

Estimating & Costing





WHAT IS ESTIMATE? TYPE OF ESTIMATE



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Estimate

An Estimating is the technique of calculating or Computing the various quantities and the expected Expenditure to be incurred on a particular work or project.

In case the funds available are less than the estimated cost the work is done in part or by reducing it or specifications are altered, the following requirement are necessary for preparing an estimate.

- Drawings like plan, elevation and sections of important points.
- Detailed specifications about workmanship & properties of materials etc.
- Standard schedule of rates of the current year

Types of Estimate

1. Preliminary Or Approximate Or Rough Estimate:

- Plinth area or square-meter method,
- Cubic rate or cubic meter method,
- Approximate quantities with bill method,

Types of Estimate

2. Accurate Estimate

- Detailed Estimates
- Revised Estimate (@5% variation in original cost but generally taken @ 10%)
- Supplementary Estimate
- Repair Estimate

Fixing of Rate per Unit of an Item

The rate per unit of an item includes the following:

i) Quantity of materials & cost: The requirement of materials are taken strictly in accordance with standard data book(S.D.B). The cost of these includes first cost, freight, insurance and transportation charges.

ii) Cost of labour: The exact number of labours required for unit of work and the multiplied by the wages/ day to get of labour for unit item work.

iii) Cost of equipment (T&P): Some works need special type of equipment, tools and plant. In such case, an amount of 1 to 2% of estimated cost is provided.

iv) Overhead charges: To meet expenses of office rent, depreciation of equipment salaries of staff postage, lighting an amount of 4% of estimate cost is allocated



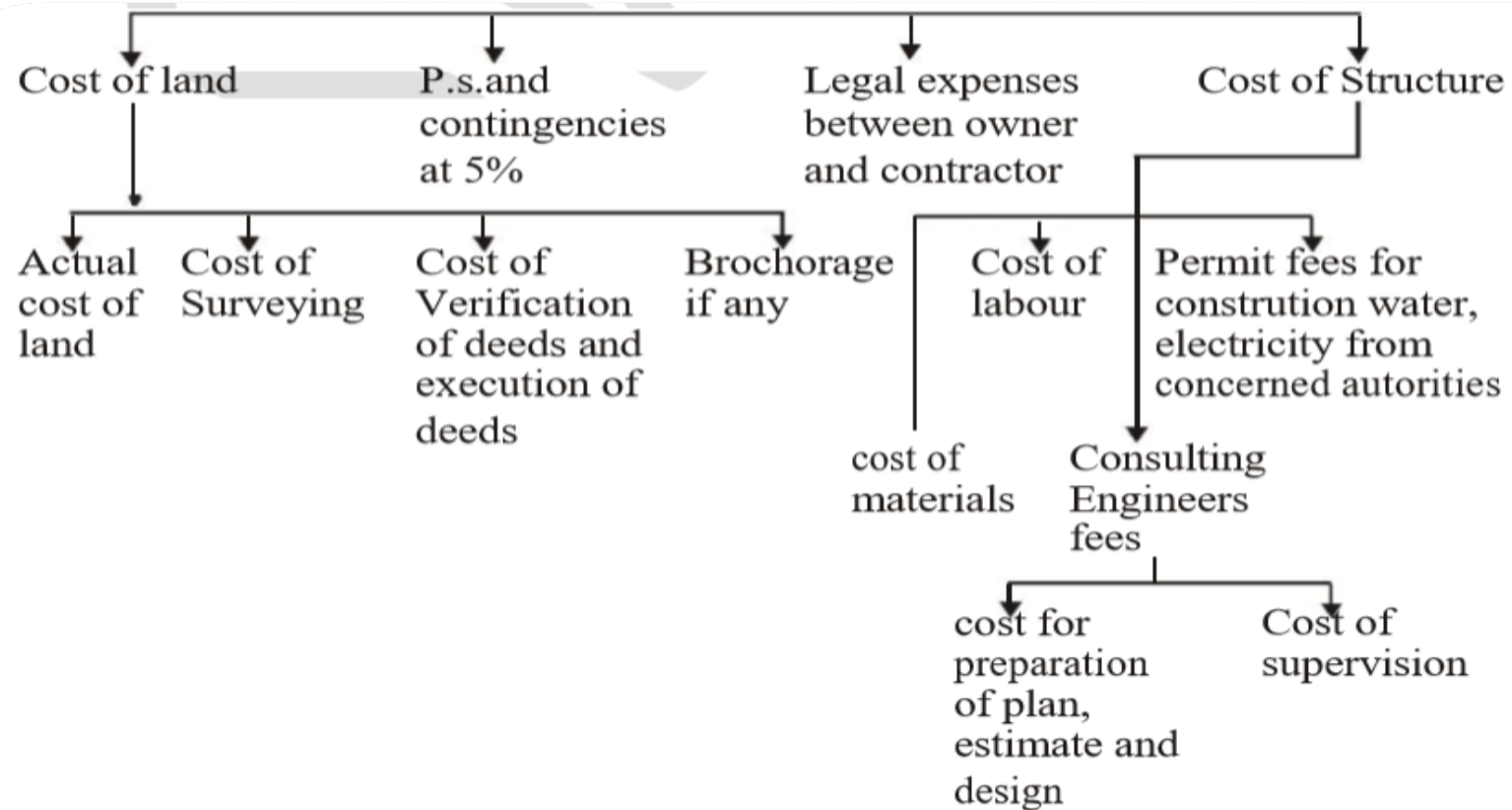
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RATES

For preparing the estimate the unit rates of each item of work are required.

1. For arriving at the unit rates of each item.
2. The rates of various materials to be used in the construction.
3. The cost of transport materials.
4. The wages of labour, skilled or unskilled of masons, carpenters, Mazdoor, etc.

COMPLETE ESTIMATE



WORK CHARGED ESTABLISHMENT

During the construction of a project considerable number of skilled supervisors, work assistance, watch men etc., are employed on temporary basis. The salaries of these persons are drawn from the L.S. amount allotted towards the work charged establishment. that is, establishment which is charged directly to work. an L.S. **amount of 1½ to 2%** of the estimated cost is provided towards the work charged establishment



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Additional Charges

Type	% Cost of sanctioned cost
<i>Environment control</i>	1%
<i>Contingencies charges</i>	3-5 %
<i>Water Charges</i>	1%
<i>Supervision Charges</i>	10-15 %
<i>Contractor benefit</i>	10%
<i>septic tank for unsewered area</i>	3% of building cost
<i>Maintenance charges</i>	1-2%
<i>Establishment charges</i>	1.5-2%

1. A revised estimate is usually prepared when the original estimate has exceeded by more than

एक संशोधित अनुमान आमतौर पर तैयार किया जाता है जब मूल अनुमान अधिक से अधिक हो गया है

- (A) 1%
- (B) 2%
- (C) 10%
- (D) 100%.

Let's Discuss



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In a detailed estimate, the provision for contingencies is, usually

एक विस्तृत अनुमान में, आकस्मिकताओं के लिए प्रावधान आमतौर पर होता है

- (A) 1%
- (B) 3% to 5%
- (C) 10%
- (D) 12% to 25%

Let's Discuss



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Generally the provision for supervision is

आम तौर पर पर्यवेक्षण के लिए प्रावधान है

- (A) 1%**
- (B) 2 to 3%**
- (C) 3 to 5%**
- (D) 5 to 10%**

Let's Discuss



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Which estimate is expected to be least accurate

कौन सा अनुमान कम से कम सटीक होने की उम्मीद है

- (A) Preliminary estimate**
- (B) Plinth area estimate**
- (C) Detailed estimate**
- (D) Revised estimate**

Let's Discuss

In case of unsewered area, an additional provision for septic tank, is usually

असुरक्षित क्षेत्र के मामले में, सेप्टिक टैंक के लिए अतिरिक्त प्रावधान आमतौर पर होता है

- (A) 1% of the cost of building**
- (B) 3% of the cost of building**
- (C) 10% of the cost of building**
- (D) 12% of the cost of building**

Let's Discuss



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The process of evaluating the rough cost of construction of a project is known as:

एक परियोजना के निर्माण की किसी न किसी लागत का मूल्यांकन करने की प्रक्रिया को जाना जाता है

- (A) Guess work cost (B) Estimate**
(C) Rough cost (D) Actual cost

Let's Discuss



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Which one of the following is overhead expenditure ?

निम्नलिखित में से कौन सा ओवरहेड व्यय है

- (A) Workmen's compensation, insurance, etc.**
- (B) Establishment**
- (C) Stationary**
- (D) Postage**

Let's Discuss

All costs other than direct material costs.

A “**general overhead**” (i.e. regular/indirect overhead) is part of your overall operating expenses — things like rent, utilities, Workmen's compensation insurance for premises and employees, and similar things that you have to pay out whether your firm has work or not.

A “**job overhead**” is the particular expense spent on and for a particular job or project. Business meeting costs, taxi fares, air travel, local travel, subsistence (meals), etc, that are specifically related to that particular job or project.



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Which one of the following is considered general overhead?

निम्नलिखित में से कौन सा सामान्य ओवरहेड माना जाता है?

- (A) Travelling expenses**
- (B) Losses on advance**
- (C) Interest on investment**
- (D) Amenities to labour**

Let's Discuss



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Crashing is reduction in

क्रैशिंग में कमी आई है

- (A) cost
- (B) resources
- (C) duration
- (D) all of the above

Let's Discuss

Crashing is a schedule compression technique used to reduce or shorten the project schedule

क्रैशिंग एक शेड्यूल संपीड़न तकनीक है जो प्रोजेक्ट शेड्यूल को कम या कम करने के लिए उपयोग की जाती है



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Critical path is

गंभीर पथ है

- (A) the shortest path for the earliest completion of a project
- (B) the path having maximum slack
- (C) the path which takes into account all parallel activities
- (D) the longest path of the network from the first event to the last event.

Let's Discuss

The **critical path method (CPM)** is a step-by-step project management technique for process planning that defines **critical (longest root)**

Non-critical tasks with the goal of preventing time-frame problems and process bottlenecks.



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In the analysis of rates, the profit for contractor is taken as

दरों के विश्लेषण में, ठेकेदार के लिए लाभ के रूप में लिया जाता है

- (A) 1%
- (B) 5%
- (C) 10%
- (D) 20%.

Let's Discuss



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Which of the following is necessarily an accurate estimate ?

निम्नलिखित में से कौन सा एक सटीक अनुमान है?

- (A) Plinth area estimate**
- (B) Cubical content estimate**
- (C) Revised estimate**
- (D) None of the above.**

Let's Discuss



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Detailed drawing is not necessarily required for which of the following estimate ?

निम्नलिखित अनुमानों के लिए विस्तृत ड्राइंग आवश्यक नहीं है?

- (A) Detailed estimate ?**
- (B) Revised estimate**
- (C) Supplementary estimate**
- (D) Rough cost estimate.**

Let's Discuss



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Replacement of a window and provision of a door in its place comes under

एक खिड़की के प्रतिस्थापन और इसके स्थान पर एक दरवाजे के प्रावधान के तहत आता है

- (A) supplementary estimate**
- (B) revised estimate**
- (C) annual maintenance estimate**
- (D) addition and alteration estimate.**

Let's Discuss

- A **renovation** is an update to an existing building or a return to a new condition.
- An **alteration** is a change to an existing building.
- An **addition** is adding to an existing building.



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Annual repair estimate is usually not allowed to exceed

वार्षिक मरम्मत अनुमान आमतौर पर पार करने की अनुमति नहीं है

- (A) 10% of capital cost**
- (B) 5% of capital cost**
- (C) 2% of capital cost**
- (D) 0.5% of capital cost.**

Let's Discuss



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Which of the following is nearly a detailed estimate ?

निम्नलिखित में से कौन सा एक विस्तृत अनुमान आवश्यक है?

- (A) Supplementary estimate**
- (B) Revised estimate**
- (C) Both (A) and (B) above**
- (D) None of the above.**

Let's Discuss



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The percentage of total cost provided towards water charge, (in rate analysis) is

जल परिवर्तन की ओर प्रदान की गई कुल लागत का प्रतिशत, (दर विश्लेषण में) है

- (A) 1 %
- (B) 2%
- (C) 3%
- (D) 5%.

Let's Discuss



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The quantum of work of any item, a skilled labors is expected to do in a day, is known as

किसी भी वस्तु के काम की मात्रा, एक कुशल श्रमिकों को एक दिन में करने की उम्मीद है, जिसे जाना जाता है

- (A) standard work**
- (B) work to specification**
- (C) target work**
- (D) test work.**

Let's Discuss

Also known as out turn
(Per labour per day work)



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A person who advances loan against the property is known as

एक व्यक्ति जो संपत्ति के बंधक के खिलाफ ऋण अग्रिम करता है उसे जाना जाता है

**(A) Banker (B) Lessee
(C) Broker (D) Mortgager.**

Let's Discuss

- A legal agreement by which a bank, building society, etc. lends money at interest in exchange for taking title of the debtor's property, with the condition that the conveyance of title becomes void upon the payment of the debt
- एक कानूनी समझौता जिसके द्वारा एक बैंक, बिल्डिंग सोसाइटी इत्यादि देनदार की संपत्ति का खिताब लेने के बदले में ब्याज पर पैसा देता है



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The document on which the transaction of mortgage is recorded is known as

जिस दस्तावेज़ पर बंधक के लेनदेन को रिकॉर्ड किया गया है उसे जाना जाता है

- (A) Loan paper (B) Registry
(C) Stamp paper (D) Mortgage deed

Let's Discuss

- A **mortgage deed** is a document in which the mortgagor transfers an interest in real estate to a mortgagee for the purpose of providing a **mortgage** loan.
- एक बंधक कार्य एक दस्तावेज है जिसमें बंधक ऋण बंधक ऋण प्रदान करने के उद्देश्य से एक बंधक को अचल संपत्ति में रुचि स्थानांतरित करता है



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A property whose owner is in the absolute possession of the property, and the owner can utilize the same in any manner, he likes subject to the rules and regulations of Government and local authorities, is known as

एक संपत्ति जिसका मालिक संपत्ति के पूर्ण कब्जे में है, और मालिक इसे किसी भी तरह से उपयोग कर सकता है, वह सरकार और स्थानीय अधिकारियों के नियमों और विनियमों के अधीन पसंद करता है, जिसे जाना जाता है

- (A) Lease hold property**
- (B) Absolute property**
- (C) Owner's property**
- (D) Free hold property.**

Let's Discuss

- **Freehold property** can be **defined** as any estate which is "**free** from**hold**" of any entity besides the owner. Hence, the owner of such an estate enjoys**free** ownership for perpetuity and can use the land for any purposes however in accordance with the local regulations.
- फ्रीहोल्ड संपत्ति को किसी भी संपत्ति के रूप में परिभाषित किया जा सकता है जो मालिक के अलावा किसी भी इकाई के "धारण से मुक्त" होता है। इसलिए, इस तरह के एक संपत्ति के मालिक हमेशा के लिए निःशुल्क स्वामित्व का आनंद लेते हैं और स्थानीय नियमों के अनुसार किसी भी उद्देश्य के लिए भूमि का उपयोग कर सकते हैं।



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A person who takes the lease is known as

एक व्यक्ति जो पट्टा लेता है उसे जाना जाता है

- (A) Leaser (B) Lessee
(C) Owner (D) Short term owner

Let's Discuss

User or renter of the leased asset or property. In case of capital **leases**, the lessee is also the 'debtor' to the lessor.

When real estate is leased, the lessee is called a **tenant**.

The rights and privileges which one owner of a property enjoys through or over the property of another is known as

अधिकार और पूर्वाग्रह जो किसी संपत्ति के मालिक को किसी अन्य संपत्ति के माध्यम से या उससे अधिक आनंद लेते हैं, के रूप में जाना जाता है

(A) Property right
(C) Legal right

(B) Lease right
(D) Easement

Let's Discuss

An **easement** is a nonpossessory right to use and/or enter onto the real property of another without possessing it. It is "best typified in the right of way which one landowner, A, may enjoy over the land of another, B"

किसी अन्य की वास्तविक संपत्ति पर उपयोग करने और / या प्रवेश करने का एक गैर-स्वामित्व अधिकार है।



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The person who enjoys the easements over a property is called

वह व्यक्ति जो संपत्ति पर आसानी का आनंद लेता है उसे बुलाया जाता है

- (A) Easer
- (B) Lesser
- (C) Owner
- (D) Dominant owner.

Let's Discuss

- The party gaining the benefit of the easement is the **dominant** estate (or **dominant tenement**), while the party granting the benefit or suffering the burden is the **servient** estate (or **servient tenement**). For example, the **owner** of parcel A holds an easement to use a driveway on parcel B to gain access to A's house
- पार्टी का लाभ प्राप्त करने वाला लाभ प्रमुख संपत्ति (या प्रमुख किराये) है, जबकि लाभ या लाभ को पीड़ित करने वाली पार्टी सेवा संपत्ति (या सेवा किराये) है।



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The owner over whose property the easements are enjoyed in called as

मालिक जिसकी संपत्ति पर आसानी से आनंद लिया जाता है

- (A) Subordinate owner**
- (B) Bonded owner**
- (C) Dead owner**
- (D) Servient owner.**

Let's Discuss



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A work costing Rs. 20000 is termed as

एक काम रु। 20000 के रूप में जाना जाता है

- (A) Petty work**
- (B) Minor work**
- (C) Major work**
- (D) Minor product**

Let's Discuss

Amount	Type of work
0-20000/-	Petty work
20000-20Lakhs/-	Minor work
20Lakhs-1Cr.	Major works
Above 1 Cr	Project



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A work costing Rs. one crore is termed as

एक काम रु एक करोड़ के रूप में जाना जाता है

- (A) Petty work**
- (B) Minor work**
- (C) Major work**
- (D) Major project**

Let's Discuss



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While submitting a tender the contractor is required to deposit some amount with the department, as guarantee of the tender, known as

एक निविदा जमा करते समय ठेकेदार को निविदा की गारंटी के रूप में, विभाग के साथ कुछ राशि जमा करने की आवश्यकता होती है

- (A) Bank guarantee**
- (B) Earnest money**
- (C) Security deposit**
- (D) Caution money**

Let's Discuss

Money	Amount
Earnest money	2%
Security deposit	10%

When a contractor is paid certain percentage over the actual cost of the construction as his profit, such contract is termed as

जब एक ठेकेदार को उसके लाभ के रूप में निर्माण की वास्तविक लागत पर कुछ प्रतिशत का भुगतान किया जाता है, तो इस तरह के अनुबंध को कहा जाता है

- (A) Lump-sum contract**
- (B) Piece work contract**
- (C) Work order**
- (D) Cost plus percentage contract.**

Let's Discuss

- A **cost-plus contract**, also termed a **cost** reimbursement **contract**, is a **contract** where a **contractor** is paid for all of its allowed expenses, **plus** additional payment to allow for a profit.
- एक लागत-प्लस अनुबंध, जिसे एक लागत प्रतिपूर्ति अनुबंध भी कहा जाता है, एक अनुबंध है जहां एक ठेकेदार को इसके सभी अनुमत खर्चों के लिए भुगतान किया जाता है, साथ ही लाभ के लिए अतिरिक्त भुगतान भी किया जाता है।

An agency which is employed to execute a work or part of a work at the cost of contractor who fails to complete the work, is known as

एक एजेंसी जो ठेकेदार की लागत पर काम या काम के हिस्से को निष्पादित करने के लिए नियोजित है जो काम पूरा करने में विफल रहता है, को जाना जाता है

- (A) Secondary agency**
- (B) Substitute agency**
- (C) Debitable agency**
- (D) Creditable agency**

Let's Discuss

- Debitable Agency: If the Contractor fails to perform the work successfully or discontinues the work before completion of the period of agreement or the work is discontinued by the department due to poor performance the security money shall be forfeited in all the cases and work shall be got done from debit agency at the cost of Contractor i.e. all such expenditure incurred by the department to get the work completed shall be recovered from Contractor's pending bills/ Security/ Earnest Money.
- देनदार एजेंसी: समझौते की अवधि पूरी होने से पहले यदि ठेकेदार काम को सफलतापूर्वक करने में विफल रहता है काम पूरा करने के लिए विभाग द्वारा किए गए सभी व्यय ठेकेदार के लंबित बिल / सुरक्षा / कमाई से वसूल किए जाएंगे



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Which chart gives an estimate about the time of materials handling between various work stations

कौन सा चार्ट विभिन्न कार्य स्टेशनों के बीच सामग्रियों के संचालन के समय के बारे में एक अनुमान देता है

- (A) Flow chart**
- (B) Process chart**
- (C) Operation chart**
- (D) Travel chart.**

Let's Discuss



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The estimated time required to complete an activity is known as

एक गतिविधि को पूरा करने के लिए अनुमानित समय के रूप में जाना जाता है

- (A) duration**
- (B) restraint**
- (C) constraint**
- (D) float.**

Let's Discuss



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The information which cannot be included in drawings is conveyed to the estimator

चित्र जो चित्रों में शामिल नहीं किया जा सकता है उसे अनुमानक को बताया जाता है

- (A) verbally**
- (B) through specifications**
- (C) through cover note**
- (D) by bar chart.**

Let's Discuss



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The main factor to be considered while preparing a detailed estimate, is

एक विस्तृत अनुमान तैयार करते समय विचार किया जाने वाला मुख्य कारक है

- A. Quantity of the materials**
- B. Availability of materials**
- C. Transportation of materials**
- D. All the above**

Let's Discuss



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Pick up the correct statement from the following:

निम्नलिखित से सही कथन उठाएं:

- A. The estimated value of the work excluding the amount for contingencies, work charged establishment, tool and plants, is called work value**
- B. The actual expenditure involved to complete a work including incidental, establishment and travelling charges, is called actual cost**
- C. The formal acceptance by the administrative department for incurring an expenditure on the work, is called administrative approval**
- D. All the above**

Let's Discuss



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While estimating a reinforced cement structure, the omitted cover of concrete is assumed

एक प्रबलित सीमेंट संरचना का अनुमान लगाने के दौरान, कंक्रीट के छोड़े गए कवर को माना जाता है

- A. At the end of reinforcing bar, not less than 25 mm or twice the diameter of the bar**
- B. In thin slabs, 12 mm minimum or diameter of the bar whichever is more**
- C. For reinforcing longitudinal bar in a beam 25 mm minimum or diameter of the largest bar which is more**
- D. All the above**

Let's Discuss



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While estimating the quantities for the construction of a building, the correct metric unit is

एक इमारत के निर्माण के लिए गुणों का अनुमान लगाने के दौरान, सही मीट्रिक इकाई है

- A. Metre for length**
- B. Cubic metre for area**
- C. Square metres for volume**
- D. Litre for capacity**

Let's Discuss



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Due to change in price level, a revised estimate is prepared if the sanctioned estimate exceeds

मूल्य स्तर में परिवर्तन के कारण, स्वीकृत अनुमान अधिक होने पर संशोधित अनुमान तैयार किया जाता है

- A. 2.0 %**
- B. 2.5 %**
- C. 4.0 %**
- D. 5.0 %**

Let's Discuss



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The most reliable estimate is

सबसे विश्वसनीय अनुमान है

- A. Detailed estimate**
- B. Preliminary estimate**
- C. Plinth area estimate**
- D. Cube rate estimate**

Let's Discuss



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METHODS OF ESTIMATION



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RULES FOR MEASUREMENT :

The rules for measurement of each item are invariably described in IS-1200. However some of the general rules are listed below.

- Measurement shall be made for finished item of work and description of each item shall include materials, transport, labour, fabrication tools and plant and all types of overheads for finishing the work in required shape, size and specification.
काम की तैयार वस्तु के लिए मापन किया जाएगा और प्रत्येक आइटम के विवरण में सामग्री, परिवहन, श्रम, निर्माण उपकरण और पौधे और आवश्यक आकार, आकार और विनिर्देशन में काम को खत्म करने के लिए सभी प्रकार के उपरि शामिल होंगे।
- In booking, the order shall be in sequence of length, breadth and height or thickness.
बुकिंग में अनुक्रम, लंबाई, चौड़ाई और ऊंचाई या मोटाई में होगा।

RULES FOR MEASUREMENT :

- *All works shall be measured subject to the following tolerances.*
 - i) Linear measurement shall be measured to the nearest 0.01m.
 - ii) Areas shall be measured to the nearest 0.01 sq.m
 - iii) Cubic contents shall be worked-out to the nearest 0.01 cum
- Same type of work under different conditions and nature shall be measured separately under separate items.
- The bill of quantities shall fully describe the materials, proportions, workmanships and accurately represent the work to be executed.

RULES FOR MEASUREMENT :

- *In case of masonry (stone or brick) or structural concrete, the categories shall be measured separately and the heights shall be described:*
 - a) from foundation to plinth level
 - b) from plinth level to First floor level
 - c) from First floor to Second floor level and so on.

METHODS OF TAKING OUT QUANTITIES:

The quantities like earth work, foundation concrete, brickwork in plinth and super structure etc., can be workout by any of following two methods:

- a) Long wall - short wall method
- b) Centre line method.
- c) Partly centre line and short wall method.

Long wall-short wall method:

In this method, calculate first the centre line lengths of individual walls. Then the length of long wall, (out to out) may be calculated after adding half breadth at each end to its centre line length. Thus the length of short wall measured into in and may be found by deducting half breadth from its centre line length at each end. The length of long wall usually decreases from earth work to brick work in super structure while the short wall increases. These lengths are multiplied by breadth and depth to get quantities

Centre line method:

This method is suitable for walls of similar cross sections. Here the total centre line length is multiplied by breadth and depth of respective item to get the total quantity at a time. When cross walls or partitions or verandah walls join with main all, the centre line length gets reduced by half of breadth for each junction. such junction or joints are studied carefully while calculating total centre line length. The estimates prepared by this method are most accurate and quick



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Partly centre line and partly cross wall method:

This method is adopted when external (i.e., around the building) wall is of one thickness and the internal walls having different thicknesses. In such cases, centre line method is applied to external walls and long wall short wall method is used to internal walls. This method suits for different thicknesses walls and different level of foundations. Because of this reason, all Engineering departments are practicing this method.



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In case of Jack arch roofing including brickwork in arches, concrete in haunch filling and finishing of underside is taken as

मेहराब में ईंटों सहित जैक आर्क छत के मामले में, हंच भरने और अंडरसाइड के परिष्करण में ठोस के रूप में लिया जाता है

- (A) 90% of the total flat surface**
- (B) Total flat surface**
- (C) 110% of the total flat surface**
- (D) times the total flat surface**

Let's Discuss



The quantity of arch masonry work is calculated by the relation

आर्क चिनाई कार्य की मात्रा संबंध द्वारा गणना की जाती है

(A) Span of arch \times breadth of wall \times thickness of arch

(B) (span of arch + 2 \times thickness of arch) \times breadth of wall

(C) (Span of arch + 2 \times breadth of wall) \times thickness of arch

(D) Mean length of arch \times breadth of wall \times thickness of arch.

Let's Discuss



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For building project estimate which method is generally used in PWD ?

प्रोजेक्ट अनुमान बनाने के लिए आमतौर पर पीडब्ल्यूडी में किस विधि का उपयोग किया जाता है?

- (A) Long wall and short wall method**
- (B) Centre line method**
- (C) Crossing method**
- (D) None of the above.**

Let's Discuss



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CPM stands for

सीपीएम का मतलब है

- (A) Cumulative Path Method**
- (B) Critical Process Method**
- (C) Combined Planning Method**
- (D) Critical Path Method.**

Let's Discuss



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The depth of foundation is usually calculated from

नींव की गहराई आमतौर पर गणना की जाती है

- (A) Rankines formula**
- (B) Newtons formula**
- (C) De' Almberts formula**
- (D) Any of the above**

Let's Discuss



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Which of the following is considered to be the golden rule for the procurement of construction stones ?

निम्नलिखित में से कौन सा निर्माण पत्थरों की खरीद के लिए सुनहरा नियम माना जाता है

- (A) three fourth of the construction stones should be at work site and one fourth under procurement**
- (B) half of the construction stones should be at work site and half under procurement**
- (C) one fourth of the construction stones at the site and three fourth under procurement**
- (D) two thirds of the construction stones at work site and one third under procurement.**

Let's Discuss



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In long and short wall method of estimation, the length of long wall is the centre to centre distance between the walls and

अनुमान की लंबी और छोटी दीवार विधि में, लंबी दीवार की लंबाई दीवारों के बीच मध्य दूरी के केंद्र और केंद्र है

- A. Breadth of the wall**
- B. Half breadth of wall on each side**
- C. One fourth breadth of wall on each side**
- D. None of these**

Let's Discuss



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The 'centre line method' is specially adopted for estimating

अनुमान लगाने के लिए 'केंद्र रेखा विधि' विशेष रूप से अपनाया गया है

- A. Circular buildings**
- B. Hexagonal buildings**
- C. Octagonal buildings**
- D. All the above**

Let's Discuss



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3. TYPE OF AREAS



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The useful livable area of a building is also known as

एक इमारत के उपयोगी रहने योग्य क्षेत्र के रूप में भी जाना जाता है

- (A) Carpet area
- (B) Circulation area
- (C) Horizontal circulation area
- (D) Floor area

Let's Discuss



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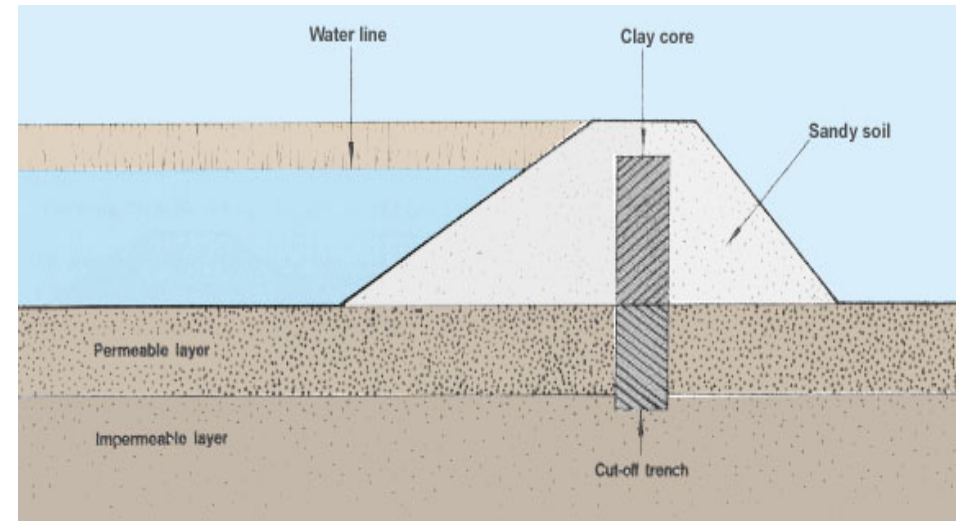
When canal is fully in banking, a wall of puddle clay is provided in the centre of the banks to prevent loss of water by seepage. This wall is known as

जब नहर बैंकिंग में पूरी तरह से हो, तो सीपेज द्वारा पानी के नुकसान को रोकने के लिए बैंकों के केंद्र में पुडल मिट्टी की एक दीवार प्रदान की जाती है। इस दीवार के रूप में जाना जाता है

(A) Side wall
(C) Core wall

(B) Central wall
(D) Partition wall

Let's Discuss



While planning for a primary school, the area provided per student is

प्राथमिक विद्यालय की योजना बनाते समय, प्रति छात्र प्रदान किया गया क्षेत्र है

(A) 0.1 sq-m

(B) 0.5 sq-m

(C) 1.2 sq-m

(D) 2.4 sq-m.

Let's Discuss



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Plinth area normally does not include area covered under

प्लिंथ क्षेत्र में आमतौर पर क्षेत्र शामिल नहीं होता है

- (A) Lavatories (शौचालयों)**
- (B) Garage**
- (C) Open courtyard**
- (D) All of the above.**

Let's Discuss



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The plinth area of a building not includes

एक इमारत के प्लिंथ क्षेत्र में शामिल नहीं है

- A. Area of the walls at the floor level
- B. Internal shaft for sanitary installations up to sq m. in area
- C. Lift and wall including landing
- D. Area of cantilevered porch

Let's Discuss



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Carpet area does not include the area of

कालीन क्षेत्र में क्षेत्र शामिल नहीं है

- A. The walls along with doors and other openings**
- B. Bath room and lavatory**
- C. Kitchen and pantry**
- D. All the above**

Let's Discuss



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Pick up the incorrect statement from the following:

निम्नलिखित से गलत कथन उठाएं:

- A. The built up covered area at the floor level of any storey of a building is called plinth area**
- B. The usable covered area of the rooms of any storey of a building is called carpet area**
- C. The carpet area of a building along with area of its kitchen, pantry, store, lavatory, bath room and glazed veranda, is called floor area**
- D. None of these**

Let's Discuss



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Pick up the item of work not included in the plinth area estimate

प्लिंथ क्षेत्र के अनुमान में शामिल नहीं किए गए काम की वस्तु उठाएं

- A. Wall thickness**
- B. Room area**
- C. W.C. area**
- D. Courtyard area**

Let's Discuss



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4. TERMINOLOGY



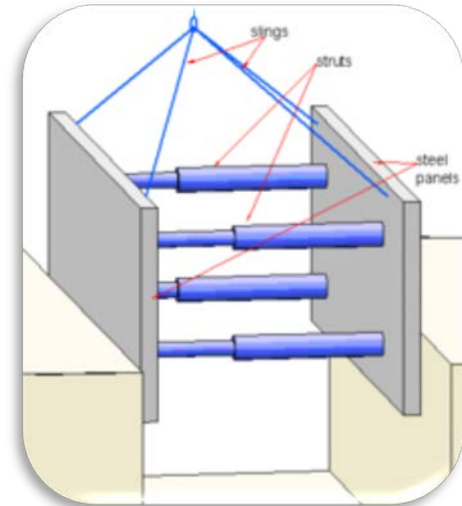
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A layer of dry bricks put below the foundation concrete, in the case of soft soils is called

नरम मिट्टी के मामले में, नींव कंक्रीट के नीचे सूखी ईंटों की एक परत कहा जाता है

- (A) soling**
- (B) shoring**
- (C) D.P.C.**
- (D) none of the above.**

Let's Discuss



A fixed stipulated sum of penalty payable by the contractor having no relationship with real damage, is known as

वास्तविक क्षति के साथ कोई संबंध नहीं होने वाले ठेकेदार द्वारा देय दंड का एक निश्चित निर्धारित राशि, के रूप में जाना जाता है

Let's Discuss

- (A) Fixed penalty** निश्चित जुर्माना
- (B) Liquidated damages** परिसमापन हर्जाना
- (C) Unliquidated damages** अप्रत्याशित क्षति
- (D) Terminal damage** टर्मिनल क्षति



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A penalty imposed by the railways for the unloading of wagon beyond a certain allowable period, usually six hours is known as

एक निश्चित स्वीकार्य अवधि से परे वैगन को उतारने के लिए रेलवे द्वारा लगाए गए जुर्माना, आमतौर पर छह घंटे के रूप में जाना जाता है

**(A) Demurrage (B) Challan
(C) Wearfage (D) Damages**

Let's Discuss



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A penalty imposed by railway for the delay in removing goods and for keeping railway space occupied beyond a certain allowable period, is known as

माल को हटाने में देरी के लिए रेलवे द्वारा लगाए गए जुर्माना और एक निश्चित स्वीकार्य अवधि से परे रेलवे स्थान को रखने के लिए,

(A) Demurrage
(C) Penalty

(B) Wearfage
(D) Damage

Let's Discuss



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5. MEASUREMENT UNITS



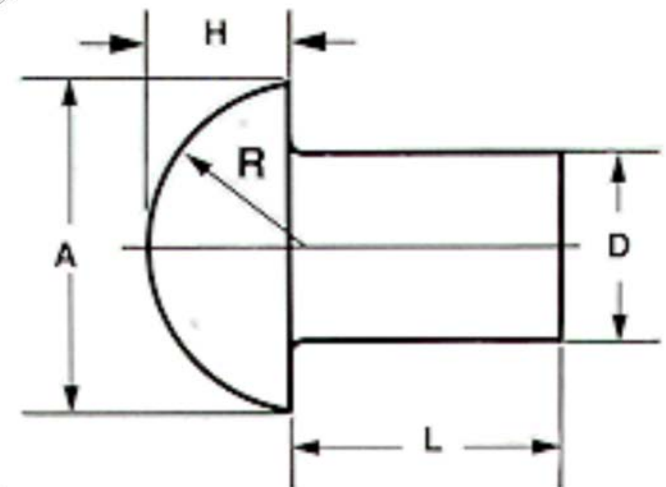
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Rivets are specified by

Rivets द्वारा निर्दिष्ट कर रहे हैं

- (A) Type and diameter
- (B) Type, diameter and length
- (C) Type, diameter, length and size of head
- (D) Type, diameter, length and mode of riveting.

Let's Discuss



Estimate for electric wiring e.g. light fan plug points etc., is usually made in terms of

इलेक्ट्रिक तारों के लिए अनुमान प्रकाश प्रशंसक प्लग अंक आदि, आमतौर पर के मामले में बनाया जाता है

- (A) Total power at mains in kW**
- (B) Amperage of every point**
- (C) Type of point**
- (D) Number of points**

Let's Discuss



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Besides standard length and width of a corrugated sheet, one important dimension usually considered is

एक नालीदार चादर की मानक लंबाई और चौड़ाई के अलावा, आमतौर पर एक महत्वपूर्ण आयाम माना जाता है

- (A) Pitch of corrugation**
- (B) Depth of corrugation**
- (C) Shape of corrugation**
- (D) Gauge of the material**

Let's Discuss



The duct metal work is measured in

नलिका धातु के काम में मापा जाता है

- (A) running meters
- (B) sq. m. on the basis of surface area
- (C) cubic meters
- (D) kilograms.

Let's Discuss

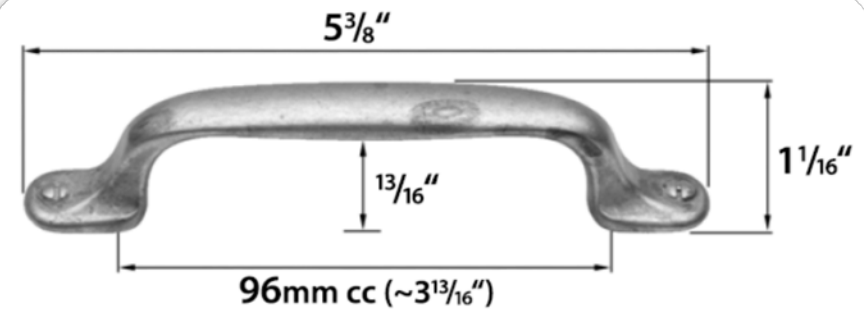


The size of door handle is specified by

दरवाजा संभाल का आकार निर्दिष्ट है

- (A) the number of screws
- (B) the grip length
- (C) the overall length
- (D) the weight in grams

Let's Discuss



A sliding door bolt (aldrop) is specified by

एक स्लाइडिंग दरवाजा बोल्ट (aldrop) द्वारा निर्दिष्ट किया गया है

- (A) the length of the bolt
- (B) the weight of the bolt
- (C) the number of screw holes
- (D) none of the above.

Let's Discuss



Steel rolling shutters are measured in terms of

स्टील रोलिंग शटर के मामले में मापा जाता है

- (A) running metres
- (B) square metres
- (C) both (A) and (B) above
- (D) gross weight.

Let's Discuss



Steel louver are measured in terms of

स्टील लूवर के मामले में मापा जाता है

- (A) running metre (B) sq-m
(C) cu-m (D) gross weight.

Let's Discuss



The supply of explosives for blasting is usually expressed in terms of

विस्फोट के लिए विस्फोटकों की आपूर्ति आमतौर पर व्यक्त की जाती है

Let's Discuss

- (A) Equivalent tons of TNT**
- (B) Explosive power**
- (C) Volume of earth work that can be blasted**
- (D) Kilograms of explosive**



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Particulars of rolled steel sections such as I-beams, channels, angles, etc. are usually expressed in terms of

रोल किए गए स्टील खंडों जैसे कि आई-बीम्स, चैनल, कोण इत्यादि के विवरण आमतौर पर व्यक्त किए जाते हैं

- (A) Total weight in quintals**
- (B) Weight per metre length**
- (C) Length in metres and section in Sqm meters**
- (D) Length in mm and section in meters**

Let's Discuss



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Cutting down of hedges is measured in

हेजेज काटने का मापन किया जाता है

- (A) running meters (B) square meters
(C) cubic meters (D) tones.

Let's Discuss



A honey comb wall is measured in and is made for honey comb openings

एक शहद कंघी दीवार को मापा जाता है और शहद कंघी खोलने के लिए बनाया जाता है

- (A) running meters...deduction**
- (B) sq. m no deduction**
- (C) sq. m. deduction**
- (D) cu. m no deduction.**

Let's Discuss



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Cutting openings exceeding 0.1 Sqm in area in more than one brick thick walls is measured in

एक से अधिक ईंट मोटी दीवारों में क्षेत्र में 0.1 वर्गमीटर से अधिक की खुली खुदाई का आकलन किया जाता है

(A) sq.-m

(B) cu-m

(C) m

(D) any of the above.

Let's Discuss



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Quantities for wood work are computed generally in terms of

लकड़ी के काम के लिए मात्रा आम तौर पर गणना की जाती है

- (A) Numbers
- (B) Numbers and sizes
- (C) Area in square meters
- (D) Volume in cubic meters

Let's Discuss



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Quantities for iron work are computed generally in terms of

लोहे के काम के लिए मात्रा आम तौर पर गणना की जाती है

- (A) Numbers
- (B) Numbers and sizes
- (C) Area in square meters
- (D) Weight in kilograms.

Let's Discuss



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No deductions are made in the masonry for the openings, if the area of the opening does not exceed

उद्घाटन के क्षेत्र में खुलने के लिए चिनाई में कोई कटौती नहीं की जाती है

(A) 0.1 m^2

(B) 0.5 m^2

(C) 0.99 m^2

(D) 1.5 m^2 .

Let's Discuss



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One cubic meter of mild steel weighs about

हल्के स्टील का एक घन मीटर वजन का होता है

- (A) 1000 kg (B) 3625 kg
(C) 7850 kg (D) 12660 kg

Let's Discuss



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Whenever not specified the number of hold fasts for door is usually taken as

जब भी निर्दिष्ट नहीं किया जाता है कि दरवाजे के लिए होल्ड फेस्ट्स की संख्या आमतौर पर ली जाती है

- (A) 2 (B) 4
(C) 6 (D) 8

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

In case of steel roof truss, of the total steel work, rivets, bolts and nuts usually account for

इस्पात की छत के मामले में, कुल स्टील के काम, rivets, बोल्ट और पागल आमतौर पर खाते हैं

(A) 1%
(C) 10%

(B) 5%
(D) 15%

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The thickness of slabs and beams is measured to the nearest

स्लैब और बीम की मोटाई को निकटतम में मापा जाता है

- (A) 0.001 m (B) 0.005 m
(C) 0.01 m (D) 0.05 m.

Let's Discuss



EXCELLENTVISION
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In the detailed estimate the volumes are worked out to the nearest

विस्तृत अनुमान में वॉल्यूम निकटतम में काम किया जाता है

- (A) 0.00001 m^3
- (B) 0.0001 m^3
- (C) 0.001 m^3
- (D) 0.01 m^3 .

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

In the detailed estimate, the areas are worked out to the nearest

विस्तृत अनुमान में, क्षेत्र निकटतम में काम किए जाते हैं

- (A) 0.01 m² (B) 0.001 m²
(C) 0.0001 m² (D) 0.00001 m².

Let's Discuss



EXCELLENTVISION
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Estimate for electrical wiring is prepared on the basis of

के आधार पर विद्युत तारों के लिए अनुमान तैयार किया गया है

- (A) Voltage
- (B) Power
- (C) Number of appliances
- (D) Points

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

In ease of point wiring, when the length of wiring is less than 3 meters, it is termed as

बिंदु तारों की आसानी से, जब तारों की लंबाई 3 मीटर से कम है, तो इसे कहा जाता है

**(A) Short point (B) Medium point
(C) Long point (D) Extra long point**

Let's Discuss



**EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.**

In case of point wiring when the length of wiring exceeds 30 m, it is known as

बिंदु तारों के मामले में जब तारों की लंबाई 30 मीटर से अधिक हो जाती है, तो इसे जाना जाता है

**(A) Short point (B) Medium point
(C) Long point (D) Special point**

Let's Discuss



**EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.**

In case of point wiring when the length of wiring is between 6 m and 10 m, it is termed as

बिंदु तारों के मामले में जब तारों की लंबाई 6 मीटर और 10 मीटर के बीच होती है, तो इसे कहा जाता है

- (A) Medium point**
- (B) Short-medium point**
- (C) Super-medium point**
- (D) Long point**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Taking up or down or breaking up of a structure is termed as

एक ढांचे को ऊपर या नीचे लेना या तोड़ना कहा जाता है

(A) Dismantling (B) Breaking
(C) Removal (D) Demolition विध्वंस.

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Carefully taking up or down and removing carefully a structure without damage is termed as

ध्यान से बिना किसी नुकसान के संरचना को सावधानीपूर्वक ऊपर या नीचे ले जाना और निकालना कहा जाता है

- | | |
|-------------------------|----------------------|
| (A) Dismantling | (B) Breaking |
| (C) Rescheduling | (D) Direction |

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The measurement of grills is usually taken in terms of

ग्रिल का माप आमतौर पर लिया जाता है

- (A) Area in square meters**
- (B) Volume in cubic meters**
- (C) Weight**
- (D) Volume @ of section used**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Specifications for iron hold fasts are expressed in terms of

लोहे के रखरखाव के लिए विनिर्देशों के संदर्भ में व्यक्त किया जाता है

- (A) Weight in kg
- (B) Number
- (C) Weight and number
- (D) Volume

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

For any steel pipe work, important dimension is

किसी भी स्टील पाइप काम के लिए, महत्वपूर्ण आयाम है

- (A) Length (B) Diameter
(C) Gauge (D) All of the above

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Brackets are usually measured in terms of

किसी भी स्टील पाइप काम के लिए, महत्वपूर्ण आयाम है

- (A) Weight in kg
- (B) Volume
- (C) Gauge of steel sections
- (D) Standard design

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Bar bed wire is measured in

बार बिस्तर तार में मापा जाता है

(A) Running meters (B) Gauge
(C) Weight (D) (A) , (B) and (C) above

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Rolling shutters are measured in terms of

रोलिंग शटर के मामले में मापा जाता है

- (A) Area in square meters
- (B) Gauge of sheet
- (C) Width of slots and distance between centers of inter-locks
- (D) All of the above together

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

100 square millimeters are equivalent to

100 वर्ग मिलीमीटर चाप के बराबर है

- (A) 1 square meter
- (B) 1 square centimeter
- (C) 1 square decimeter
- (D) 1 hectare

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

One cubic meter of sand will roughly weigh

एक घन मीटर रेत का वजन लगभग होगा

- A) 100 kg (B) 600 kg
C) 1600 kg (D) 2600 kg

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Weight of one cubic metre of each of the following material is recorded. Which one will be the heaviest

**(A) Earth (ordinary) (B) Cement
(C) Stone ballast (D) Steel**

Let's Discuss



**EXCELLENTVISION
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Weight per cu. m. of shisham wood will be around

वजन प्रति सीयू। मीटर। शिशम लकड़ी की चारों ओर होगी

- (A) 100 kg (B) 800 kg
(C) 1200 kg (D) 1800 kg

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The weight in kg per sq. m. of C.G.I. sheet 24 gauge, will be around

किलो प्रति वर्ग मीटर वजन। सीजीआई का शीट 24 गेज, चारों ओर होगा

(A) 1 kg (B) 2 kg (C) 7 kg (D) 12 kg

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

A 16 gauge steel sheet will roughly have thickness equal to

एक 16 गेज स्टील शीट मोटे तौर पर मोटाई बराबर होगा

- (A) 6 mm (B) 4 mm
(C) 3 mm (D) 1.5 mm

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

One horsepower is roughly have thickness equal to

एक अश्वशक्ति मोटे तौर पर मोटाई बराबर है

- (A) 0.746 W (B) 1.431 kW
(C) 1431 VA (D) 0.746 kW

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The unit of specific gravity of water is

पानी की विशिष्ट गुरुत्वाकर्षण की इकाई है

- (A) gm/cc (B) kg/cu. m
(C) lbs/cu. ft (D) None of the
above.

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Binding wire for steel reinforcement is

स्टील सुदृढीकरण के लिए बाध्यकारी तार है

- (A) measured in running meters
- (B) measured in kilograms
- (C) not measured but included in description
- (D) not measure and also not included in description.

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Brick walls are measured in sq. m if the thickness of the wall is

अगर दीवार की मोटाई है तो ईंट की दीवारों को वर्ग मीटर में मापा जाता है

- A. 10 cm**
- B. 15 cm**
- C. 20 cm**
- D. None of these**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The measurement is made in square metre in case of

माप के मामले में वर्ग मीटर में किया जाता है

- A. Cement concrete in foundation**
- B. R.C.C. structure**
- C. Hollow concrete block wall**
- D. None of these**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Pick up the correct statement from the following:

निम्नलिखित से सही कथन उठाएं:

- A. Pointing is measured in sq.m**
- B. Plastering is measured in sq.m**
- C. Glazing is measured in sq.m**
- D. All the above**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

Pick up the incorrect statement from the following:

निम्नलिखित से गलत कथन उठाएं:

- A. No deduction is made for the volume occupied by reinforcement**
- B. No deduction is made for the openings upto 0.1 sq.m**
- C. No deduction is made for volumes occupied by pipes, not exceeding 100 sq.cm in cross-section**
- D. None of these**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

**The item of the brick structure measured in sq.m,
is**

वर्ग मीटर में मापा ईंट संरचना का आइटम है

- A. Reinforced brick work**
- B. Broken glass coping**
- C. Brick edging**
- D. Brick work in arches**

Let's Discuss



EXCELLENTVISION
TECHNICAL ACADEMY PVT. LTD.

The unit of measurement is per quintal for the following:

मापन की इकाई निम्नलिखित के लिए प्रति क्विंटल है:

- A. Collapsible gates with rails**
- B. Rolling shutters**
- C. Expanded metal wire netting**
- D. M.S. reinforcement of R.C.C. works**

Let's Discuss



EXCELLENTVISION
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The brick work is measured in sq metre, in case of

ईंट काम के मामले में वर्ग मीटर में मापा जाता है

Let's Discuss

- A. Honey comb brick work**
- B. Brick flat soling**
- C. Half brick walls or the partition**
- D. All the above**



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