



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

CIVIL ENGINEERING

DEFINITIONS AND TERMINOLOGY QUESTION BANK

Course Name	:	ESTIMATING AND COSTING
Course Code	:	ACE017
Program	:	B.Tech
Semester	:	VII
Branch	:	Civil Engineering
Section	:	A & B
Academic Year	:	2019 - 2020
Course Faculty	:	Mr. CH. Venugopal Reddy, Assistant Professor.

COURSE OBJECTIVES:

The course should enable the students to:	
I	Summarize the basic principal and standard methods for working out quantities in estimating.
II	Demonstrate the detailed estimate of buildings and workout rate analysis of the various items of work.
III	Understand the material requirements as per specified norms and standards.
IV	Assess the valuation of buildings and provide practical knowledge of standard specifications of items of building construction.

DEFINITIONS AND TERMINOLOGY QUESTION BANK

S.No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
UNIT-I						
1	Define estimate?	An estimate is the anticipated or probable cost of work and is usually prepared before the construction is taken up. It is indeed calculations or computations of various items of an engineering work.	Remember	CO 1	CLO 1	ACE017.01
2	What is quantity survey?	It is the schedule of all items of work in a building. These quantities are calculated from the drawing of the building. Thus quantity survey gives quantities of work done in case of each items, when priced gives the total cost.	Remember	CO 1	CLO 1	ACE017.01
3	What are general Specifications?	This gives the nature, quality, class and work and materials in general terms to be used in various parts of wok. It helps no form a general idea of building.	Remember	CO 1	CLO 1	ACE017.01

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4	What are detailed specifications?	These gives the detailed description of the various items of work laying down the Quantities and qualities of materials, their proportions, the method of preparation workmanship and execution of work.	Remember	CO 1	CLO 1	ACE017.01
5	What is site plan?	It is the plan drawn for a particular construction showing its position with respect to approaching roads, main bazars, markets and other permanent features in a populated area. It shows the location of the area under construction with respect to the other areas and on it generally the names of the owners of areas or property holders adjoining to it are also denoted. North line is also clearly marked on it.	Understand	CO 1	CLO 1	ACE017.01
6	What is detailed plan?	This plan indicates a plan of a construction drawn to a definite scale, showing all detailed information required for its execution. Various sections and elevations are clearly drawn on this plan	Understand	CO 1	CLO 1	ACE017.01
7	What is centre line plan?	This is actually a layout plan drawn to facilitate the laying out of foundation lines and other features. It is generally fixed on the entrance or at exit in the central place of the colony for the guidance of the inhabitants and outsiders.	Remember	CO 1	CLO 3	ACE017.03
8	What is supplemantry estimate?	When some additions are done in the original work, a fresh detailed estimate is prepared to supplement the original work. This estimate is called supplementary estimate. It is also accompanied by all the papers as required in thru detailed estimate.	Remember	CO 1	CLO 3	ACE017.03
9	What is detailed estimate?	The preparation of detailed estimate consists of working out quantities of various items of work and then determine the cost of each item.	Remember	CO 1	CLO 3	ACE017.03
10	What is abstract estimate?	The cost of each item of work is worked out from the quantities that already computed in the details measurement form at workable rate. But the total cost is worked out in the prescribed form is known as abstract of estimated form.	Remember	CO 1	CLO 3	ACE017.03

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11	What is floor area?	The floor area is the plinth area less the area of the walls.	Remember	CO 1	CLO 3	ACE017.03
12	What is the order of booking dimensions?	Length, breadth & height.	Remember	CO 1	CLO 3	ACE017.03
13	What is lump sum items?	Sometimes while preparing estimate for the certain small items like front architecture or decoration work of a building it is not possible to workout detailed quantities so far such lump sum items a lump sum rate is provided.	Understand	CO 1	CLO 3	ACE017.03
14	What is plinth area?	The built up covered area of a building measured at floor level of any storey is called plinth area.	Remember	CO 1	CLO 3	ACE017.03
15	What is technical sanction?	It means the sanction and order by the competent authority of the department for the detailed estimate design calculations quantities of work rates and cost of work. After the technical sanction of the estimate is received the work is then taken up for construction.	Remember	CO 1	CLO 3	ACE017.03

UNIT-II

1	What is lead?	It is the average horizontal distance between the centre of excavation to the centre of deposition. The unit of lead is 50m.	Remember	CO 2	CLO 4	ACE017.04
2	What is lift?	It is the average height through which the earth has to be lifted from source to the place of spreading or heaping. The unit of lift is 1.5m.	Remember	CO 2	CLO 4	ACE017.04
3	What is the unit of earthwork?	Cubic meters	Remember	CO 2	CLO 4	ACE017.04
4	Prismoidal formula for volume is?	$D/3[\text{first area} + \text{last area} + 4 \sum \text{Even area} + 2 \sum \text{odd areas}]$	Understand	CO 2	CLO 4	ACE017.04
5	What is the order of booking dimensions in earth work?	Length, breadth & height.	Remember	CO 2	CLO 4	ACE017.04
6	What is meant by earthwork in embankment?	Earthwork in filling.	Remember	CO 2	CLO 4	ACE017.04
7	What is meant by earthwork in cutting?	Earthwork in excavation.	Remember	CO 2	CLO 4	ACE017.04
8	What is borrow pit?	For the formation of embankment like roads or earth dams large quantities of earth/gravel/sand borrowed from a different place away from the alignment pit excavated.	Remember	CO 2	CLO 4	ACE017.04

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9	What is spoil bank?	An earthen bund formed by deposition of earth disposed off from an excavation is called spoil bank.	Remember	CO 2	CLO 4	ACE017.04
10	What are dead men?	To know the volume of earth taken from the pit a cylindrical part (about 40mm dia) of earth left over without excavation is called dead men.	Remember	CO 2	CLO 4	ACE017.04
11	What are thandoos?	When borrow pits are excavated in undulated area long stretches of rectangular c/s of 300 to 400mm wide are left over across the pits without excavation are called Thandoos.	Remember	CO 2	CLO 4	ACE017.04
12	What is mean sectional area method?	In this method average area of the two end sections are considered. This method is most commonly used by the departments for calculating the volume of the earth work.	Remember	CO 2	CLO 4	ACE017.04
13	What are spot levels?	In this method area is divided into number of squares or rectangles and spot levels are taken before and after the earth work and volume of earth work is calculated.	Remember	CO 2	CLO 4	ACE017.04
14	What is mid sectional area method?	In this method volume of the earth work is found by multiplying the mid-section area with the distance between the sections. This method is used when the ground is fairly level and the sections are taken at closed intervals.	Remember	CO 2	CLO 4	ACE017.04
15	What Trapezoidal rule?	This method is the extension of mean sectional area method and is applicable to a series of sections taken at equal intervals.	Remember	CO 2	CLO 4	ACE017.04

UNIT-III

1	What is analysis of rate?	The basis of arriving at a correct and reasonable rate per unit work or supply, for a particular item following its specification & detailed survey of materials, labour, equipment's as required for the unit work and their prevailing rates may called as an analysis of rate.	Understand	CO 3	CLO 09	ACE017.09
2	What are general overheads?	i)Establishment ii)stationary, printing, postages, iii)Travelling expenses iv)telephone v)rent & taxes	Remember	CO 3	CLO 09	ACE017.09
3	What are job overheads?.	a)Supervision b)Handling of materials c)Repairs, carriage& depreciation of T&P d)Amenities of labour e)workmen's	Remember	CO 3	CLO 09	ACE017.09

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4	1Cum of Portland cement weighs	1440 Kgs	Remember	CO 3	CLO 09	ACE017.09
5	For 100cum of finished concrete the sum total volume of dry ingredient materials may be taken as?	152cum	Remember	CO 3	CLO 09	ACE017.09
6	For brickmasonry no of bricks required for 1cum?	500 nos	Remember	CO 3	CLO 09	ACE017.09
7	For 10cum of brickwork , dry volume of mortar	3.2cum	Remember	CO 3	CLO 09	ACE017.09
8	What is Task work?.	The capacity of doing work by an artisan or skilled labour in the form of quantity of work per day is known as task work.	Understand	CO 3	CLO 09	ACE017.09
9	How many cum of one bag cement?	1cum of Portland cement = 30bags. 1 bag cement of 50kg = $1/30=0.034$ cum.	Remember	CO 3	CLO 09	ACE017.09
10	What is the size of modular bicks(nominal size)?	20cmx10cmx10cm	Remember	CO 3	CLO 09	ACE017.09
11	How much contractor profit is given?	10%	Remember	CO 3	CLO 09	ACE017.09
12	How are bricks paid?	Bricks are paid per thousand.	Remember	CO 3	CLO 09	ACE017.09
13	The rate of an item depends on?	Specifications of works, specifications of materials, proportions of mortar.	Remember	CO 3	CLO 09	ACE017.09
14	What is Contingencies?	Indicate incidental expenses which cannot be classified under any distinct item sub head.	Remember	CO 3	CLO 09	ACE017.09
15	What is work charged establishment?	Is the establishment which is charged to works directly.	Remember	CO 3	CLO 09	ACE017.09

UNIT-IV

1	What is the length of one hook?	The length of one hook is $9d$, where d is the dia of rod.	Remember	CO 4	CLO 10	ACE017.10
2	What is the length of 45° cranked bar?	$0.45d$, where d is the dia of rod.	Remember	CO 4	CLO 10	ACE017.10
3	What is the length of 30° cranked bar?	$0.30d$, where d is the dia of rod	Remember	CO 4	CLO 10	ACE017.10
4	What is contract?	It is an undertaking by a person or firm to do any work under certain terms and conditions.	Remember	CO 4	CLO 13	ACE017.13

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5	For a large work which is done through daily labour the report prepared is called?	Labour report.	Remember	CO 4	CLO 11	ACE017.11
6	What is Debitable agency?	It is an agency which is employed to execute a work at the cost of a contractor who fails to complete the work.	Remember	CO 4	CLO 13	ACE017.13
7	What is Penalty?	It is a cost of fine for non fulfilment of terms of contract	Remember	CO 4	CLO 13	ACE017.13
8	What is the total length of straight bar?	$L+18 \text{ dia}$, where L is the length of the bar & dia is the diameter of rod.	Remember	CO 4	CLO 10	ACE017.10
9	What is the formula for U-hook?	9ϕ , where ϕ is the diameter of rod.	Remember	CO 4	CLO 10	ACE017.10
10	How much steel is there in 1cum?	7.85q (or) 7850 kgs	Remember	CO 4	CLO 11	ACE017.11
11	What is lump-sum contract?	In this form of contract undertakes the construction or the execution of the specified work and complete it in all respects for a fixed amount of money.	Remember	CO 4	CLO 13	ACE017.13
12	What is earnest money?	While submitting a tender the contractor is to deposit a certain amount, about 2% of the estimated cost, with the department, as earnest money as guarantee of the tender.	Remember	CO 4	CLO 13	ACE017.13
13	The weight of an item is measured correct to nearest ?	1Kg	Remember	CO 4	CLO 11	ACE017.11
14	What is the unit weight of 20 mm ϕ bar is?	2.46Kg/m	Remember	CO 4	CLO 11	ACE017.11
15	What is % of steel reinforcement for beams by approximate method?	1 to 2 %.	Remember	CO 4	CLO 11	ACE017.11
UNIT-V						
1	Define Valuation?	Valuation is the technique of estimating or determining the fair price or value of a property such as a building, a factory, other engineering structures of various types, land etc. By valuation the present value of a property is determined.	Remember	CO 5	CLO 16	ACE017.16
2	What is cost ?	Means original cost of construction of purchase.	Remember	CO 5	CLO 16	ACE017.16

S.No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
3	What is Capital cost?	Capital cost is the total cost of construction including land, or the original total amount required to possess a property. It is the original cost & does not change.	Remember	CO 5	CLO 16	ACE017.16
4	What is gross income ?	Gross income is the total income & includes all receipts from various sources, the outgoings and the operational & collection charges are not deducted.	Remember	CO 5	CLO 16	ACE017.16
5	What are the outgoings?	Outgoings or the expenses which are required to be incurred to maintain the revenue of the buildings.	Understand	CO 5	CLO 16	ACE017.16
6	What is sinking fund?	A certain amount of the gross rent is set aside annually as sinking fund to accumulate the total cost of construction when the life of building is over.	Understand	CO 5	CLO 16	ACE017.16
7	What is scrap value?	Scrap value is the value of dismantled materials. For a building when the life is over at the end of its utility period the dismantled materials as steel, bricks, timber will fetch a certain amount which is the scrap value of the building.	Understand	CO 5	CLO 16	ACE017.16
8	Define salvage value?	It is the value at the end of the utility period without being dismantled.	Understand	CO 5	CLO 16	ACE017.16
9	Define Market value?	The market value of a property is the amount which can be obtained at any particular time from the open market if the property is put for sale.	Remember	CO 5	CLO 16	ACE017.16
10	What is book value?	Book value is the amount shown in the account book after allowing necessary depreciation. The book value of a property at a particular year is the original cost minus the amount of depreciation up to the previous year.	Remember	CO 5	CLO 16	ACE017.16
11	What is Rateable value?	Rateable value is the net annual letting value of a property, which is obtained after deducting the amount of yearly repairs from the gross income.	Remember	CO 5	CLO 16	ACE017.16
12	What is Obsolescence?	The value of property or structures becoming out of date in style, in structure design is termed as Obsolescence.	Remember	CO 5	CLO 16	ACE017.16
13	What is Annuity?	Annuity is the annual periodic payments for repayments of the capital amount invested by a party. These annual payments are either paid at the end of the year or at the beginning of the year.	Remember	CO 5	CLO 16	ACE017.16

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14	What is Capital cost?	Capital cost is the total cost of construction including land or the original total amount required to possess a property. It is the original and does not change.	Remember	CO 5	CLO 16	ACE017.16
15	What is Capitalized value?	The Capitalized value of a property is the amount of money whose annual interest at the highest prevailing rate of interest will be equal to the net income from the property multiply by years purchase. To determine the capitalized value of a property it is required to know the net income from the property and the highest prevailing rate of interest.	Remember	CO 5	CLO 16	ACE017.16

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