

SCHEME OF VALUATION

SCORING INDICATORS

A

Revision - 2015

TED-5012

CONSTRUCTION MANAGEMENT & SAFETY ENGINEERING

Qs No	SCORING INDICATORS	SPLIT SCORE	SUB TOTAL	TOTAL
I	<p style="text-align: center;"><u>PART-A</u></p> 1. Construction <u>Management</u> is a techniques to oversee the planning, design and construction of a project from its beginning to its end.		2	8
	2. Tender has been defined as an officer in writing to execute specified work or supply some specified articles at certain rates with in a fixed time		2	
	3. Human resources management is the management of an organizations work force or human resources.		2	
	4. Grader, Scraper, Shovel, Drag line.		2	
	5. The operational technique and activities that are used to full fill requirements for quality.	2 marks each	2	
II	<p style="text-align: center;"><u>PART-B</u></p> 1. Administrative Sanction:- Formal acceptance of the proposed work or project by the competent authority is called administrative sanction		3	10

Technical Sanction :- For every works proposed to be carried out except petty work, a properly detailed estimate must be prescribed for sanction by the competent authority of the Engg. Dept.

3 3+3 6

- II 2. i. Planning phase
 ii. Organizing phase
 iii. Scheduling phase
 iv. Controlling and monitoring phase

each
1/2

1/2 x 4 6

- II 3. i. Quickness in execution
 ii. Overall responsibility with the department
 iii. Small Contractor with small means in way off places can easily undertake execution of work
 iv. Where the works are small and spread on this system works out to be cheaper and quicker
 v. Nomination of Contractor is possible if no competitive Contractor is available to take up work
 vi. The Contractors can be selected by taking operations

each point
1 min

1 x 6 6

- II 4. i. Name of department calling tenders
 ii. Name of work and location
 iii. Designation of the officer inviting tenders
 iv. Last date and time of receipt of tenders
 v. Period of availability of tender forms.
 vi. Cost of tender documents including any sales tax
 vii. Time of Completion type of Contract
 viii. Approx: Value of Contract
 ix. Earnest money deposit to be paid
 x. Date time and place of opening tenders.
 xi. Designation of officer opening the tender.

Ans

any
6

1x6

6

- II 5. Trade union is an organization of workers who have banded together to achieve common goals such as protecting the integrity of its trade - higher pay - better working conditions.

3

functions! →

- i. Improving working condition at site
 ii. Improving wages of workers
 iii. Providing welfare activities health plans, LIC, Bonus etc.

Ans

any

3

1x3

- | | | | |
|----|---|-------------------|------------------------------------|
| | iv. Providing legal assistance to workers | 313 | 6 |
| II | 6. i. They should have tremendous ^{amount of} energy and drive leading them to work for more time | | |
| | ii. They should have high level Confidence and they should believe strongly in themselves | | |
| | iii. They should make commitments to a long term project and work towards goals that may be quite distant | | |
| | iv. They should have intense level of determination and desire to overcome hurdles. | | |
| | v. They should prefer to take moderate and calculated risk. | | |
| | vi. They should like to initiative to solve the problem. | | |
| | vii. They should work with capacity to seek and use feed back on their performance in order to take correction action to improve. | Ams
any
Six | 1 1/2 x 4
1 x 6
6 |

- I
- * i. ~~Satisfaction of Consumers~~
 - ii. ~~Involvement of employees~~
 - iii. ~~Morale of employees~~
 - iv. ~~Quality Control System.~~

7. i. Sound Foundation: Philosophy, Policy, Culture, leadership and Commitment

ii. Sound infrastructure organization System, Procedures manuals, Customer involvement, Suppliers involvement, training and education

iii. Use to specific tools and techniques

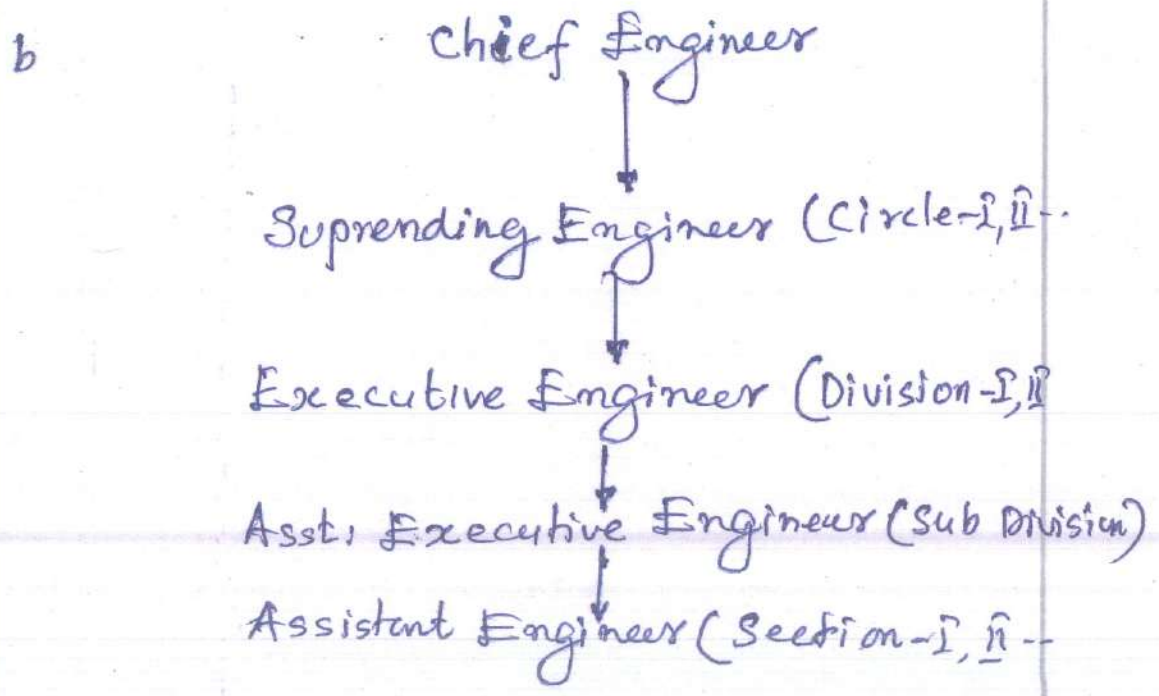
each 1/2 mark 2x2 6

PART-C

UNIT - I

iii a. All categories of staff employed for the actual execution of a specific work or subworks of a big project or for supervision of departmental labours, stores and machinery are called work charged establishments staff. Their pay is drawn in the form of pay bill of work charged establishment.

5 5



	↓ <u>Overseer.</u>		2x5	10
IV.	a. i. Planning and scheduling	2		
	ii. Organising			
	iii. Staffing			
	iv. Directing	1x5	2x5	7
	v. Controlling	1	1x5	5
	vi. Co-ordinating			
	vii.			
	b. i. Detailed Survey of the area Longitudinal Section & c/s			
	ii. Exploration of soil - depth - nature variation of strata.			
	iii. Hydrological Particulars.			
	iv. Information regarding local regulation			
	v. Location of quarries			
	vi. Estimating no. of Cross drainage works			
	vii. Local labour Conditions, wages availability of labour	each 2 mins	5x2	10
	viii. Existing roads Probable length of approach roads to connect site.			

UNIT-II

V a. After the tenders are opened a Comparative Statement is made in the office of tender opening authority. It serves to compare the rate of various tenders in respect of each item against estimated rates. The excess or saving for each tender is worked out. The tender opening authority shall verify whether the Contractor agreed to all the tender conditions and the consequent variations in the total amount has to be calculated.

V b. i. First and final bill

ii. Running account bills - A

iii. Running account bills - C

iv. Lumpsum Contract bills

v. Hand receipt

each
1
mark
Ans
Any 4 ~~1~~ 1x4

Checking of Bills

All calculations in the 'M' book shall be checked for arithmetical accuracy.

All the quantities noted in the bill shall be compared with those in 'M' book. In

the case of running account, the deductions and the quantities shall be compared with the previous bill.

4 4 8

VI a. Advantage of item rate Contract

- i. The addition and alterations in the plan and specifications can be easily made at any stage
- ii. As the Contractor gets the payments for the actual quantities, there is no possibility for excess payment
- iii. The work can be started after accepting the tender without waiting for all the detailed drawing
- iv. This method of Contracts is used in most of projects, Irrigation projects, Construction of big building and repairs of buildings

VI b. i. first and final bill:

This form should be used for making payments both to contractors for works and to suppliers where a single payment is made for a job or contract on its completion. A single form may be used for making payments to several parties.

ii. Running Account Bill

This form used for contracts both for works executed on piece work and for supplies received. This form is widely used specially for medium size work executed through K2 Contract

7 7

A

4+4 8

4

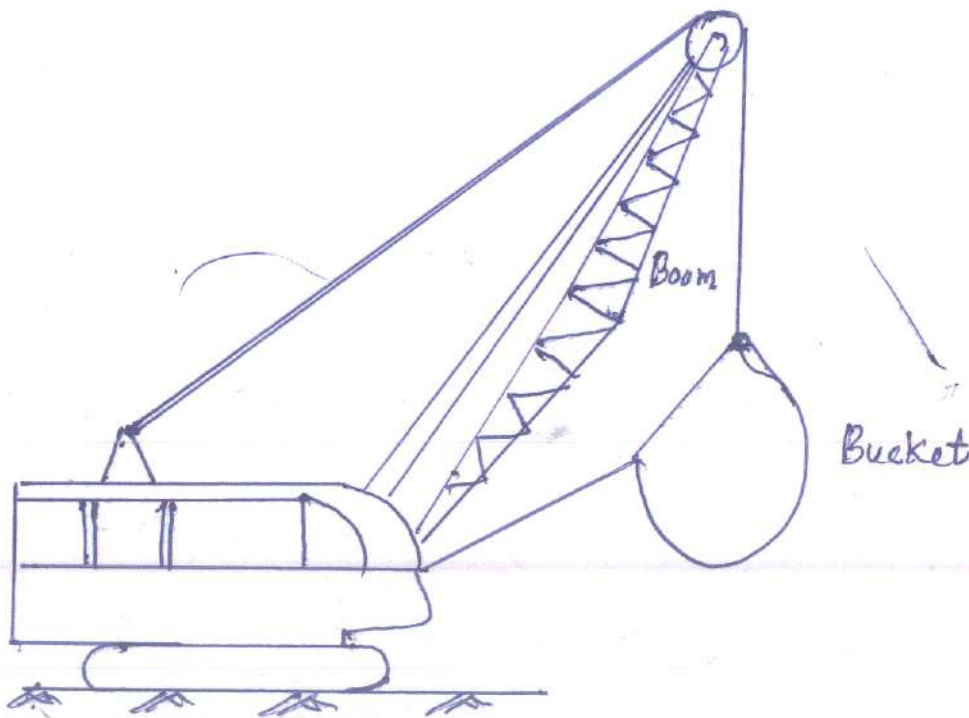
or split up works executed through K2 Contract or split up works executed or projects entrusted on nomination to a number of Contractors.

UNIT - III

- VII a.
1. Advertisement in News paper
 2. Employment exchanges
 3. Field trip
 4. Educational Institution
 5. Labour Contract
 6. Employee Referrals
 7. Telecasting
 8. Recruitment notice at factory gate.

Any
Seven 1x7 7

VII b.



Drag line can operate on surfaces which are too soft for wheel or truck mounted drag line but its speed is as 2 kmph. Excavation is started by swinging the empty bucket to the digging position at the same time slackening off the drag

fig
5
exp.
3

5+8 8

VIII a. Power Shovel.

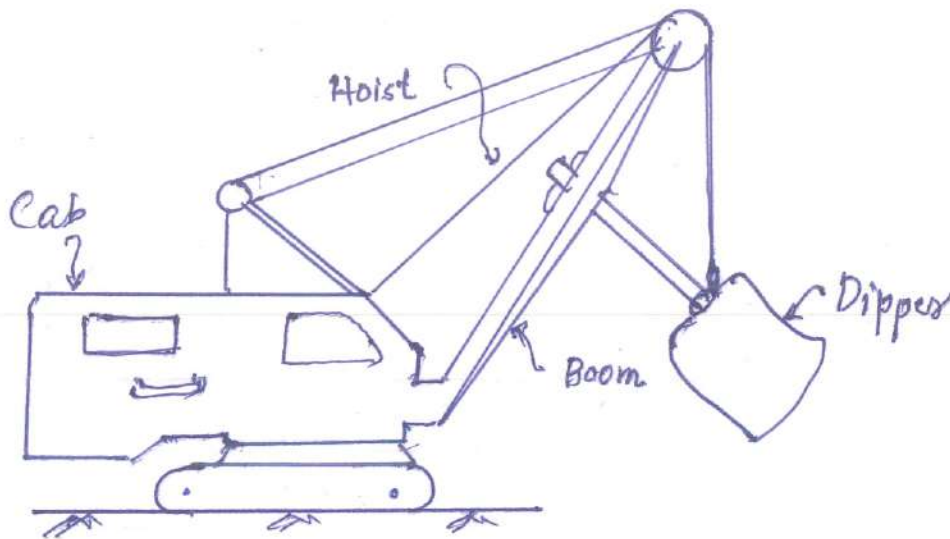


fig
4

These are used for digging hard rocks all classes of earth and discharging into dumpers. It consists of boom, dipper stick, bucket and mechanism of operation

Exp. 4+3 7
3

VII b. Objectives of Material Management

- i. Economy in material Cost
- ii. Efficient Control of inventories
- iii. Ensure uniform flow of material for Construction
- iv. Ensure right quality
- v. Ensure right Price
- vi. Establish and maintain good relations with Customers
- vii. Economical Consumption of important items and finding their substitutes

each
mark 100%

8

UNIT IV

- IX. a. i. It is increasingly becoming the requirements for global export or tender and access global supply
- ii. It is increasingly becoming an effective marketing strategy also acquiring new consumers
 - iii. It increases consistently dependable process less field failure less wasted time, materials
 - iv. Ten percent sales increases directly attributable to ISO
 - v. Return on investment being achieved is less than two years for manufacturers

assembly shop.

vi. Eighteen percent reduction in Customer focus and 25 percent increase in production back log in case of hardware manufacturers.

vii. The ISO-9000 Standards are capable of helping defining the current state of total quality management. each made

viii. Since ISO-9000 Series of quality Standards are accepted world wide a Common Standard. Come into practice ISO-9000 is Universal code of good Practices. 147 7

IX. b. Scaffolding :- Scaffolding must be sound material - properly constructed and braced, as tied to the building that there will be no collapse of structure. - Plat form proper width Scaffolding should be designed to with stand four times expected load. 4

Excavation work :-

The side of the trenches should be supported by batters held in position by cross members. - Fencing and crossing gangways should be provided. 4+8 8

- X a. i. Training programmes that guide persons in the safe use of these new materials
- ii. All materials in containers or bundles stored in tiers should be stacked, blocked, interlocked and limited in height so that it is stable and secured against sliding
- iii. Inflammable liquids should be stored in NO SMOKING AREA - and properly separated from other stored material
- iv. Persons working in hoppers or on high piles of loose material should be equipped with life lines and safety belts
- v. Inflammable liquid with a flash point below 100°F should not be used for cleaning purpose
- vi. Efficient first aid to injured persons should be maintained under the guidance of medical officer
- vii. Provided with protective foot wears and goggles.
- viii. Suitable face masks should be supplied for the use of workers - spray painting

Amy
7 pts 1x7 7

X b: The BIS reorganised the importance of preparation standards on quality system.

An Indian Standard manual on quality insurance system 110201 was published in 1982. This describes in basic set of quality elements by which quality management system could be developed and implemented within organisation.

After the publication of international standards on quality system BIS adopted these as IS-14000 ~~is~~ Series of Standards.

8

8 8