the admixture shall satisfy the requirements of BS: 5075. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS 456-2000.

8.3.18 Use of ready mixed concrete (RMC) may also be permitted, with prior approval of University Engineer, without any extra payment. Separate account of design mix concrete and RMC shall however be kept. The ready mixed concrete shall conform to the requirement of durability, workability and strength laid down for design mix concrete.

## **9.0 EQUIPMENTS AND PLANTS (Refer Clause 18 of Schedule 'F')**

9.1 The contractor should be capable of deploying necessary tools & plants as when required in appropriate as below required numbers to ensure smooth & timely execution of work, at his own cost

& risk as per the requirement of work at different stages. The decision of University Engineer shall be final regarding use of particular T&P(s) at a particular time(s) & the contractor has to adhere the same strictly:

I.	Steel centering and shuttering.	7000 Sqm.
II	Excavator Cum Loader.	1 No.
III	Builders Hoist / Tower crane	1 No.
IV	Concrete mixer with hopper. (Diesel + Elect.)	1 Nos.
V	Needle Vibrator. (Diesel / Petrol + Elect.)	5 Nos.
VI	Bar Bending Machine.	1 No.
VII	Bar Cutting Machine.	1 No.
VIII	Truck / Tipper	1 Nos.
IX	Floor grinding machine	10 Nos.
X	Welding machine	2 No.
XI	Chase cutter.	2 Nos.
XII	Water Pump	1 Nos.
XIII	DG set (Diesel)	1 No.
XIV	Pile rig for 300 mm dia pile	1 No.

9.2 To achieve the progress of work as per programme the contractor must bring at site the shuttering materials required for cement concrete and RCC work etc. within 7 days from the date of start of work. Work shop facilities for fabrication/addition and alterations, and other allied works shall be arranged by the contractor at his own cost.

9.3 In addition to these, machinery / equipment as required shall be arranged by the contractor in case the requirement at any stage exceeds as per the programme finalized at his own cost and nothing extra whatsoever on this account shall be paid.

9.4 All the equipment, T&P and machinery shall be kept in good condition.

## **10.0 SAFETY MEASURES AT CONSTRUCTION SITE**

In order to ensure safe construction, following shall be adhered for strict compliance at the site:-

- (i) The work site shall be properly barricaded.
- (ii) Adequate signages indicating 'Work in Progress – Inconvenience caused is regretted' or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.
- (iii) The construction malba at site shall be regularly removed on daily basis.
- (iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.
- (v) Proper MS pipe scaffoldings with work – platforms and easy-access ladders shall be provided at site to avoid accidents.
- (vi) Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract, CPWD safety code and CPWD specifications for which nothing extra shall be paid except otherwise provided.

## **11.0 LIST OF EQUIPMENT FOR SITE LABORATORY (Ref. Clause 10A of Schedule 'F')**

### **A. Laboratory testing instruments.**

- (1) Balances
  - i. 7 Kg. to 10 Kg. capacity, semi-self indicating type – accuracy 10 gm.-1 No.
  - ii. 500 gm. Capacity, semi-self indicating type – accuracy 1 gm.- 1 No.
  - iii. Pan balance – 5 Kg. capacities – accuracy 10 gms.-1 No.
- (2) Sieves: as per IS 460 – 1962.
  1. I.S. sieves – 450 mm internal dia, of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan. – 1 Set
  - ii. I.S. sieves - 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan. – 1 Set
- (3) Equipment for slump test – slump cone, steel plate, tamping rod, steel scale, scoop.- 2 Nos.
- (4) Graduated measuring cylinders 200 ml capacity – 2 Nos.

### **B. Field testing instruments.**

- (1) Steel tapes – 3 m. – 2 Nos
- (2) Vernier Calipers. - 1 Nos.
- (3) Micrometer screw 25 mm gauge. – 1 Nos.
- (4) A good quality plumb bob. – 2 Nos.
- (5) Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical.- 2 Nos.
- (6) Wire gauge (circular type) disc. – 1 Nos.
- (7) Foot rule – 2 Nos.
- (8) Long nylon thread – 2 Nos.
- (9) Magnifying glass – 1 Nos.
- (10) Screw driver 30 cms long – 1 Nos.
- (11) Ball pin hammer, 100 gms. – 1 Nos.
- (12) Plastic bags for taking samples – 1 Nos.

## **12.0 SPECIFICATIONS FOR CEMENT BASED FLY ASH BRICKS**

### **12.1 Quality of Raw Materials**

12.1.1 **ASH:** Fly ash shall meet the requirement of Grade 2 of IS : 3812. Fly ash should preferably be collected from 1<sup>st</sup> / 2<sup>nd</sup> field of ESP.

12.1.2 **Sand / Stone dust:** Deleterious materials such as clay and silt in sand / stone dust shall not be more than 5%.

12.1.3 **Cement:** Portland cement conforming to IS: 269, IS : 8112 or IS : 12269 (latest revision) shall be used.

12.1.4 **Storage:** All raw materials shall be stored in covered sheds and suitably protected from the rains.

12.1.5 **Proportioning of raw materials :** The following mix proportion shall be adopted for manufacturing fly ash, sand and cement bricks

Fly ash	50-60%	
Sand / Stone dust		32-40%
Cement	8-10%	

## ACCEPTANCE CRITERIA :

- 12.1.6.1 **Compressive Strength:** Minimum average compressive strength of brick shall not be less than 7.5 N/sq.mm when tested as per IS -3495 (Part-I) : 1976. The compressive strength of any individual brick shall not fall below the minimum average compressive strength by more than 20%. In case any test result of compressive strength exceeds 10.0 N/sq.mm, the same shall be limited to 10.0 N/sq.mm for the purpose of averaging.
- 12.1.6.2 **Water absorption:** The bricks when tested in accordance with the procedure laid down in Is: 3495 (Part-2) : 1976 after immersion in cold water for 24 hours, shall have water absorption not more than 20%.
- 12.1.6.3 **Drying Shrinkage:** The average drying shrinkage of the bricks, when tested by the method described in IS: 4139: 1989 being the average of the three units, shall not exceed 0.15 percent.
- 12.1.6.4 **Efflorescence Test:** The bricks when tested in accordance with the procedure laid down in IS : 3495 (Para-3) : 1976 shall have the rating of efflorescence not more than 'Moderate'.
- Sampling and Criteria for conformity:** Sampling and criteria for conformity of the bricks shall be as given in IS : 5454 : 1976.
13. The University will not pay cost escalation in any case.
14. The tenderer shall be required to submit the tender in two envelop system. Envelop A should contain the earnest money through bank draft of any scheduled bank payable to the Registrar GGV, Bilaspur (C.G.) Envelop B should contain the rate quoted by the contractor/firm of contractors in the prescribed tender form.
15. Envelop 'A' & 'B' will be sealed and then again put in the third envelop which also should be in sealed envelop. It should be clearly mentioned on the top of the envelop that it contains the tender invited by GGV wide tender number **38/Engg./2012 dated 18/12/2012**
16. The GGV reserves the right to award the work order to the 2<sup>nd</sup> lowest tenderer incase of the first lowest tenderer fails to execute monthly work progress report by canceling the work order given the 1<sup>st</sup> lowest tenderer.
17. The GGV reserves the right to place the order complete or part of work.
18. The GGV reserves the right to alter. Add or delete any term(s) & condition(s) in the interest of the University without any prenotice and no suit shall lie on the University for the same.
19. Validity of accepted Quoted rates will be for 12 months from the date of agreement. University will give separate order for separate works time to time for some specified time and specified works in the interest of the University.
20. The venue of arbitration shall be the court at Bilaspur (C.G.)
21. Any other information related to the tender may be obtained from office of the University Engineer, GGV, Bilaspur(C.G.) during working hours.

## **LIST OF APPROVED MATERIALS & SPECIALIZED AGENCIES (CIVIL)**

Note :

1. The Contractor shall obtain prior approval from the University Engineer before placing order for any specific material or engaging any of the specialized agencies.

2. Wherever applicable, the University Engineer may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction.
3. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.
4. In case of non availability of the brand specified in the contract or ISI marked materials, the Contractor shall be allowed to use alternate equivalent brand of the material subject to submission of documentary evidence of non-availability of the specified brand. Necessary cost adjustments on account of above change shall be made for the material, if required.

**MATERIALS:**

**BRAND/MAKE**

	<b>MATERIALS:</b>	<b>BRAND/MAKE</b>
1.	White Cement	JK, Birla or equivalent.
2.	Super plasticizer	MC Baucheme, Sika, Fosroc
3.	Water Proofing Compound (Liquid)	Pidiproof Ltd., Cico, Impermo
4.	Stainless Steel	Jindal Stainless Steel, Salem Steel
5.	Galvanized/Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer
6.	PVC Tiles	Arm Strong, LG or equivalent.
7.	Ceramic Tiles	Kajaria, Somany, Nitco, Orient, Bell Ceramic, Johnson
8.	Vitrified /Porcelain Tile	Marbonite, Euro, Somany, diamond of Naveen Granamite of Bell ceramic, Granito, Kajaria, Marbitto.
9.	Terrazzo tiles	Mehtab, Nitasha, Nitco, Raj-yesh, Bharat
10.	Chequered tiles	Mehtab, Nitasha, Nitco, Raj-yesh, Bharat
11.	Acid/Alkali Resistant Tile	Somany, Nitco, Kajariya, Bell Granamite Group, Johnson
12.	Polymer Modified Cementitious grout	Bal Endura, Pidilite or equivalent.
13.	Glass Mosaic Tile	Bissazza, Saon or equivalent.
14.	Hardner	Hard crete of Snowcem India, MC Deritop F.H.
15.	Flush Doors	Kutty flush door, Anchor, Kanara, Kitlam, National, Swastic
16.	FRP Shutters	Fibre Glass Engineers, Raipur, Aashoo Model
17.	PVC Shutter	Rajshri, Sintex or equivalent.
18.	Ply Wood	Archid, Kitply, Green ply, Century
19.	Pre-laminated Particle Board	Novapan, Kitlam or equivalent.
20.	Melamine Polish	Melamine of Asian Paint, Wudfin of pidilite Industries Timbertone of ICI Dullex.
21.	Laminate	Marino, Greenlam, Decolam, Century, Formica
22.	Aluminium Composite Panel	Alpolic, Aluco Bond, Reynobond, Euro bond, Al-strong



23.	Stainless Steel Screws	Kundan, Arrow or equivalent.
24.	Aluminium Extrusions	Hindalco, Indalco, Jindal
25.	Hydraulic Floor spring	Hardwyn, Godrej or equivalent.
26.	Hydraulic Door Closer	Hardwyn, Godrej or equivalent.
27.	Annealed Float Glass	Saint Gobain, Modi Guard, Hindustan Pilkington
28.	Synthetic Enamel Paints	ICI(Dulux),Asian (Apolite),Berger (Luxol),Nerolac (NST)
29.	Structural Silicon Sealant	Dow Corning, Wacker, GE, Du-pont
30.	Epoxy Primer & Paints	Berger, Pidilite or equivalent.
31.	GI Pipe	Tata, Zenith, Jindal
32.	GI fitting	Unik, ICS or equivalent.
33.	Centrifugally Cast Iron Pipe & Fittings	Neco, RIF, SKF
34.	Polyester Powder Coating	Nerolac, Berger, J&N
35.	Gun Metal Gate Valve	Zoloto, Leader, SAINT
36.	PVC Rain Water Pipe & Fitting	Finolax, Classic of Kisan or equivalent.
37.	Primer	Asian, ICI, Berger, Nerolac
38.	Oil Bound Distemper	Asian(Tractor), ICI (Maxi lite),Berger(Bison),Nerolac (NAD)
39.	Acrylic Emulsion Paint	Asian (Royale), ICI (Velvet), Berger (Luxol Silk), Nerolac (Allscapes)
40.	Structural steel section	TATA, SAIL, RINL
41.	Curtain Carrier	Vista levlor or equivalent.
42.	Drapery Rod	Vista Levlor or equivalent.
43.	Vitreous China Wash Basin Rectangular without Pedestal	Hindware / Perryware or equivalent.
44.	Virtuosos China Wash Basin Oval	Hindware / Perryware or equivalent.
45.	Vitreous China Pedestal for Wash Basin	Pedstal of Perryware / Hindware
46.	Vitreous China Floor Mounted European W.C. without cistern	Perryware / Hindware or equivalent.
47.	Vitreous China Floor moulded European with Cistern Compote	Perryware / Hindware or equivalent.
48.	Vitreous China Wall hung W.C. without Cistern.	Perryware / Hindware or equivalent.
49.	Vitreous China Wall Hung W.C. with vitreous Cistern (component)	Perryware / Hindware or equivalent.
50.	Orissa Pan	Perryware / Hindware or equivalent.
51.	Vitreous China Low Level Cistern for European W.C.	Hindware / Perryware or equivalent.
52.	Low Level PVC Cistern	Sleek model Cistern of PVC of Hindware

	Single flush	or Slimline deluxe model of Perryware JINDAL.
53.	Dual Flush	Sleek Dual flush PVC cistern of Hindware or Slimline dual of Perryware.
54.	Vitreous China Half stall Urinal	Model No. 6002 Urinal flat back large of Hindware or magnum of Perryware.
55.	Flush Valve	Aquel, Marc or equivalent.
56.	Solid Plastic Seat Cover for EWC	EWC standard seat cover white of Perryware/Hindware
57.	Jet Assembly for EWC	Perryware, Kamal (Mahendra)
58.	Float Glass	Modi Float, Saint Gobain, Asahi, Sejal
59.	CP Brass Bibcock, Pillarcock, Stopcock, Angle Valve, Concealed Stop Cock.	Marc (oriental series) Jaquar (continental series), Parko, Nova
60.	Plastic Connection Pipe	Perryware/Kamal Delux or equivalent.
61.	CP Waste Coupling	Kamal/Jaquar/Mark/Nova/Parko
62.	CP Bottle Trap	Perryware / Hindware or equivalent.
63.	Waste Pipe	Kamal with brass checknut/Viking
64.	Stainless steel Sink with or without Draining board.	Nirali, Hindware, Frankee, Cobra
65.	Towel Ring/Towel Rod/Towel Rack	Kamal, Marc or equivalent.
66.	Fibre Glass Shelf	Kamal, Bath King or equivalent.
67.	Vitreous China laboratory Sink	Hindware / Perryware or equivalent.
68.	Aluminum Sections	Jindal, Hindalco, Indalco
69.	Textured Exterior wall	Berger, Unitile, Spectrum, Oikos
70	Non asbestos high impact polypropelene reinforced Cement sheet	Everest or equivelent

### **SPECIAL CONDITIONS FOR ELECTRICAL WORKS TENDERS**

1. Main contractor shall have to associate an electrical contractor of appropriate class and category of CPWD for the electrical works for the purpose of execution of job as part of the composite contract.
2. In case the main contractor is himself eligible for sale of tender for the specific electrical component and intends doing the job himself, he may not associate agency for the specific electrical component.
3. Main agency shall have to submit credential of the proposed associated agencies for verification and approval of the department in proforma at Annexure I. Consent letter of such selected agencies for association shall also be enclosed in the prescribed format (Annexure-II). Main agency may propose upto three names of eligible associates. Last date of submission of proposal to University Engineer for electrical works shall be the date fixed for submission of performance guarantee.

4. After obtaining concurrence of department for such association, the main agency shall finalize one associate for execution of the electrical component of the work
5. The main contractor shall be entirely responsible and answerable for all the works done by his associated electrical contractor regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.
6. The manufacturer's guarantee/warranty for all the electrical accessories shall be for minimum period of 12 months from the date of taking over of the installation by the department. Necessary documents of handing / taking over of the installation will be duly signed by the three parties namely **Registrar/U.E.** the main contractor and the associate contractor. The main contractor will ensure that the maintenance during the guarantee period shall also be carried out by the associate electrical contractor.
7. The main contractor shall also give necessary general power of attorney under the contract to the associated electrical contractor to enable him to receive instructions from electrical engineers of the department at site, sign the site order book, bills MBs for acceptance of measurement and receive stipulated materials etc.
8. The main contractor shall be responsible for coordinating the activities of all the works and will ensure progress of all works as per the laid down programme. The main contractor shall also arrange for proper storage of the electrical accessories at site and will be responsible for their watch and ward.

**i. Annexure I**

**PROPOSAL FOR ASSOCIATING ELECTRICAL AGENCIES**

We hereby propose the following electrical agencies as per details mentioned against each. Their consent letters are also attached as per Annexure II.

S l. N o .	Name of Electrical contractor	Category and class of registration in CPWD	Registrati on No.	Moneta ry Limit of Work	Validity of registrati on	Consent letter attached (Yes/No)
1						
2						
3						

Note: A copy of registration order shall be attached for each agency.

**Contractor Signature**

## **Annexure II**

### **CONSENT LETTER**

I/We hereby give my / our consent to work as electrical contractor till the completion of work and I/we will be responsible for necessary action to hand over the work and for rectification of defects and repair during the maintenance period. I/we will execute the work as per CPWD specification and addition specifications and conditions of the works.

I/we will also engage suitable Engineer for the work as per condition of contract. I further certify that the particulars pertaining to me are correct.

Signature of Electrical Contractor

### ***ADDITIONAL TERMS AND CONDITIONS (ELECTRICAL)***

1. Any damage done to the man, machine and building during the execution of work shall be the responsibility of the contractor and same will have to be made good promptly by the contractor at his own cost to the entire satisfaction of the University Engineer.
2. The electrical work shall be executed in close coordinated manner with client department. No claim for idle labour will be admissible.

#### **3. Watch and ward:-**

Watch & ward for the installations, materials, including materials supplied by the department shall be responsibility of the contractor till the installations / left over materials are finally taken over by the department. Nothing shall be payable on this account separately as this is deemed to be included within scope of work.

#### **4. Completeness of tender:-**

- (a) Statutory deduction of "Contract Tax" at source shall be made while releasing payment through running / final bills. A certificate specifying the rate and amount of deduction shall however be issued.
- (b) No. form 'D', form 31/32 (Road Permit) shall be issued by the department.

#### **5. Conformity to specifications:-**

- (a) The work shall be carried out strictly in accordance with C.P.W.D. specifications for electric works 2005 (Internal) and 1995 (External) as amended up to dated and also in accordance with the Indian Electricity Rules 1956 and Indian Electricity Act. 1910 as amended up to date and as per the instructions of the University Engineer.

- (b) PVC insulated copper wire used shall be ISI marked and wire of the size 4.00 Sq. mm and above shall be of stranded conductors and all standard wires are required to be crimped for connections / terminations.
- (c) All accessories like switches, sockets, C/rozes, holders shall be ISI marked.
- (d) Crimping type ferrules / thimbles shall be provided for wire termination in switches, sockets, MCB's etc as reqd.
- (e) Contractor shall have to prove bonafides of the make of materials by producing necessary documentary evidence. Firms are advised accordingly to obtain prior approval of University Engineer for proposed make of materials before bringing materials to site of work.
- (f) Phenolic laminated sheet be of only Hylam of Hyderabad lamination or Formica make only. Covers for adopter box and function box shall also be of white phenolic laminated sheet.

**(g) Meter / Cubical Board:-**

I. All meter / switchgear compartments shall be side hung with double hinges for each door. Left side compartments shall be provided with hinges on left side and right hand compartments shall be provided with hinges on right side.

II. Neoprene or superior quality gasket shall be used.

III. Busbar chamber cover should be fixed to the compartment with zinc plated suitably spaced of suitable size.

IV. Meter / switchgear chamber doors shall be provided with two nos. bolts with plastic molded heads.

V. Construction of cubical panel shall confirm to I.S. 8623/93 and chapter 7 of general specification for electrical works Part-1 Internal 2005. Degree of protection shall be IP-42, panel shall be fabricated out of 2 mm thick CRCA MS sheet and powder coated with approved colour of paint (two coats) after applying red oxide primer.

VI. Drawing of M.V. Board shall be got approved before fabrication in workshop from the University Engineer.

**(h) Earthing connections:-**

I. All fans & fittings are to be properly earthed for which no extra will be paid.

II. Proper sleeving is to be provided to bare earth conductor in the switch boxes and also to bore conductors used for inter switch looping inside the switch boxes for which no extra will be paid.

III. Termination of wiring inside DB's & main boards should be by crimped connections.

IV. Clamp type termination of earth strip (wherever provided) to pipe electrode will be made.

(06) The following are the acceptable makes of materials as indicated against individual items:

Sl. No.	Item	Acceptable Makes
1	PVC insulated Copper wire / Telephone wire	Finolex / Havell's / L&T / Anchor / Skyline.
2	MCCB (ICS=100%ICU) / Switch Gear	L&T / Siemens / Merlin Gerin
3	MCB / MCB DB / Industrial Socket.	L&T (Hager) / ABB / Legrand.
4	Steel Conduit.	BEC / AKG / NIC.
5	GI Pipe.	TATA / Prakash Surya / Jindal.
6	Piano type switch, socket	Anchor Penta / Vinay Clair / Polo Rider.
7	Call Bell / Buzzer / Ceiling rose / Electronic Regulator.	Anchor / Vinay Clair / Polo Rider / North West.
8	Brass Batten / Angle Holder.	Kinjal / Antex / Emperor.

**(7) Facilities to the contractor:-**

**(a) Contractor shall make his own arrangement for water & electricity and T& P required for the work.**

(b) Contractor shall have to make his own arrangement for storage place.

**(8) Inspection and testing:-**

(a) The contractor shall despatch the equipment / components in consultation with the University Engineer. The contractor shall provide all necessary facilities for inspection of panel board at manufacturer's work before despatch.

(b) On completion of work the contractor shall arrange for insulation and earth continuity test as per IE rules in the presence of the University Engineer or his representative and shall submit the test report in triplicate.

**(9) Date of acceptance of the installation:-**

(a) After the University Engineer is satisfied that the installation complies with requirements of specifications in all respect.

(b) The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However, if there is any delay from the department

side, the installation may be taken over in parts but the decision on the same shall be binding on the contractor.

- (c) Contractor or his authorized representative is bound to sign the site order book as and when required by the University Engineer.
- (d) The contractor shall remain responsible for attending complaints free of cost for the minimum period of six months for satisfactory performance of installations against the scheduled work done.

### Construction of Physics Building (Hall and other balance work FF)

#### Schedule of quantities (Civil Works)

S.N.	ITEM NO.	DESCRIPTION OF ITEM	QUANTITY	UNIT	RATE	AMOUNT
1	2	3	4	5	6	7
		<b>A. CIVIL WORK</b>				
1	<b>2.8</b>	Earth work in excavation by mechanical means (Hydraulic Excavator )/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sum on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
	<b>2.8.1</b>	All kinds of soil.	<b>8201.16</b>	cum	103.40	<b>847999.82</b>
2	<b>2.11</b>	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).				
			<b>4100.58</b>	metre	34.12	<b>139911.77</b>
3	<b>N.S.1</b>	Supplying and filling moorum in plinth sides of foundation in layer not exceeding 20 cm in deptconsolidating each deposited layer by ramming and watering for all lead and lifts(Compected qty. Shall be measured and paid)				
			<b>7107.67</b>	cum	301.50	<b>2142962.79</b>
4	<b>2.27</b>	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.				

			<b>1264.88</b>	cum	301.50	<b>381361.77</b>
5	<b>2.35</b>	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :				
	<b>2.35.3</b>	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor :				
	<b>2.35.3.1</b>	With Chlorpyrifos/ Lindane E.C. 20% with 1% concentration.				
			<b>1805.48</b>	sqm	48.70	<b>87926.97</b>
6	<b>4.1</b>	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :				
	<b>4.1.3</b>	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
			<b>370.10</b>	cum	3,257.45	<b>1205592.67</b>
7	<b>4.10</b>	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).				
			<b>166.12</b>	sqm	144.15	<b>23946.83</b>
8	<b>4.13</b>	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.				
			<b>166.12</b>	sqm	58.60	<b>9734.89</b>



9	5.33	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement. including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. M-25 grade reinforced cement concrete by using 410kg. of cement per cum of concrete. All work upto floor V level.				
			1488.04	cum	4,147.40	6171508.91
10	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).				
			9.22	cum	3673.85	33871.43
11	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
	5.22.6	Thermo-Mechanically Treated bars.				
			176678.84	Kg	42.70	7544186.453
12	5.9	Centring and shuttering including strutting, propping etc. and removal of form for :				
A	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.				
			1062.11	sqm	119.25	126656.62
B	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.				
			1715.36	sqm	238.40	408941.82
C	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.				

			<b>2329.42</b>	sqm	162.65	<b>378879.58</b>
<b>D</b>	<b>5.9.3</b>	Suspended floors, roofs, landings, balconies and access platform.				
			<b>1550.18</b>	sqm	187.35	<b>290425.36</b>
<b>E</b>	<b>5.9.7</b>	Stairs, (excluding landings) except spiral-staircases.				
			<b>51.50</b>	sqm	204.00	<b>10506.51</b>
<b>13</b>	<b>6.1</b>	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:				
	<b>6.1.2</b>	Cement mortar 1:6 (1 cement : 6 coarse sand)				
			<b>404.89</b>	cum	2,121.75	<b>859081.55</b>
<b>14</b>	<b>6.5</b>	Extra for brick work in superstructure above floor V level for each four floors or part thereof by mechanical means by lifting material using mobile crane .				
			<b>404.89</b>	cum	190.00	<b>76929.65</b>
<b>15</b>	<b>6.13</b>	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level upto floor V level.				
	<b>6.13.2</b>	Cement mortar 1:4 (1 cement :4 coarse sand)				
			<b>156.41</b>	sqm	302.80	<b>47359.43</b>
<b>16</b>	<b>13.16</b>	6 mm cement plaster of mix :				
	<b>13.16.1</b>	1:3 (1 cement : 3 fine sand)				
			<b>2326.56</b>	sqm	62.15	<b>144595.77</b>
<b>17</b>	<b>13.5</b>	15 mm cement plaster on rough side of single or half brick wall of mix :				
	<b>13.5.2</b>	1:6 (1 cement : 6 coarse sand)				
			<b>1212.35</b>	sqm	84.55	<b>102503.77</b>
<b>18</b>	<b>13.4</b>	12 mm cement plaster of mix :				
	<b>13.4.2</b>	1:6 (1 cement : 6 coarse sand)				
			<b>1160.46</b>	sqm	72.70	<b>84365.13</b>
<b>19</b>	<b>6.15</b>	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks).				
			<b>156.41</b>	sqm	47.80	<b>7476.16</b>
<b>20</b>	<b>13.26</b>	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete				
			<b>4699.36</b>	sqm	47.20	<b>221809.87</b>

21	13.41	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
	13.41.1	New work (two or more coats) over and including priming coat with cement primer.				
			3487.02	sqm	41.55	144885.54
22	13.45	Finishing walls with textured exterior paint of required shade :				
	13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sum) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sum.				
			1212.35	sqm	96.25	116688.21
23	13.44	Finishing walls with water proofing cement paint of required shade :				
	13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sum).				
			1212.35	sqm	30.80	37340.23
24	11.41	Providing and laying polished vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete.				
	11.41.2	Size of Tile 60x60 cm				
			1009.45	sqm	1,448.55	1462239.81
25	11.37	Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete.				
			145.07	sqm	598.65	86846.16

26	11.36	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture ) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sum including pointing in white cement mixed with pigment of matching shade complete.				
			462.36	sqm	556.60	257347.91
27	12.29	Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087 finished with a coat of aluminium primer on both sides & edges and two coats of synthetic enamel paint of approved quality on exposed face fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners and cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be				
		suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats. The suspenders shall be placed 600x 1200 mm centre to centre including fixing to the frame with C.P brace screws and applying a priming coat of zinc chromate yellow primer ( aluminium frame work shall be paid separately.)				
			547.48	sqm	202.45	110837.73

28	11.23	Marble stone flooring with 18mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with :				
	11.23.5	Udaipur green marble				
			1421.11	sqm	1,112.55	1581056.82
29	8.1	Marble work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (vener work) in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	8.1.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble.				
	8.1.1.1	Area of slab upto 0.50 sum				
			1385.01	sqm	1,511.60	2093581.12
30	9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position :				
	9.1.2	Sal wood				
			1.24	cum	30511.90	37895.78
31	9.20	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.20.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.				
			71.19	sqm	1473.50	104898.47
32	9.120	Providing and fixing to existing door frames.				

	<b>9.120.1</b>	<p>30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top &amp; bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2 ) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail &amp; bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles &amp; rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification &amp; drawing (for W.C. and bathroom door shutter).</p>				
			<b>45.68</b>	sqm	2109.95	<b>96371.97</b>
<b>33</b>	<b>9.53</b>	<p>Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6</p>				

		graded stone aggregate 20mm nominal size)				
			<b>372</b>	each	61.50	<b>22878.00</b>
<b>34</b>	<b>9.96</b>	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :				
	<b>9.96.1</b>	300x16 mm				
			<b>62</b>	each	158.50	<b>9827.00</b>
<b>35</b>	<b>9.97</b>	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868 ) transparent or dyed to required colour or shade with necessary screws etc. complete :				
	<b>9.97.2</b>	250x10 mm				
			<b>62</b>	each	62.20	<b>3856.40</b>
<b>36</b>	<b>9.100</b>	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :				
	<b>9.100.1</b>	125 mm				
			<b>124</b>	each	48.80	<b>6051.20</b>
<b>37</b>	<b>9.101</b>	Aluminium hanging floor door stopper				
	<b>9.101.2</b>	Twin rubber stopper				
			<b>62</b>	each	53.90	<b>3341.80</b>

<b>38</b>	<b>21.1</b>	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :				
<b>A</b>	<b>21.1.1</b>	For fixed portion.				
	<b>21.1.1.1</b>	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)				
			<b>1218.24</b>	Kg	290.45	<b>353837.81</b>
<b>B</b>	<b>21.1.2</b>	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).				
	<b>21.1.2.1</b>	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)				
			<b>758.16</b>	kg	310.45	<b>235370.77</b>



39	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item) :				
	21.3.2	with float glass panes of 5.5mm thick	152.28	sqm	673.55	102568.19
40	22.14	Grading roof for water proofing treatment with				
	22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
			93.79	cum	3314.95	310909.62
41	10.25	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.				
			3807.00	Kg	51.20	194918.40
42	13.50	Applying priming coat :				
	13.50.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)				
			175.60	sqm	16.55	2906.21
43	13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
	13.61.1	Two or more coats on new work				
			175.60	sqm	33.25	5838.77
44	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.				
	10.26.1	M.S. tube.	3425.92	kg	60.15	206069.09

45	12.47	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto any pitch including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% Ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
	12.47.2	2mm thick flat.				
			397.36	sqm	795.70	316175.37
46	5.28	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing compound in expansion joints.				
			88.38	sqm	334.55	29567.53
		<b>B. SANATORY INSTALATION</b>				
47	17.2.	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :				
	17.2.1	W.C. pan with ISI marked white solid plastic seat and lid				
			24	Nos.	2152.50	51660.00

48	17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :				
	17.5.1	Single half stall urinal with 5 ltr. PVC automatic flushing cistern.				
			11	nos	3720.30	40923.30
49	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :				
	17.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.				
			18	nos	1044.90	18808.20
50	17.6.	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :				
	17.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern.				
			5	nos	2392.55	11962.75
51	17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers				

		complete.				
			<b>7</b>	each	493.65	<b>3455.55</b>
52	<b>17.34</b>	Providing and fixing toilet paper holder :				
	<b>17.34.1</b>	C.P. brass	<b>11</b>	<b>Nos</b>	147.10	<b>1618.10</b>
53	<b>17.11</b>	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete including painting of fittings and brackets, cutting and making good the wall wherever required :				
	<b>17.11.2</b>	Size 600x450x200mm	<b>2</b>	<b>nos</b>	2149.95	<b>4299.90</b>
54	<b>17.35.</b>	Providing and fixing soil, waste and vent pipes :				
A	<b>17.35.2</b>	75 mm diameter :				
	<b>17.35.2.2</b>	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.				
			<b>34.54</b>	each	629.85	<b>21755.02</b>
B	<b>17.35.1</b>	100mm dia.				
	<b>17.35.1.2</b>	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.				
			<b>43.80</b>	each	730.40	<b>31991.52</b>
55	<b>17.37</b>	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :				
A	<b>17.37.1</b>	For 100 mm dia. Pipe	<b>26</b>	<b>each</b>	65.35	<b>1699.10</b>
B	<b>17.37.2</b>	For 75 mm dia. Pipe	<b>88</b>	<b>each</b>	63.00	<b>5544.00</b>
56	<b>17.38</b>	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
A	<b>17.38.1</b>	100 mm				
	<b>17.38.1.2</b>	Sand cast iron S&S as per IS - 3989	<b>29</b>	<b>each</b>	291.00	<b>8439.00</b>

B	17.38.2	75 mm dia				
	17.38.2.2	Sand cast iron S&S as per IS-3989				
			<b>31</b>	<b>each</b>	230.90	<b>7157.90</b>
57	17.39	Providing and fixing plain bend of required degree.				
A	17.39.1	100 mm				
	17.39.1.2	Sand cast iron S&S as per IS : 3989				
			<b>31</b>	<b>each</b>	236.40	<b>7328.40</b>
B	17.39.2	75 mm				
	17.39.2.2	Sand cast iron S&S as per IS - 3989				
			<b>31</b>	<b>each</b>	178.65	<b>5538.15</b>
58	17.40.	Providing and fixing heel rest sanitary bend				
A	17.40.1	100 mm dia				
	17.40.1.2	Sand cast iron S&S as per IS - 3989				
			<b>57</b>	<b>each</b>	286.35	<b>16321.95</b>
B	17.40.2	75 mm				
	17.40.2.2	Sand cast iron S&S as per IS - 3989				
			<b>45</b>	<b>each</b>	249.50	<b>11227.50</b>
59	17.56	Providing and fixing terminal guard:				
A	17.56.1	100 mm				
	17.56.1.2	Sand cast iron S&S as per IS - 3989				
			<b>15</b>	<b>each</b>	194.60	<b>2919.00</b>
B	17.56.2	75 mm				
	17.56.2.2	Sand cast iron S&S as per IS - 3989				
			<b>25</b>	<b>each</b>	177.45	<b>4436.25</b>
60	17.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :				
	17.41.2	75x75x75x75 mm				
	17.41.2.2	Sand cast iron S&S as per IS - 3989				
			<b>10</b>	<b>each</b>	487.60	<b>4876.00</b>
61	17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
A	17.43.1	100x100x100 mm				
	17.43.1.2	Sand cast iron S&S as per IS - 3989				
			<b>7</b>	<b>each</b>	489.60	<b>3427.20</b>
B	17.43.2	75x75x75 mm				

	17.43.2.2	Sand cast iron S&S as per IS - 3989				
			<b>25</b>	<b>each</b>	364.45	<b>9111.25</b>
<b>62</b>	<b>17.44</b>	Providing and fixing single equal plain junction of required degree :				
	<b>17.44.2</b>	75x75x75 mm				
	<b>17.44.2.2</b>	Sand cast iron S&S as per IS - 3989				
			<b>38</b>	<b>each</b>	333.10	<b>12657.80</b>
<b>63</b>	<b>17.57</b>	Providing and fixing collar:				
	<b>17.57.1</b>	100 mm				
	<b>17.57.1.2</b>	Sand cast iron S&S as per IS - 3989				
			<b>18</b>	<b>each</b>	202.10	<b>3637.80</b>
<b>64</b>	<b>17.57.2</b>	75 mm				
	<b>17.57.2.2</b>	Sand cast iron S&S as per IS-3989				
			<b>18</b>	<b>each</b>	146.10	<b>2629.80</b>
<b>65</b>	<b>17.58</b>	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:				
<b>A</b>	<b>17.58.2</b>	75 mm	<b>408</b>	<b>each</b>	107.80	<b>43982.40</b>
<b>B</b>	<b>17.58.1</b>	100 mm	<b>195</b>	<b>each</b>	126.50	<b>24667.50</b>
<b>66</b>	<b>17.60.</b>	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :				
	<b>17.60.2</b>	100 mm inlet and 75 mm outlet				
	<b>17.60.2.1</b>	Sand cast iron S&S as per IS - 3989				
			<b>35</b>	<b>each</b>	573.35	<b>20067.25</b>
<b>67</b>	<b>17.28</b>	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
	<b>17.28.1</b>	Semi rigid pipe				
	<b>17.28.1.1</b>	32 mm dia	<b>23</b>	<b>each</b>	42.15	<b>969.45</b>
<b>68</b>	<b>17.71</b>	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.				
			<b>17</b>	<b>each</b>	164.65	<b>2799.05</b>

69	17.72	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms.				
			30	each	149.00	4470.00
70	17.65	Painting sand cast iron/centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :				
	17.65.1	100 mm diameter pipe	43.80	each	17.85	781.83
	17.65.2	75 mm diameter pipe	34.54	each	13.70	473.20
		<b>C. WATER SUPPLY</b>				
71	18.1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall				
A	18.10.1	15 mm dia. nominal bore	155.00	each	105.85	16406.75
C	18.10.3	25 mm dia. nominal bore	50.00	each	179.65	8982.50
D	18.10.4	32 mm dia. nominal bore	48.00	metre	226.10	10852.80
E	18.10.5	40 mm dia. nominal bore	56.00	metre	264.05	14786.80
72	18.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.				
A	18.11.1	15 mm dia nominal bore	103.00	metre	144.75	14909.25
73	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work :				
A	18.12.3	25 mm dia. nominal bore	65.00	metre	156.85	10195.25
B	18.12.4	32 mm dia. nominal bore	35.00	metre	193.60	6776.00
C	18.12.5	40 mm dia. nominal bore	39.00	metre	219.60	8564.40
74	18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :				
	18.13.1	25 to 40 mm nominal bore	20	each	166.05	3321.00
75	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931				
	18.49.1	15 mm nominal bore.	40	each	207.00	8280.00

76	<b>18.53</b>	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
	<b>18.53.1</b>	15 mm nominal bore	<b>102</b>	<b>each</b>	347.65	<b>35460.30</b>
77	<b>18.51</b>	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
	<b>18.51.1</b>	15 mm nominal bore	<b>15</b>	<b>each</b>	253.95	<b>3809.25</b>
78	<b>18.17</b>	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
A	<b>18.17.1</b>	25 mm nominal bore	<b>3</b>	<b>each</b>	285.50	<b>856.50</b>
B	<b>18.17.2</b>	32 mm nominal bore.	<b>3</b>	<b>each</b>	358.00	<b>1074.00</b>
C	<b>18.17.3</b>	40 mm nominal bore	<b>3</b>	<b>each</b>	399.00	<b>1197.00</b>
79	<b>18.21</b>	Providing and fixing uplasticised PVC connection pipe with brass unions :				
	<b>18.21.2</b>	45 cm length				
	<b>18.21.2 .1</b>	15 mm nominal bore				
			<b>20</b>	<b>each</b>	44.75	<b>895.00</b>
80	<b>18.32</b>	Constructing masonry Chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 ( 1 cement : 5 fine sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :				
	<b>18.32.1</b>	With F.P.S. bricks	<b>15</b>	<b>each</b>	599.80	<b>8997.00</b>
81	<b>18.40</b>	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :				
A	<b>18.40.3</b>	25 mm diameter pipe	20.00	<b>metre</b>	3.90	<b>78.00</b>
B	<b>18.40.4</b>	32 mm diameter pipe	20.00	<b>metre</b>	4.55	<b>91.00</b>
C	<b>18.40.5</b>	40 mm diameter pipe	30.00	<b>metre</b>	5.20	<b>156.00</b>



82	<b>18.41</b>	Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.				
A	<b>18.41.3</b>	25 mm diameter pipe	<b>20.00</b>	<b>metre</b>	22.85	<b>457.00</b>
B	<b>18.41.4</b>	32 mm diameter pipe	<b>20.00</b>	<b>metre</b>	23.40	<b>468.00</b>
C	<b>18.41.5</b>	40 mm diameter pipe	<b>30.00</b>	<b>metre</b>	23.70	<b>711.00</b>
		<b>D- DRAINAGE</b>				
83	<b>19.6</b>	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
A	<b>19.6.2</b>	150 mm dia. R.C.C. pipe	<b>159.22</b>	<b>metre</b>	202.85	<b>32297.78</b>
B	<b>19.6.1</b>	100 mm dia. R.C.C. pipe	<b>39.00</b>	<b>metre</b>	173.93	<b>6783.27</b>
C	<b>19.6.4</b>	300 mm dia. R.C.C. pipe	<b>60.00</b>	<b>metre</b>	338.75	<b>20325.00</b>
84	<b>19.2</b>	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:				
	<b>19.2.2</b>	150 mm diameter S.W. pipe	<b>79.61</b>	<b>metre</b>	405.05	<b>32246.03</b>
	<b>19.2.1</b>	100 mm diameter S.W. pipe	<b>39.00</b>	<b>metre</b>	331.20	<b>12916.80</b>
85	<b>19.4</b>	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :				
	<b>19.4.2</b>	150 x 100 mm size P type.				
	<b>19.4.2.1</b>	With F.P.S. bricks class designation 75				
			<b>15</b>	<b>each</b>	961.95	<b>14429.25</b>

86	19.7	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
	19.7.1.1	With F.P.S. bricks with class designation 75				
			15	each	5383.70	80755.50
87	19.8	Extra for depth for manholes				
	19.8.1	Size 90x80 cm				
	19.8.1.1	With F.P.S. bricks class designation 75				
			6.75	each	2654.00	17914.50
88	19.32	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.				
	19.32.1	With F.P.S. bricks	15	each	9938.65	149079.75
<b>Total Cost</b>			<b>30198350.22</b>			
			<b>Say 30200000.00</b>			

Note- Items other than above schedule for civil work/Electrical work will be taken from for civil: Delhi schedule of rates 2007 for Electrical: Delhi schedule of rate-2007.

**GURUGHASIDAS CENTRAL UNIVERSITY BILASPUR C.G.**

**Name of Work :- Construction of Physics Department at Remaining work of the posterior portion (C.G.).**

**Detailed estimate of internal electrical works**

**Abstract of estimate:-**

S.N.		Description Of item	Qty	Rate	Unit	Amount
1		<b>Sub Head (Wiring)</b> Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed Steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FR PVCinsulated copper conductor single core cable etc.as required.				
	1.3.1	a) Group-C	333 point	892.00	point	297036.00
2		Wiring for twin control light pointwith 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface /recessed Steel conduit, with 2 way modular switch, modular plate, suitable GI box and earthing the point with1.5 sq.mm FR PVC insulated copper conductor single core cable etc.as required.				
	1.2		4 point	899.00	point	3596.00
3		Wiring for light / power plug with 2x4 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed Steel conduit alongwith 1 No. 4 sq.mm FR PVC insulated copper conductor single core cable for loop earthing as required.				
	1.5		800 Mtr	230.00	point	184000.00
4		Wiring for light / power plug with 4x4 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed Steel conduit alongwith 2 No. 4 sq.mm FR PVC insulated copper conductor single core cable for loop earthing as required.				
	1.6		450 Mtr	359.00	point	161550.00
5		Wiring for circuit wiring/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed Steel conduit as required.				
	1.7.1	a) 2 x1.5 sq.mm + 1x1.5 sq.mm earth wire	200 Mtr.	173.00	Mtr.	34600.00
	1.7.5	b) 2 x10 sq.mm + 1x10 sq.mm earth wire	350 Mtr.	398.00	Mtr.	139300.00
	1.7.10	c) 4 x10 sq.mm + 2x10 sq.mm earth wire	350 Mtr.	774.00	Mtr.	270900.00
6		Supplying and drawing following sizes of FR PVC insulated copper conductor, single core cable in the existng surface/ recessed steel / PVC				

		conduit as required.				
	1.17.6	a) 6 x 1.5 sq.mm	150 mtr.	80.00	mtr.	12000.00
7		Supplying and fixing of following sizes of steel conduit alongwith accessories in surface/ recess including painting in case of surface conduit , or cutting the wall and making good the same in case of recessed conduit as required.				
	1.20.2	a) 25mm	450 Mtr.	143.00	Mtr.	64350.00
8		Supplying and drawing following pair 0.5 sq.mm FR PVC insulated conductor, unarmoured telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
	1.18.2	a) 2 pair	300 mtr.	15.50	mtr.	4650.00
		<b>Sub Head II ( fans &amp; Fittings)</b>				
1		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular sokcet outlet and 15/16 amps				
	1.32	modular switch, connection painting etc. as reqd.	52 Nos.	366.00	each	19032.00
2		supplying and fixing stepped type electronic fan regulator on the existing modular plate switch box				
	1.25	including connection but excluding modular plate etc .as required.	92 Nos.	322.00	each	29624.00
3		Supplying and fixing following size/ modules, GI box along with modular base and cover plate for modular switches in recess ets as required.				
	1.27.1	a) 1 or 2 module(75mm x 75mm)	30 Nos.	142.00	each	4260.00
4		Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in the front including painting etc as required.				
	1.22.9	a) 200 mm x 250 mm x 60 mm deep.	1 Nos.	211.00	each	211.00
5		SupplyingInstalling, testing and commissioning of following size ceiling fan, including wiring the down rod of standard length (up to 30 cm) with 1.5 sq.mm FR PVC insulated, copper conductor,				

		single core cable etc. as required.					
6	<b>M.R.</b>	a) 1200 mm sweep 5 star Rating (ISI Marked)	92	Nos.	1533.00	each	141036.00
		Supplying , Installation , Testing and Commissioning of 15 Watt surface mounting LED fitting complete with all accessories i/c connection etc as reqd					
		-					
7	MR	a) 15W LED fitting ( similar to cat No LCDRP81-18/CDL-N of C.G.)	70	Nos.	16882.00	Each	11,81,740.00
		Supplying , Installation , Testing , Commissioning of following sizes exhaust fan in the existing opening l/c making the hole to suit the size of the above fan making good the damages, connection, testing and commissioning as required.					
8	MR	a) 250 mm Sweep fresh Air Fan	15	Nos.	1761.00	Each	26,415.00
		SupplyingInastallation testing and commissioning of following types of prewired flourescent fittings/ of all types complete with all accessories and tubes etc. directly on ceiling/ wall including connection with 1.5 sq.mmFR PVC insulated copper conductor single core cable and earthing etc. as required.					
	<b>M R</b>	a) 1x36W Box type fitting with 1No lamp	22	Nos.	593.00	each	13046.00
	<b>M R</b>	b) High efficiency sereno surface mounted with high efficiency lamp ( similar to cat No TPS814 2 x TLS-28W of philips make)	115	Nos.	6787.00	each	780505.00
9	1.38	Supplying and fixing callbell /buzzer suitable for operation on single phase 230V AC/DC supply including connection etc. as required.	6	Nos.	54.50	each	327.00
10		supplying and fixing following modular switch/ socket on the existing modular plate and switch box including connection but excluding modular plate etc .as required.					
	1.24.1	a) 5/6 Amp switch	30	Nos.	75.00	each	2250.00
	1.24.2	b) 3 pin 5/6 Amp socket	30	Nos.	96.00	each	2880.00
	1.24.6	a) Telephone socket	30	Nos.	89.00	each	2670.00

11	1.26	supplying and fixing following modular blanking plate on the existing modular plate & switch box excluding modular plate as reqd.	50	Nos.	22.00	each	1100.00
12	M/R	Supplying, installation, testing & commissioning of 400 mm dia sweep oscillation type wall mounted fan with regulator i/c connection etc as reqd.	6	Nos.	2008.00	each	12048.00
<b>Sub Head III (MCB &amp; Main Boards)</b>							
1		Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper busbar, neutral busbar, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as reqd.					
	<b>2.3.8</b>	a) 12 way, Double door	6	Nos.	1068.00	Each	6,408.00
2	M/R	Supplying and fixing following way, three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper busbar, neutral busbar, earth bar, din bar, detachable gland plate, interconnection, phosphatized and powder painted including earthing etc. as required.	6	Nos.	7923.00	Each	47,538.00
3		Supplying and fixing 5 amps to 32 amps rating, 240 volts, 'C' series, miniature circuit breaker suitable for lighting and other loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
a	2.10.1	Single pole (6/10/16/20 Amp)	144	Nos.	141.00	each	20304.00
b	2.10.2	Single pole and neutral (32 Amp)	6	Nos.	367.00	each	2202.00
c	M/R	TPN MCB (63 Amp)	6	Nos.	1892.00	each	11352.00
4		Supplying and fixing on surface or in recessed cable end box suitable for Double door MCB DB's of following sizes.					
	M/R	a) 12 way, Double door	6	Nos.	414.00	each	2484.00
	M/R	b) 4 way TPN, Double door (MCB DB)	6	Nos.	444.00	each	2664.00
5		Supplying installation, testing and commissioning of surface/ recess mounting, vertical type, 415					

		volts, TPN MCB distribution board of sheet steel, dust protected, duly phosphatized and powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar for mounting MCB's, detachable gland/ knock out plate, and with 100 amps, 10 KA MCCB as incomer interconnection between incomer MCCB and busbar of following ways (But without MCB's) as required .					
	M/R	a) 4 way with 100 amps MCCB as incomer	1	Nos.	7492.00	each	7492.00
7		Supplying and laying following sizes of medium class GI pipe direct in ground/on surface/under wall/floor/road i.c. cutting excavation, refilling and making good the damages etc as reqd.					
	14.13.3	a)100 mm. dia.	24	Mtr.	765.00	Mtr.	18,360.00
	14.13.1	b) 50 mm. dia.	12	Mtr.	348.00	Mtr.	4,176.00
8		Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth metal enclosed plug top along with 20 amps 'C' series, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc, as required.	8	Nos	693.000	each	5,544.00
	2.18	S.I.T.C. of Cubical meter panel board of MV Cubical panel board self supporting floor mounted panel board of 415v,3 Phase,50Hz of suitable size fabricated from 2.0 mm thick compartmentalised totally enclosed i/c pdg fixing the following switch gear with connection,inter connection,earthing ,painting etc as rqd.					
		<b>a) Incommer</b> 1) 175/250A,415V,4Pole,36KA MCCB-1No 2) 300A,4strip PVC sleeved Alu.bus bar on insulation base -1set					
		<b>B) Outgoings</b> 1) 100Amp,4 pole 25 KA 415V MCCB - 5Nos 2) M.V. danger notice board -1No	2	Set	85386.00	set	1,70,772.00

		<b>Sub Head IV( Earthing)</b>					
1		Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with masonry enclosure with cover plate having locking arrangement and watering pipe etc. ( with charcoal or coke and salt)					
	5.6	as required.	2	Set	8559.00	set	17,118.00
2		Providing and fixing 25 mm X 5 mm copper strip in					
	5.1	40 mm dia G.I. pipe from earth electrode, as required.	30	Mtr.	962.00	Mtr	28,860.00
3		Providing and fixing 25 mm X 5 mm copper strip					
	5.14	on surface or in recess for connections etc. as required.	30	Mtr.	766.00	Mtr	22,980.00
		<b>Sub Head V( Cabling)</b>					
1		Supplying and Laying of following sizes PVC insulated and PVC sheathed Alu conductor armoured power cable of 1.1KV grade of following size direct in ground i.c. excavation, sand cushioning, protective covering and refilling the trench etc as reqd.					
	M/R	a) 3.5corex50Sqmm	115	Mtr	516.00	Mtr.	59340.00
	M/R	b) 2 x 10 sqmm	350	Mtr	320.00	Mtr	112000.00
2		Supplying & Laying of one number PVC insulated and PVC sheathed Alu. Conductor armoured power cable of 1.1KV grade of following size in the existing RCC/HUME / STONEWARE/ METAL/ DWC pipe as reqd.					
	M/R	a) 3.5corex50Sqmm	30	Mtr.	364.00	Mtr.	10920.00
	M/R	b) 2x 10 sqmm	320	Mtr	168.00	Mtr	53760.00
3		Supplying and making end termination with brass compression gland and Alu. Lugs for following size of PVC insulated and PVC sheathed/XLPE Alu. Conductor cable of 1.1KV grade as reqd.					
	9.1.23	a) 3.5corex50Sqmm	4	Sets	262.00	Set	1048.00



	9.1.2	b) 2 x10 sqmm	14	sets	111.00	set	1554.00
4	M/R	supplying ,installation,testing & commissioning of 45 watt LED type flood light fitting complete with all accessories IP-66 protection) on angle iron frame i/c connection etc as rqd.	9	Nos	37654	Each	338886
5	M/R	Supplying,installation,testing & commiss- ioning of Ornamental pole made from die cast Alu.,sturdy,non corrosive painted with black polyester paint of 1.6m long and a service window is provided at bottom , fitted with bakelite terminal & 6Amp,230V "C" series MCB,duly wired with copper cond. I/c supplying & Fixing of outdoor Ornamental light fixture made of die cast Alu.,polyester painted one no beveled glass,dia cast Alu., lantern & ornamental brackets with E-27 lamp holder & 18 w PLC lamp on P.C.C. foundation with suitable Rag bolts etc as rqd.	16	Nos	11265.00	Each	180240.00
6	S/R	Supplying & Laying of one number Double walled Corrugated high density polythylene pipe having corrugation on the outer wall and plain surface inner wall confirming to IS 14930 Part I & II complete with necessary HDPE fitting for protection of 1.1 Kv grade under ground cable i/c excavation,refilling the trench etc as rqd.	320	Mtr	74.00	Mtr	23680.00
						<b>TOTAL</b>	<b>4538808</b>

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**Asst. Engineer**  
GGV.Bilaspur(C.G.)

**I/c University Engineer(Civil )**  
GGV.Bilaspur(C.G.)

**Sub Engineer (Electrical)**

**Sub Engineer (Civil)**

