

University of Mumbai

Examination 2020

Program: Civil Engineering

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: CE-C-701 and Course Name: Quantity Surveying Estimation & Valuation

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	A valuer shall act with objectivity in his professional dealings by ensuring that his decisions are made _____
OptionA:	without the presence of any bias
OptionB:	with coercion
OptionC:	with confidence
OptionD:	with undue influence of any party
2.	Which is correct
OptionA:	proposal + acceptance= promise
OptionB:	promise +consideration= agreement
OptionC:	agreement + enforceability= contract
OptionD:	agreement+ acceptance= proposal
3.	Technical sanction is initiated after
OptionA:	Technical approval
OptionB:	Administrative approval
OptionC:	Budget approval
OptionD:	PWD approval
4.	Which of the following piece of land would command higher rate of land value in the residential zone?
OptionA:	Having frontage to depth ratio as 2.0
OptionB:	Having frontage to depth ratio as 6.0
OptionC:	Having frontage to depth ratio as 0.2
OptionD:	Having frontage to depth ratio as 0.6
5.	In long and short wall method of estimation, the length of long wall is the Centre-to-Centre distance between the walls and
OptionA:	Breadth of the wall
OptionB:	Half breadth of wall on each side
OptionC:	One fourth breadth of wall on each side
OptionD:	Complete width of wall
6.	To plan the lead or haulage of excavated materials from working face of the excavation section to the tip end be minimum for an economical construction is done by
OptionA:	Economical Haul
OptionB:	Mass Diagram

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OptionC:	Balancing Line
OptionD:	Average Haul Distance
7.	The assumption on which the trapezoidal formula for volumes is based, is
OptionA:	The end sections are non-parallel planes
OptionB:	The mid area of the pyramid is 1.5 times the average area of the ends.
OptionC:	The volume of the Prismoidal is over estimated and hence a Prismoidal correction is Applied
OptionD:	They are Parallel planes
8.	The value at the end of utility period of the asset without being dismantled is called
OptionA:	Market
OptionB:	Scrap
OptionC:	Salvage
OptionD:	Junk
9.	Before accepting the tender, it is required to check by the process of
OptionA:	Arbitration
OptionB:	Scrutiny
OptionC:	Acceptance of proposal
OptionD:	Rejection of proposal
10.	_____ is prepared on the basis of plinth area of building, the rate being deducted from the cost of similar building having similar specification, heights and construction, in the locality
OptionA:	Cube Rate Estimate
OptionB:	Supplementary estimate
OptionC:	Maintenance estimate
OptionD:	Plinth area estimate
11.	For 100 sq.m cement concrete (1:2:4) 4cm thick floor, the quantity of cement required Is
OptionA:	0.9 cu.m
OptionB:	0.94 cu.m
OptionC:	0.99 cu.m
OptionD:	1.0 cu.m
12.	The area of a sloping surface of a protective embankment of mean height d, side slope length L is
OptionA:	$d*d*s$
OptionB:	$d^2 * (ds)^2$
OptionC:	$2Ld$
OptionD:	$2Ldm (1+s^2)$
13.	Which one of the following is not a correct method of Alternate Dispute Resolution?
OptionA:	Legislation
OptionB:	Mediation
OptionC:	Conciliation

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OptionD	Negotiation
14.	While calculating the length of wall by center line method, the deduction to be do junctions are
OptionA	No deduction
OptionB	Half width of wall or footing
OptionC	Full width of wall or footing
OptionD	Twice the width of wall
15.	Amount of compensation payable to owner or department by contractor due to delay in construction is known as
OptionA	Price variation
OptionB	Liquidity damage
OptionC	Defect liability
OptionD	Escalation amount
16.	A cement concrete road is 1000 m long, 8 m wide and 15 cm thick over the sub base of 10 cm thick gravel. the box cutting in road crust is
OptionA	500 cu.m
OptionB	1000 cu.m
OptionC	1500 cu.m
OptionD	2000 cu.m
17.	Brick walls are measured in sq.m if the thickness of the wall is
OptionA	10 cm
OptionB	15 cm
OptionC	20 cm
OptionD	25 cm
18.	According to Indian Standards institute, the actual size of modular bricks is:
OptionA	23cm*11.5cm*7.5cm
OptionB	25cm*13cm*7.5cm
OptionC	19cm*9cm*9cm
OptionD	20cm*10cm*10cm
19.	Amount of Rs.1 per annum is worked out by which of the following formula?
OptionA	$r / \{(1+r)^n - 1\}$
OptionB	$\{(1+r)^n - 1\} / r$
OptionC	$r / \{(1+r)^n + 1\}$
OptionD	$\{(1+r)^n + 1\} / r$
20.	The rate of payment is made for in running meters in case of
OptionA	Brickwork in arches
OptionB	Rock cutting
OptionC	Brickwork in road edges
OptionD	Excavation in trenches for foundation
Q2	Solve any Two Questions out of Three 10marks each

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A	<p>Calculate the quantities of earthwork for portion of a road for a length of 300m following data.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Chainage</td> <td style="text-align: center;">0</td> <td style="text-align: center;">30</td> <td style="text-align: center;">60</td> <td style="text-align: center;">90</td> <td style="text-align: center;">120</td> <td style="text-align: center;">150</td> <td style="text-align: center;">180</td> <td style="text-align: center;">210</td> <td style="text-align: center;">240</td> <td style="text-align: center;">270</td> <td style="text-align: center;">300</td> </tr> <tr> <td style="text-align: center;">Ground</td> <td style="text-align: center;">131.1</td> <td style="text-align: center;">131.2</td> <td style="text-align: center;">130.9</td> <td style="text-align: center;">131.2</td> <td style="text-align: center;">130.8</td> <td style="text-align: center;">130.7</td> <td style="text-align: center;">130.6</td> <td style="text-align: center;">130.4</td> <td style="text-align: center;">129.1</td> <td style="text-align: center;">129.5</td> <td style="text-align: center;">129.7</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Chainage	0	30	60	90	120	150	180	210	240	270	300	Ground	131.1	131.2	130.9	131.2	130.8	130.7	130.6	130.4	129.1	129.5	129.7												
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Ground	131.1	131.2	130.9	131.2	130.8	130.7	130.6	130.4	129.1	129.5	129.7																										
	<p>The formation level at chainage '0' is 130.0 and the road is in a rising gradient of 1 in width of formation level is 10 m and the side slopes is 1.5:1 in embankment and 1:1 in cutting. Also calculate the cost of this earthwork in banking and cutting, assume suitable rates the profile diagram.</p>																																				
B	<p>A person has purchased a plot of land costing Rs. 7,00,000/- and has constructed a building there on at a cost of Rs. 20,00,000/- Allowing a net return @8.5% on cost of construction and @ 5% net return on the cost of land work out standard rent of the property with the following data:-</p> <p>i) Sinking fund on 4% basis for the future life of 80 years=0.0022 ii) Annual maintenance =0.5% of cost of construction iii) Municipal taxes and other outgoings= 28.5% of gross rent iv) Scrap value at the end of the useful life of the building as 10%</p>																																				
C	<p>Prepare an approximate estimate for a (G+3) RCC framed structure with 6 flats on each floor having a carpet area of 80sq.m located in Central Mumbai City. Assume suitable cost of construction</p>																																				
Q3	5marks each																																				
A	Write short note on:																																				
i)	Belting Method of valuation																																				
ii)	CBRI method																																				
iii)	Free hold and Lease hold property																																				
B	10marks each																																				
i)	Draft a tender notice for construction of a sky walk. Estimated cost of construction is Rs.10 Cr. And time of construction is 6 months.																																				
ii)	<p>Work out the quantities from given plan & section</p> <p>a) UCR Masonry in CM (1:5) for foundation b) 1st class Brick Masonry in CM (1:4) in superstructure c) RCC quantity for slab in M25 grade of concrete d) Net quantity of 12mm thick internal plaster in CM (1:4)</p> <p>All dimensions are in meters. a) Chajja thickness-80mm b) Chajja projection-50mm</p>																																				

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