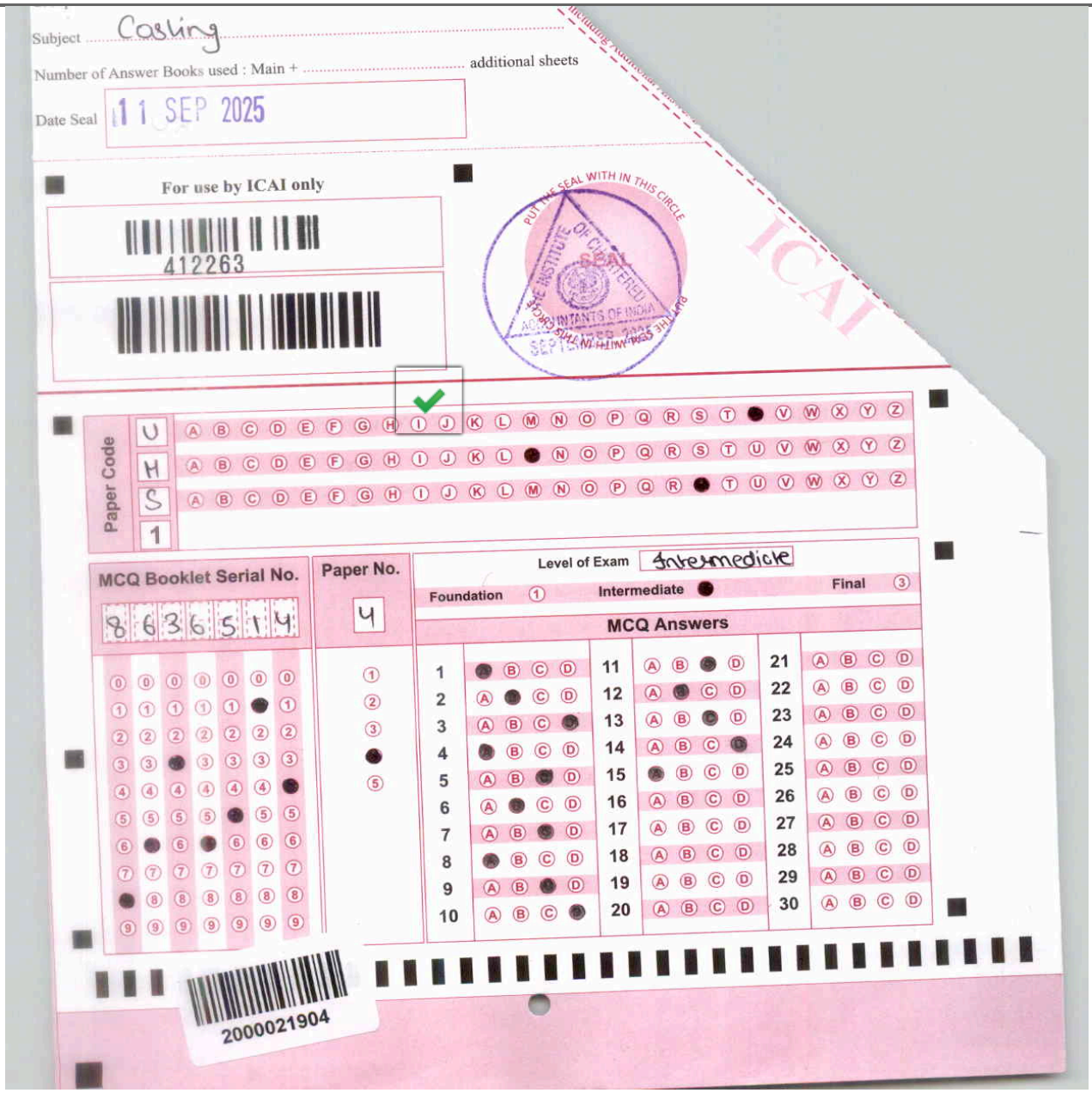
The Institute of Chartered Accountants of India

Code: IN4CM412263 **Total Marks:** 70

Subject : 04 Cost and Management Accounting **Marks Obtained :** 63.5



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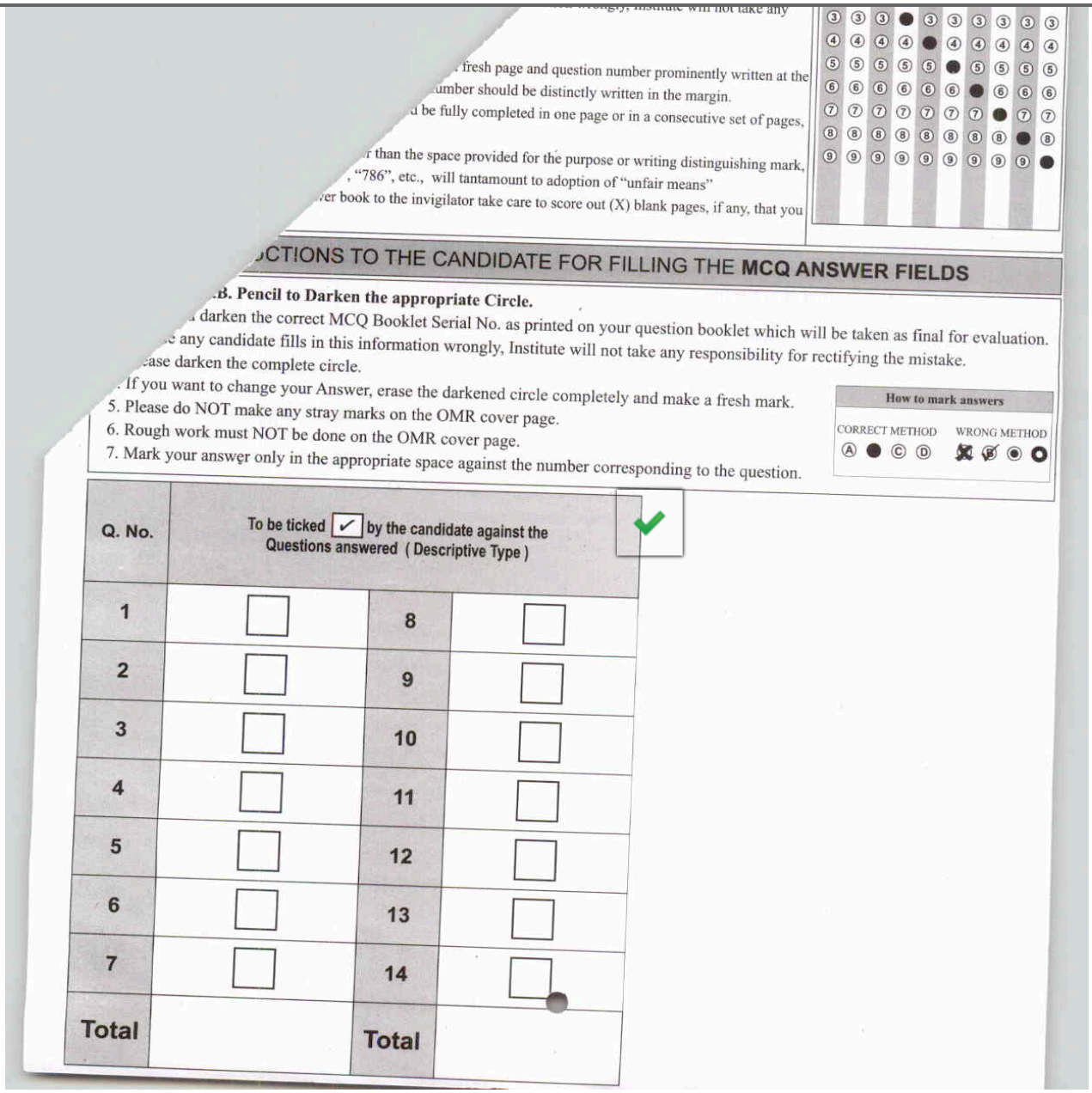


fresh page and question number prominently written at the
umber should be distinctly written in the margin.
be fully completed in one page or in a consecutive set of pages,

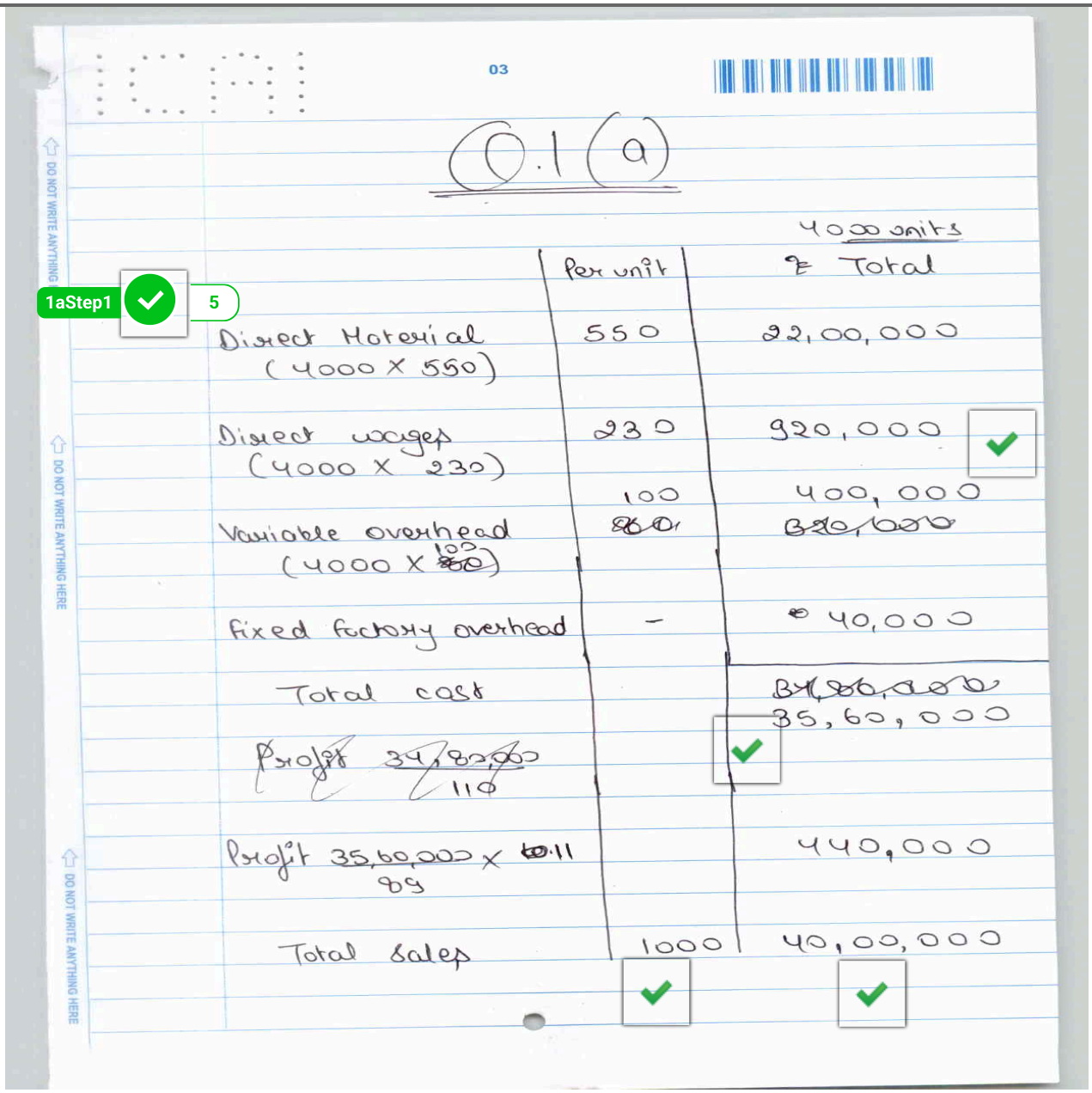
r than the space provided for the purpose or writing distinguishing mark,
, "786", etc., will tantamount to adoption of "unfair means"
ver book to the invigilator take care to score out (X) blank pages, if any, that you

CTIONS TO THE CANDIDATE FOR FILLING THE **MCQ ANSWER FIELDS**

B. Pencil to Darken the appropriate Circle.
darken the correct MCQ Booklet Serial No. as printed on your question booklet which will be taken as final for evaluation.
any candidate fills in this information wrongly, Institute will not take any responsibility for rectifying the mistake.
ase darken the complete circle.
If you want to change your Answer, erase the darkened circle completely and make a fresh mark.
5. Please do NOT make any stray marks on the OMR cover page.
6. Rough work must NOT be done on the OMR cover page.
7. Mark your answer only in the appropriate space against the number corresponding to the question.

How to mark answers
CORRECT METHOD WRONG METHOD
Ⓐ ● Ⓒ Ⓓ

Q. No.	To be ticked ✓ by the candidate against the Questions answered (Descriptive Type)		
1		8	
2		9	
3		10	
4		11	
5		12	
6		13	
7		14	
Total		Total	

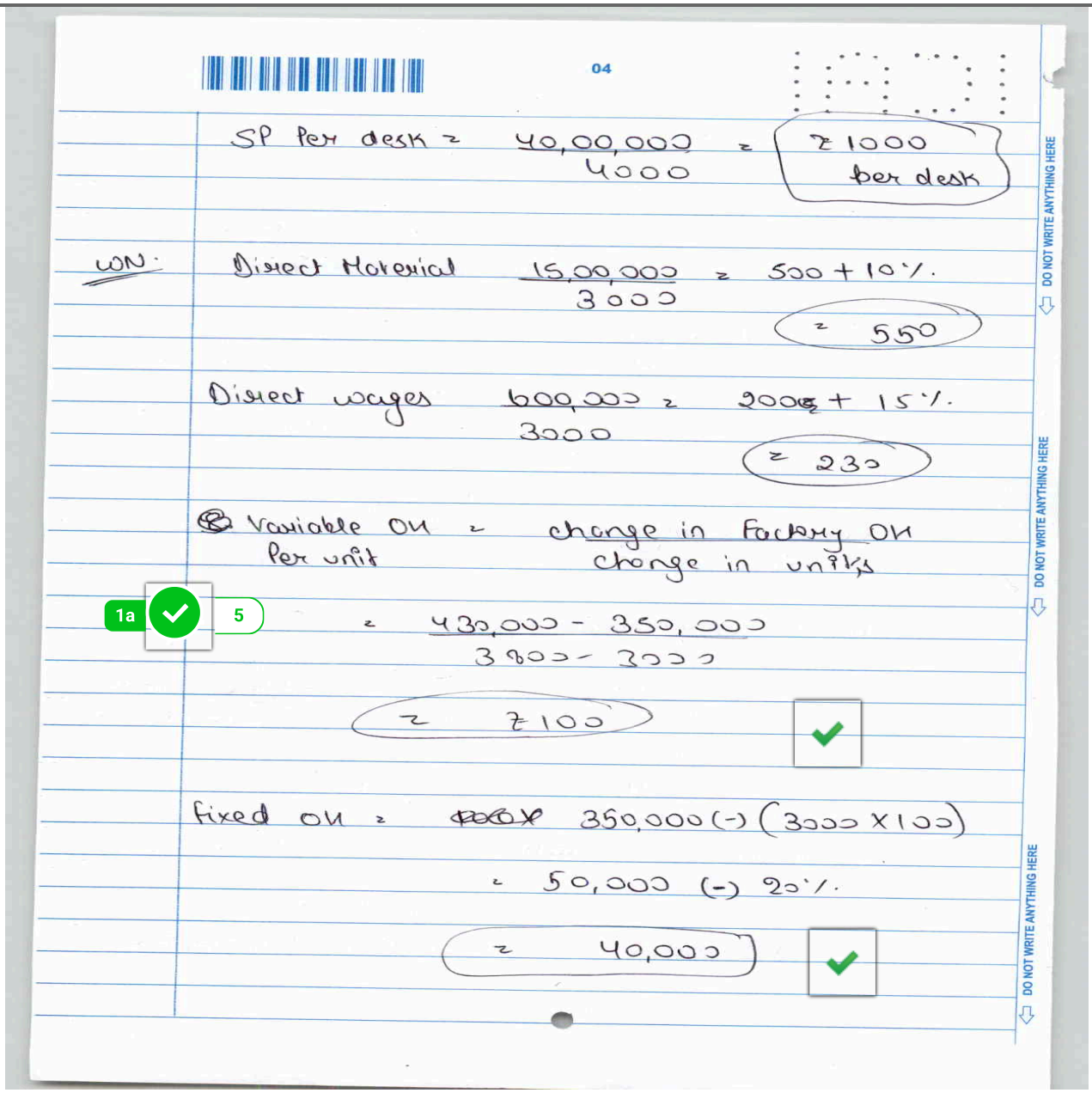


03

Q.1 (a)

1aStep1 5

	Per unit	4000 units Total
Direct Material (4000 × 550)	550	22,00,000
Direct wages (4000 × 230)	230	920,000
Variable overhead (4000 × 100)	100	400,000
fixed factory overhead	-	40,000
Total cost		35,60,000
Profit 34,80,000 / 110		
Profit 35,60,000 × 11 / 99		440,000
Total Sales	1000	40,00,000



04

SP Per desk = 40,00,000 / 4000 = ₹1000 per desk

WN:

Direct Material 15,00,000 / 3000 = 500 + 10%.

= 550

Direct wages 600,000 / 3000 = 200 + 15%.

= 230

Variable OH Per unit = change in Factory OH / change in units

= 430,000 - 350,000 / 3800 - 3000

= ₹100

Fixed OH = 350,000 (-) (3000 × 100)

= 50,000 (-) 20%.

= 40,000

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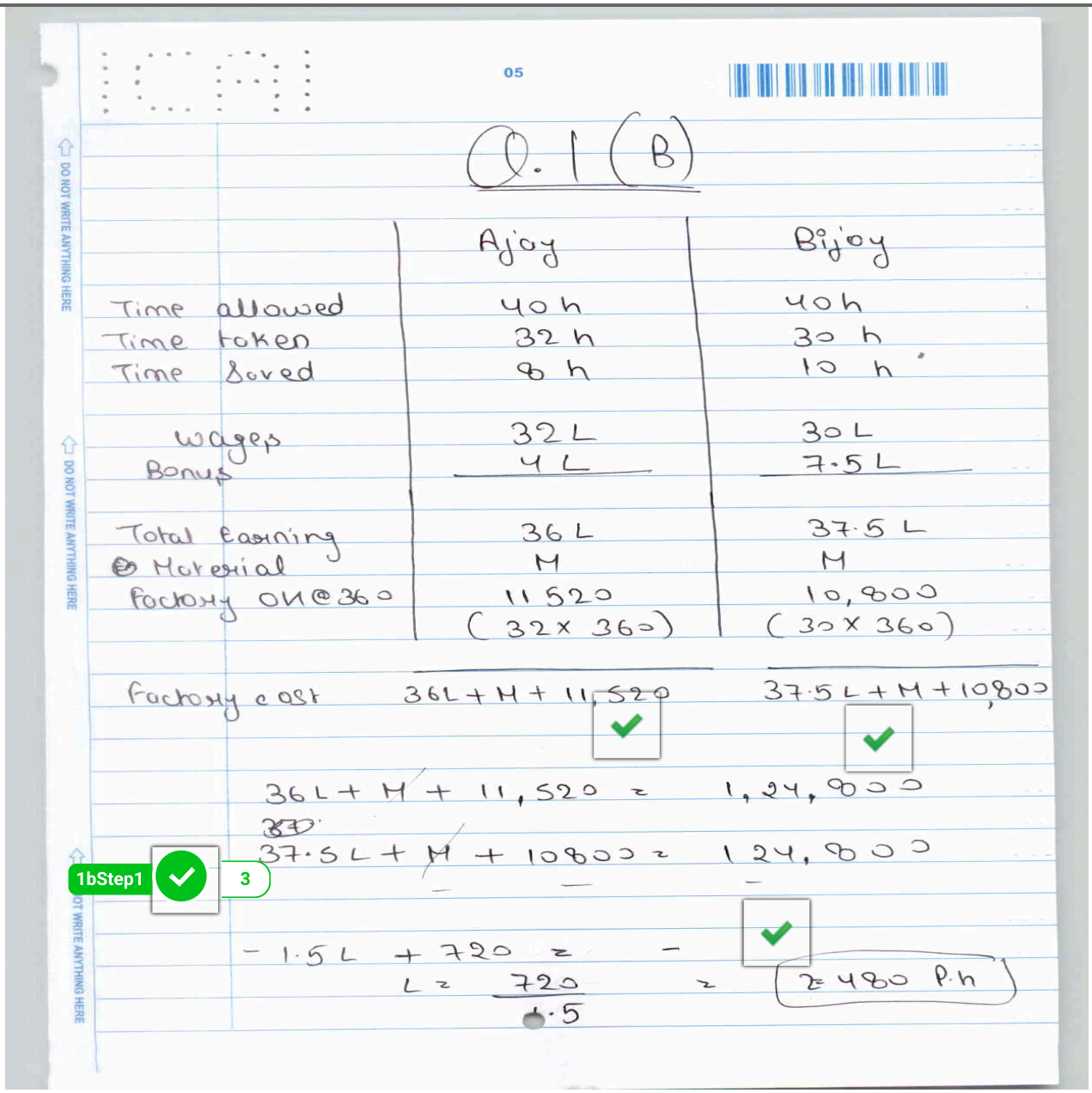
1a ✓ 5



05

Q.1 (B)

	Ajay	Bijay
Time allowed	40 h	40 h
Time taken	32 h	30 h
Time Saved	8 h	10 h
Wages	32 L	30 L
Bonus	4 L	7.5 L
Total Earning	36 L	37.5 L
& Material	M	M
Factory OH @ 360	11520 (32 × 360)	10,800 (30 × 360)
Factory cost	36L + M + 11,520 ✓	37.5L + M + 10,800 ✓

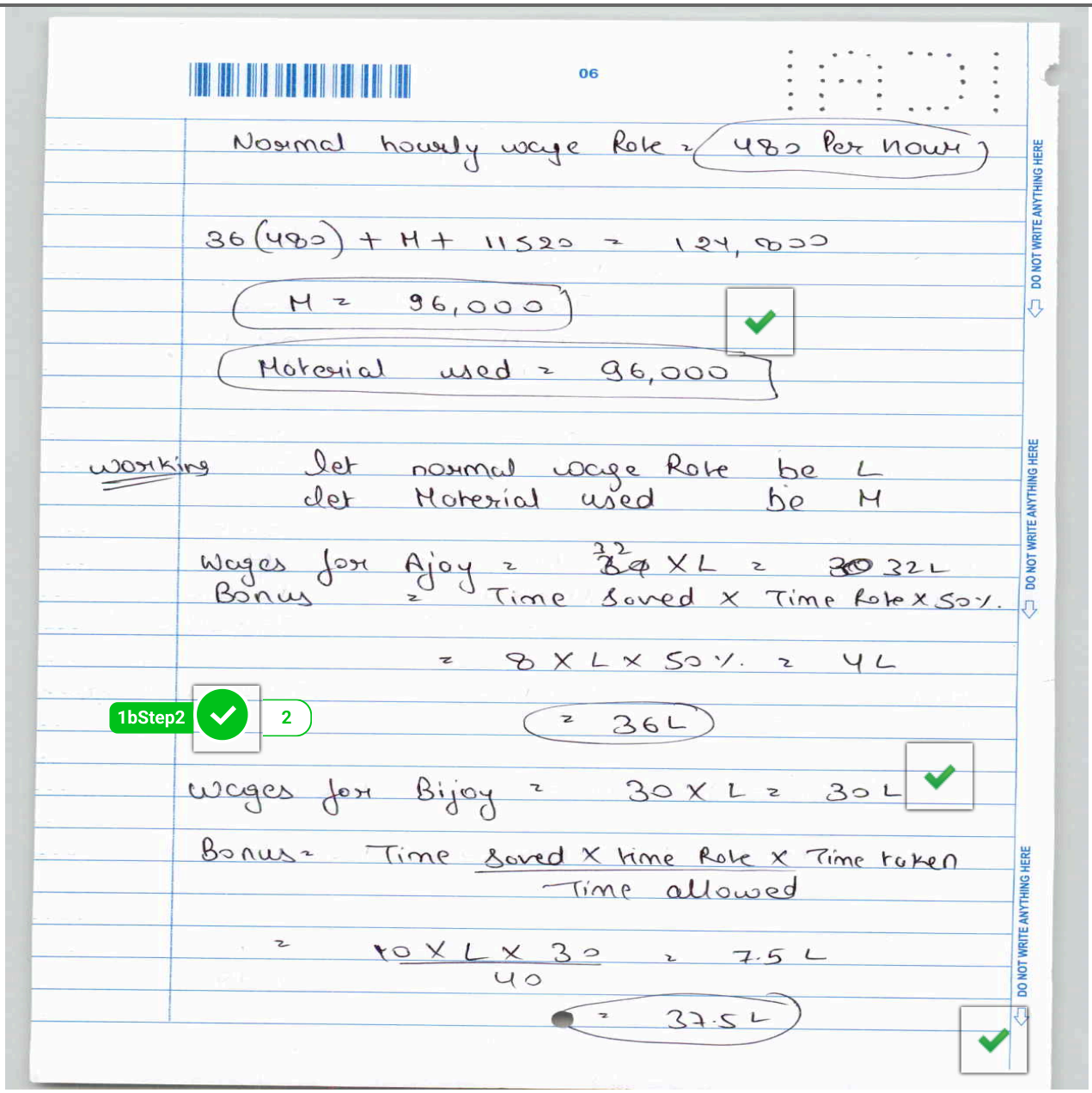
36L + M + 11,520 = 1,24,000

37.5L + M + 10800 = 124,000

1bStep1 ✓ 3

- 1.5L + 720 = ✓

L = 720 / 1.5 = = 480 P.h



06

Normal hourly wage Rate = 480 Per Hour

36 (480) + M + 11520 = 124,000

M = 96,000

Material used = 96,000

working Let normal wage Rate be L
Let Material used be M

Wages for Ajay = $\frac{32}{36}$ × L = 32L
Bonus = Time Saved × Time Rate × 50%.

= 8 × L × 50% = 4L

= 36L

1bStep2 2

Wages for Bijay = 30 × L = 30L

Bonus = $\frac{\text{Time Saved} \times \text{time Rate} \times \text{Time taken}}{\text{Time allowed}}$

= $\frac{10 \times L \times 30}{40}$ = 7.5L

= 37.5L

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07

	Ajay	Binoy
Wages	15360	14,400
Bonus	1920	3600
Earning	17280	18000
Material	96,000	96,000
Factory OH	11520	10800
Factory cost	124,800	124,800

Bonus for Ajay = 8h × 480 × 50%.
= 1920 (7)

Bonus for Binoy = $\frac{10 \times 40 \times 480}{40}$

(= 3600)

1b 5

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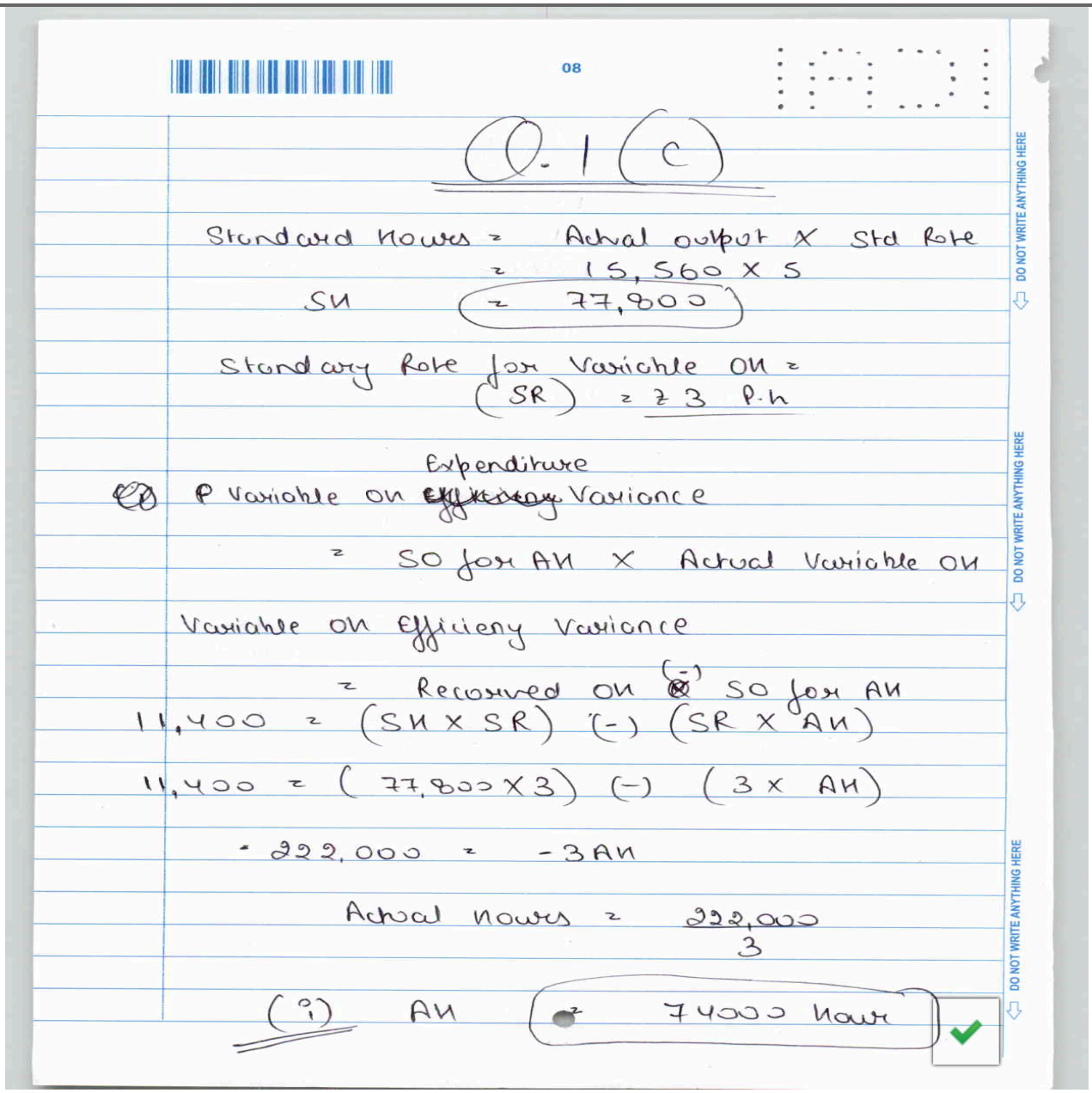

08

Q.1 (c)

Standard Hours = Actual output × Std Rate
= 15,560 × 5
SH = 77,800

Standary Rate for Variable OH =
(SR) = ₹ 3 P.h

Expenditure
(i) ₹ Variable on ~~Efficiency~~ Variance
= SO for AH × Actual Variable OH

Variable OH Efficiency Variance
= Recovered OH (-) SO for AH
11,400 = (SH × SR) (-) (SR × AH)
11,400 = (77,800 × 3) (-) (3 × AH)
- 222,000 = - 3AH
Actual Hours = 222,000 / 3
(ii) AH = 74000 Hour

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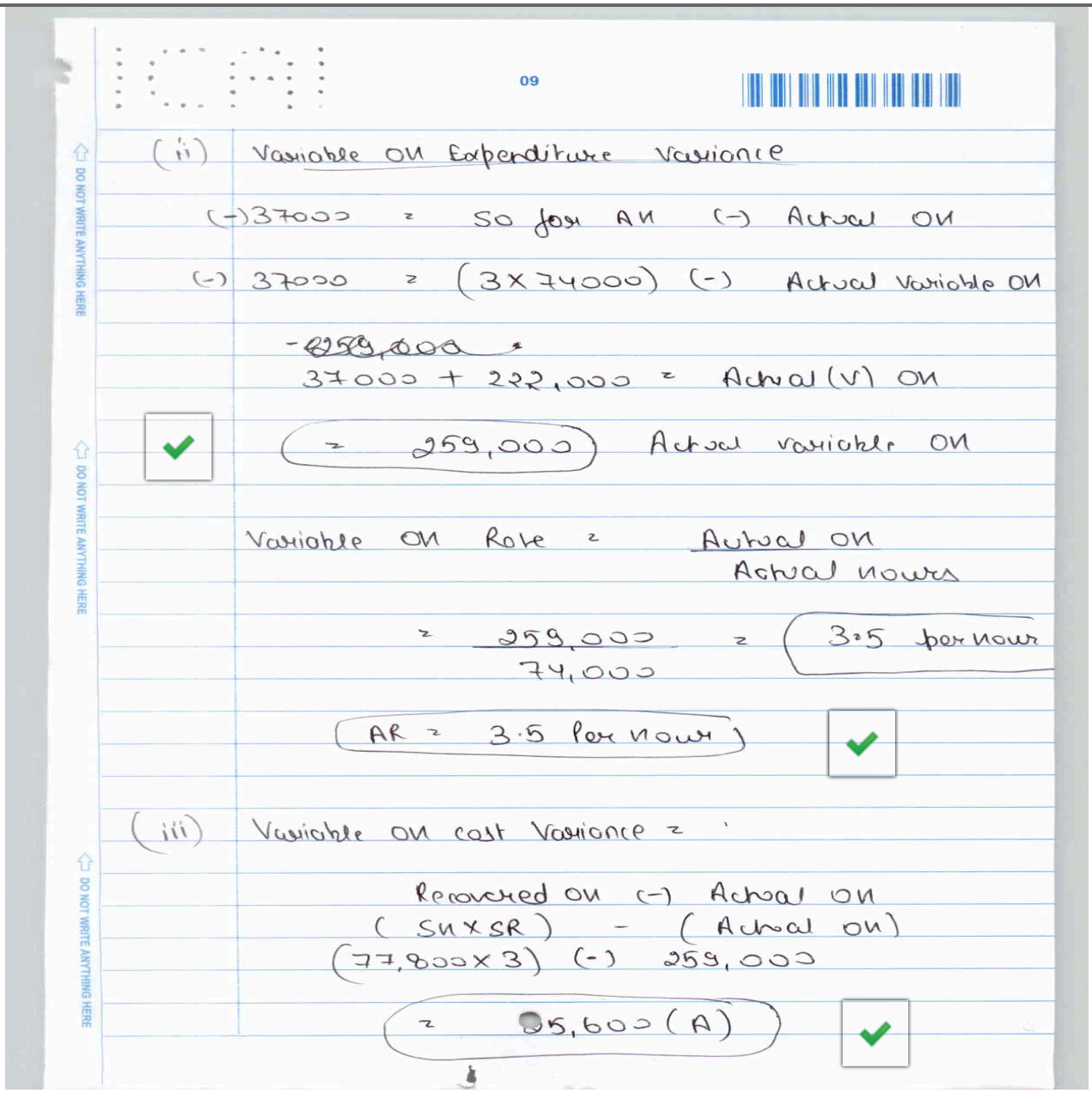


09

(ii) Variable OH Expenditure Variance

(-)37000 = SQ for AH (-) Actual OH

(-) 37000 = (3 × 74000) (-) Actual Variable OH

~~-259,000~~

37000 + 222,000 = Actual (V) OH

= 259,000 Actual variable OH

Variable OH Rate = Actual OH / Actual Hours

= 259,000 / 74,000 = 3.5 per hour

AR = 3.5 Per hour

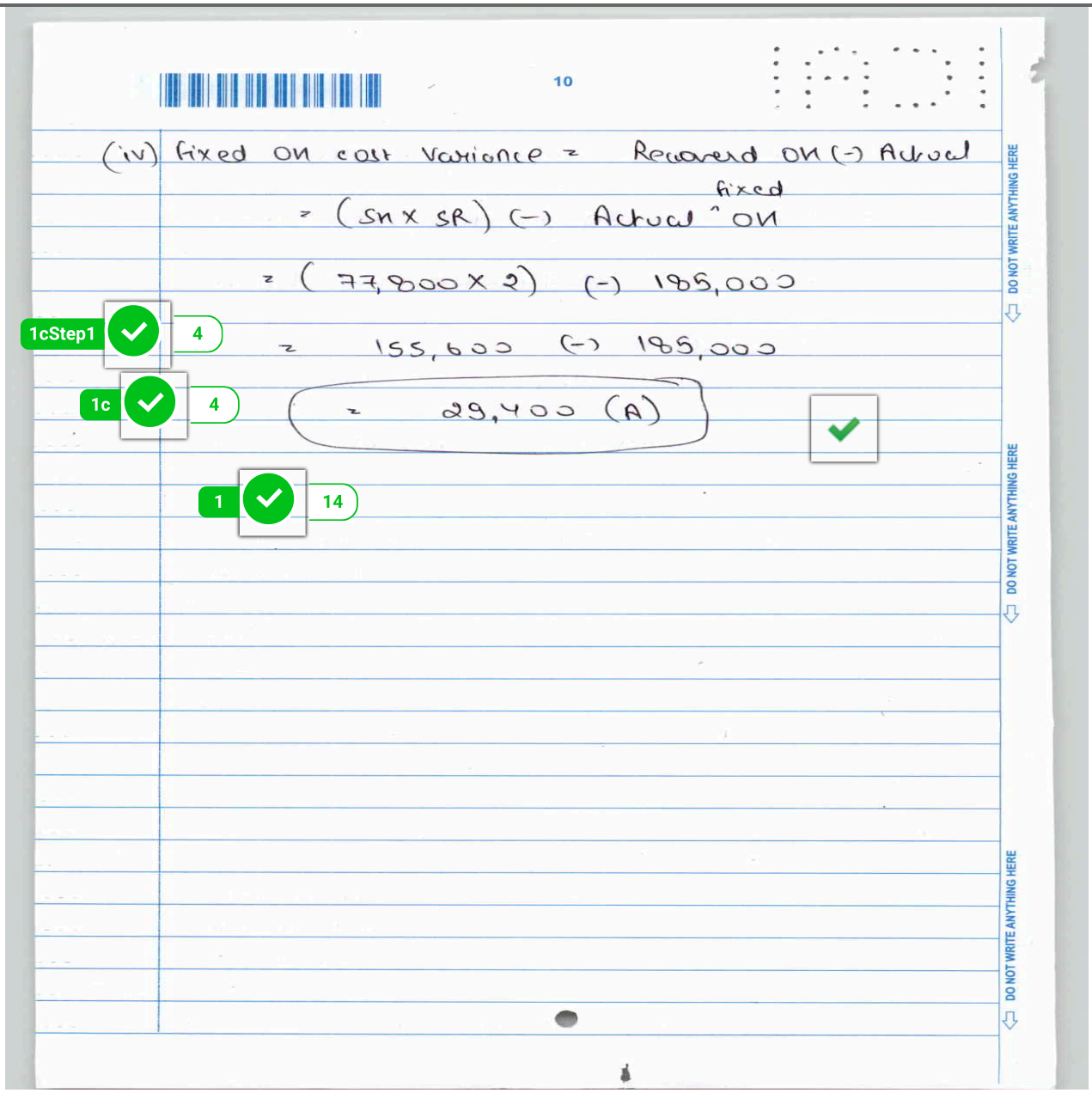
(iii) Variable OH cost Variance =

Recovered OH (-) Actual OH

(SH × SR) - (Actual OH)

(77,800 × 3) (-) 259,000

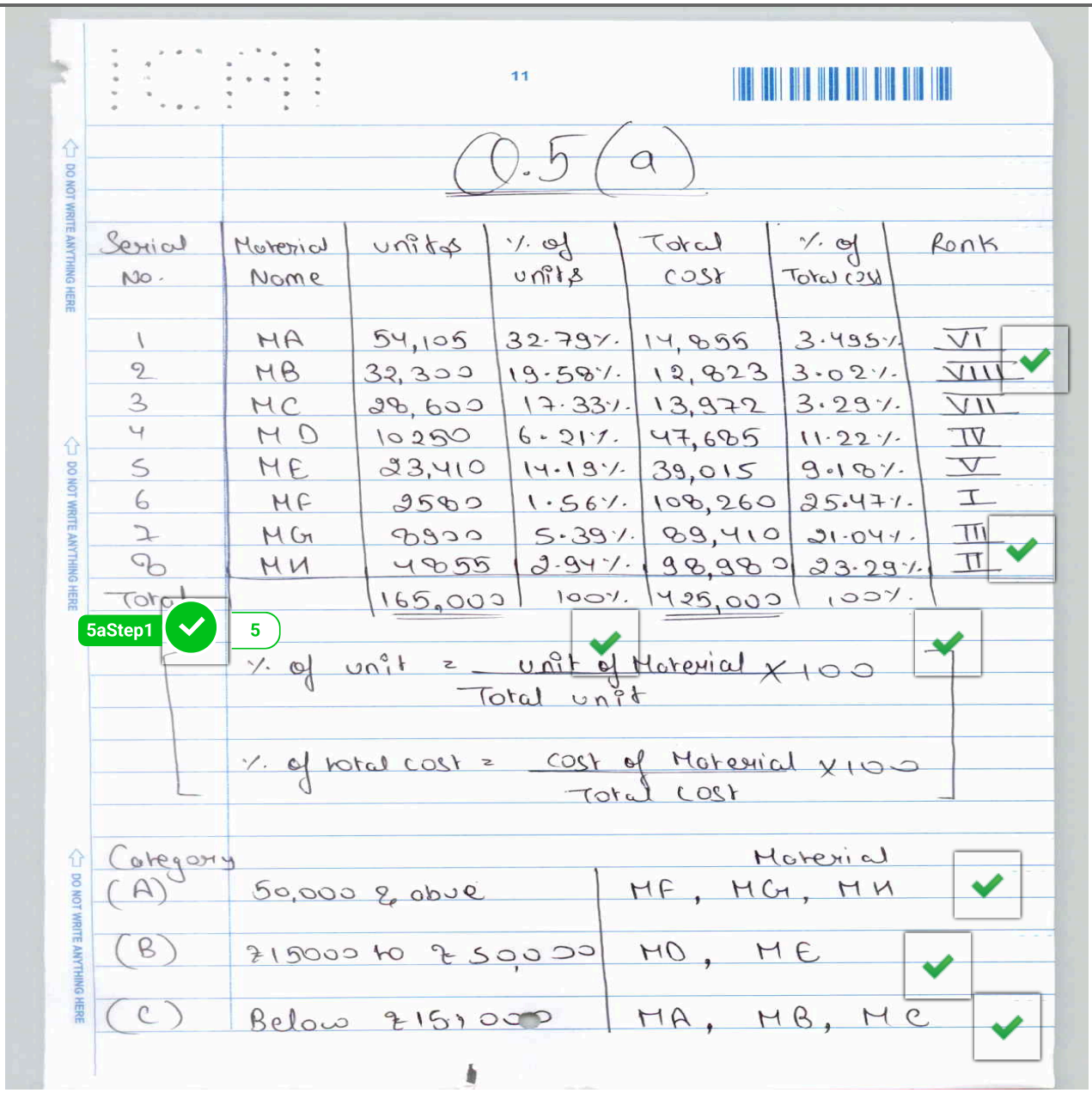
= 25,600 (A)



1cStep1 4

1c 4

1 14



11

Q.5 (a)

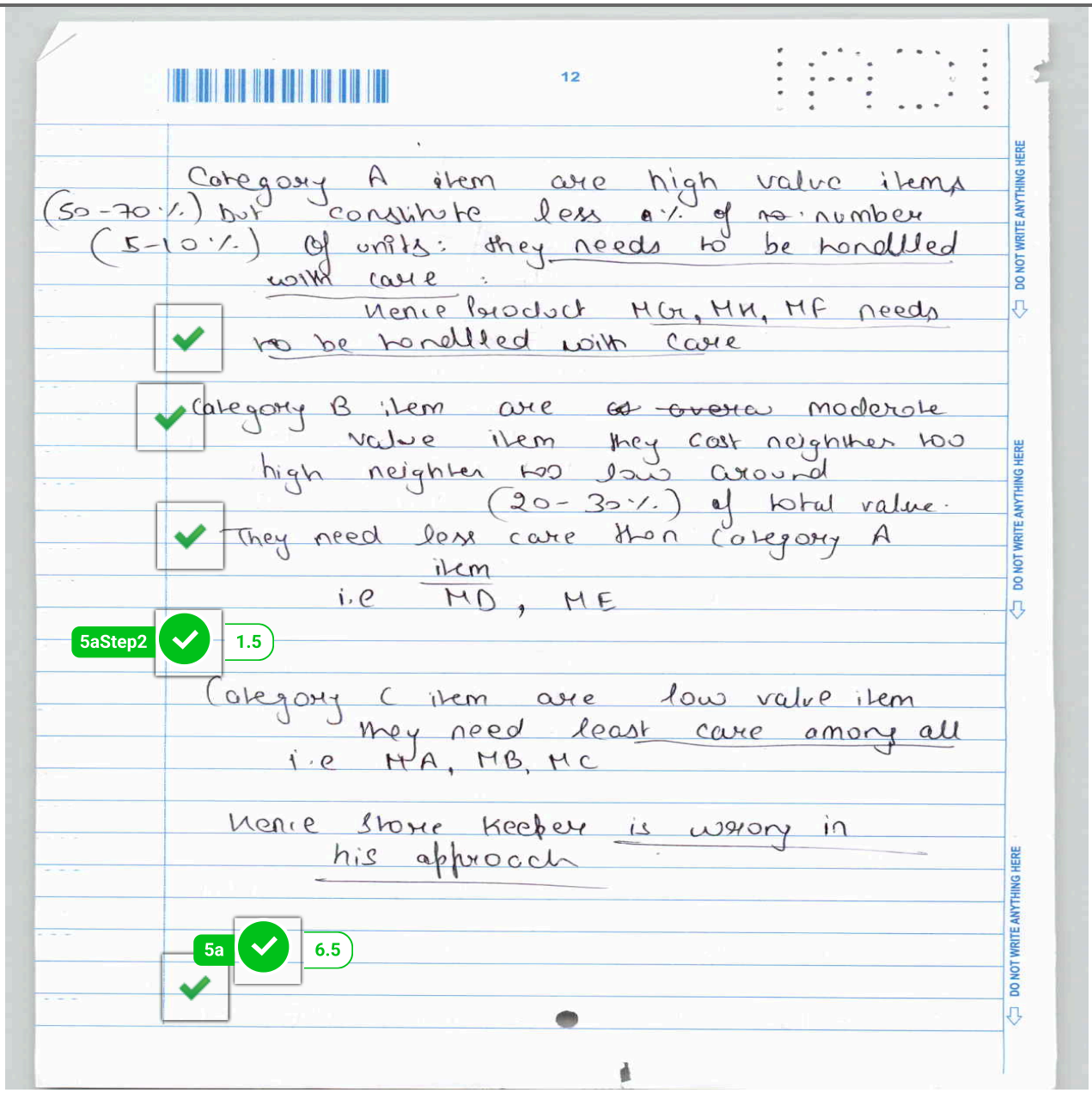
Serial No.	Material Name	units	% of units	Total cost	% of Total cost	Rank
1	MA	54,105	32.79%	14,855	3.495%	VI
2	MB	32,300	19.58%	12,823	3.02%	VIII
3	MC	28,600	17.33%	13,972	3.29%	VII
4	MD	10250	6.21%	47,685	11.22%	IV
5	ME	23,410	14.19%	39,015	9.18%	V
6	MF	2580	1.56%	108,260	25.47%	I
7	MG	8900	5.39%	89,410	21.04%	III
8	MH	4855	2.94%	98,980	23.29%	II
Total		165,000	100%	425,000	100%	

5aStep1 5

% of unit = $\frac{\text{unit of Material}}{\text{Total unit}} \times 100$

% of total cost = $\frac{\text{cost of Material}}{\text{Total cost}} \times 100$

Category		Material
(A)	50,000 & above	MF, MG, MH
(B)	₹15000 to ₹50,000	MD, ME
(C)	Below ₹15,000	MA, MB, MC



12

Category A item are high value items (50-70%) but constitute less % of no. number (5-10%) of units: they needs to be handled with care :

Hence product HGr, HH, HF needs to be handled with care

Category B item are ~~of~~ ~~overa~~ moderate value item they cost neighther too high neighter too low around (20-30%) of total value.

They need less care than category A item

i.e MD, ME

5aStep2 1.5

Category C item are low value item they need least care among all

i.e HA, HB, HC

Hence Store keeper is wrong in his approach

5a 6.5

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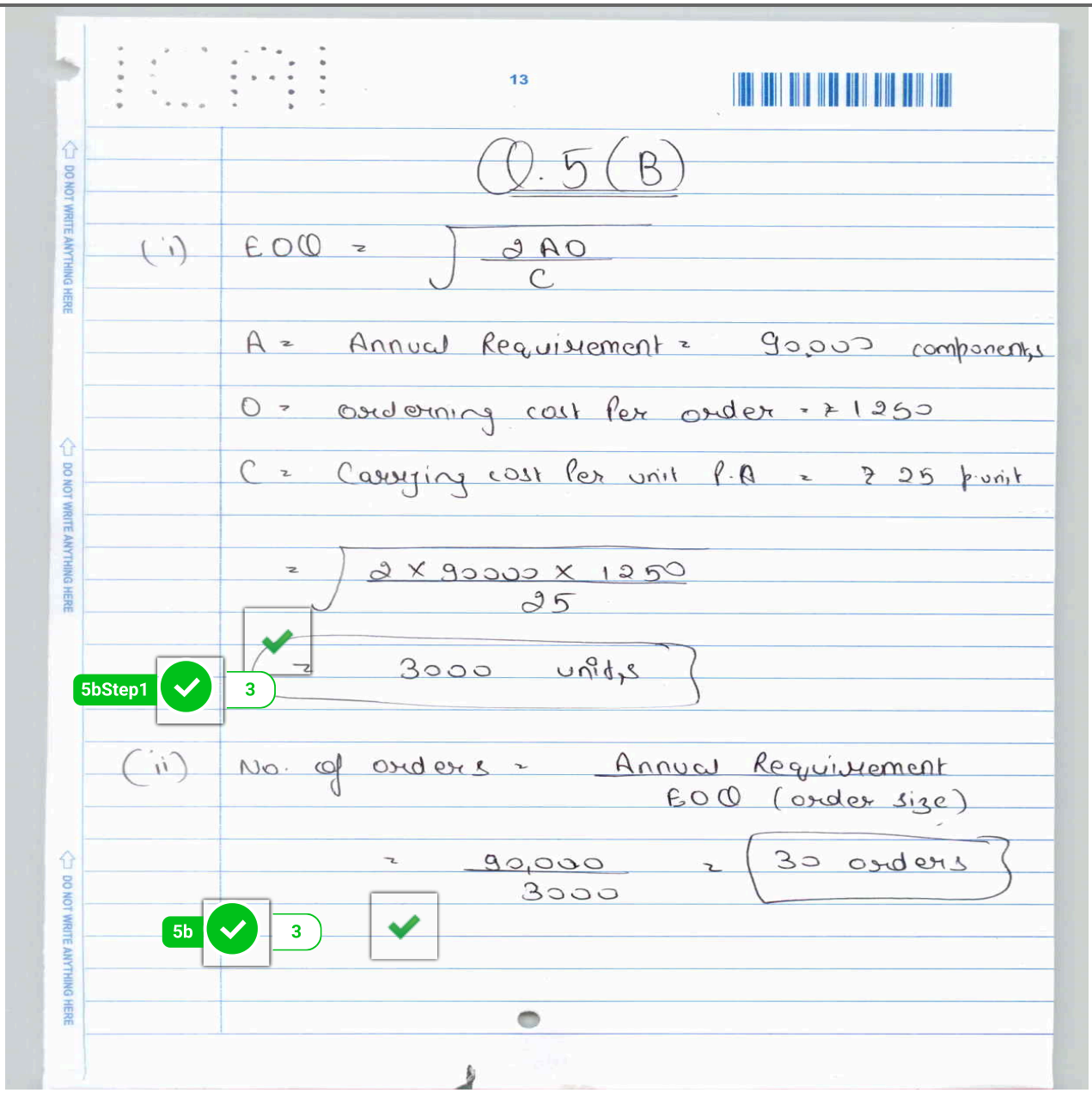


13

Q.5(B)

(i) $EOQ = \sqrt{\frac{2AO}{C}}$

A = Annual Requirement = 90,000 components

O = ordering cost per order = ₹ 1250

C = Carrying cost per unit P.A = ₹ 25 p.unit

$= \sqrt{\frac{2 \times 90000 \times 1250}{25}}$

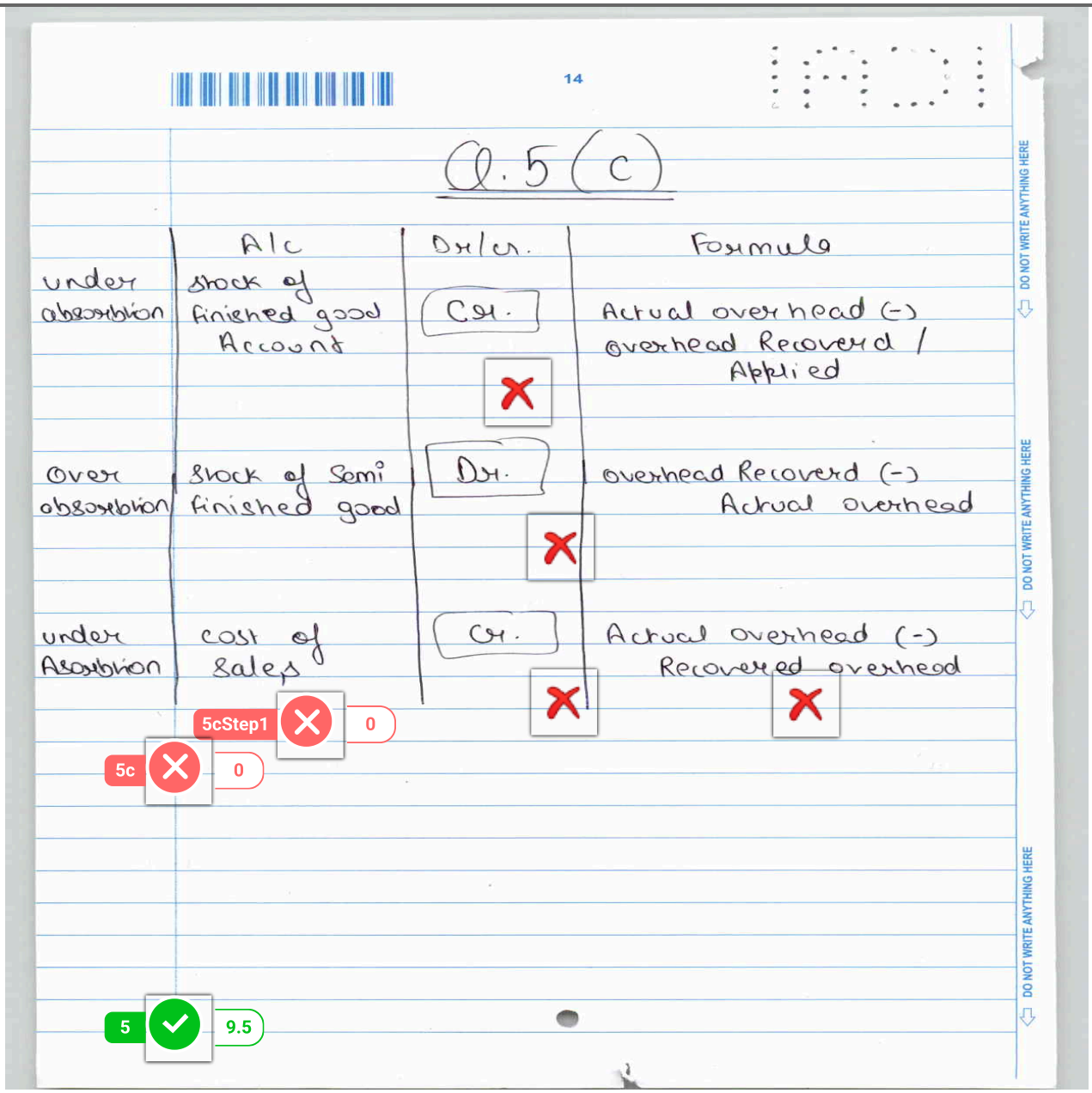
= 3000 units

5bStep1 3

(ii) No. of orders = Annual Requirement / EOQ (order size)

$= \frac{90,000}{3000} =$ 30 orders

5b 3



14

Q.5 (c)

	A/c	Dr/Cr.	Formula
under absorbion	stock of finished good Account	Cr.	Actual overhead (-) overhead Recoverd / Applied
Over absorbion	stock of Semi finished good	Dr.	overhead Recoverd (-) Actual overhead
under Asorbion	cost of Sales	Cr.	Actual overhead (-) Recovered overhead

5cStep1 0

5c 0

5 9.5

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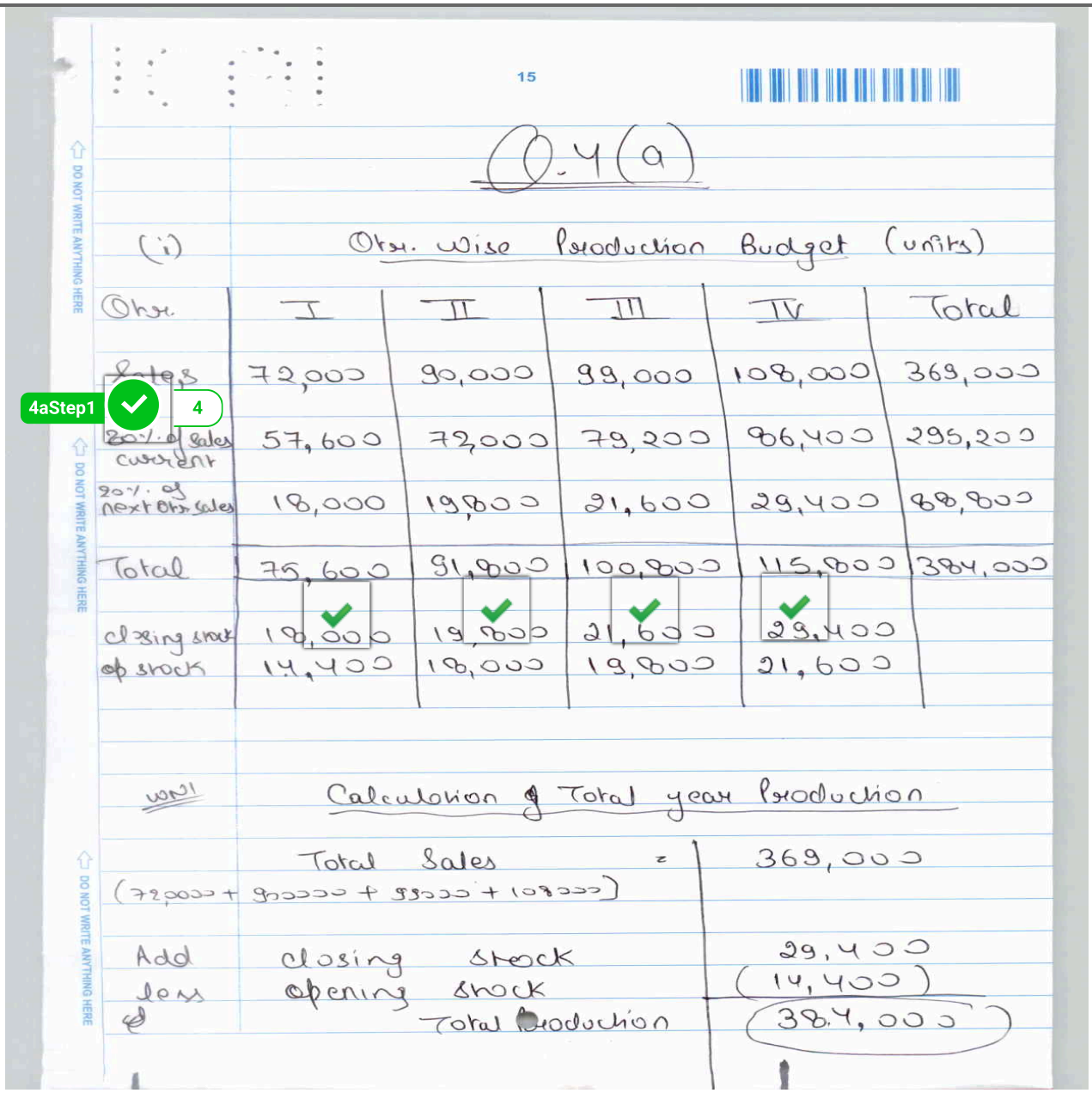


15

Q.4(a)

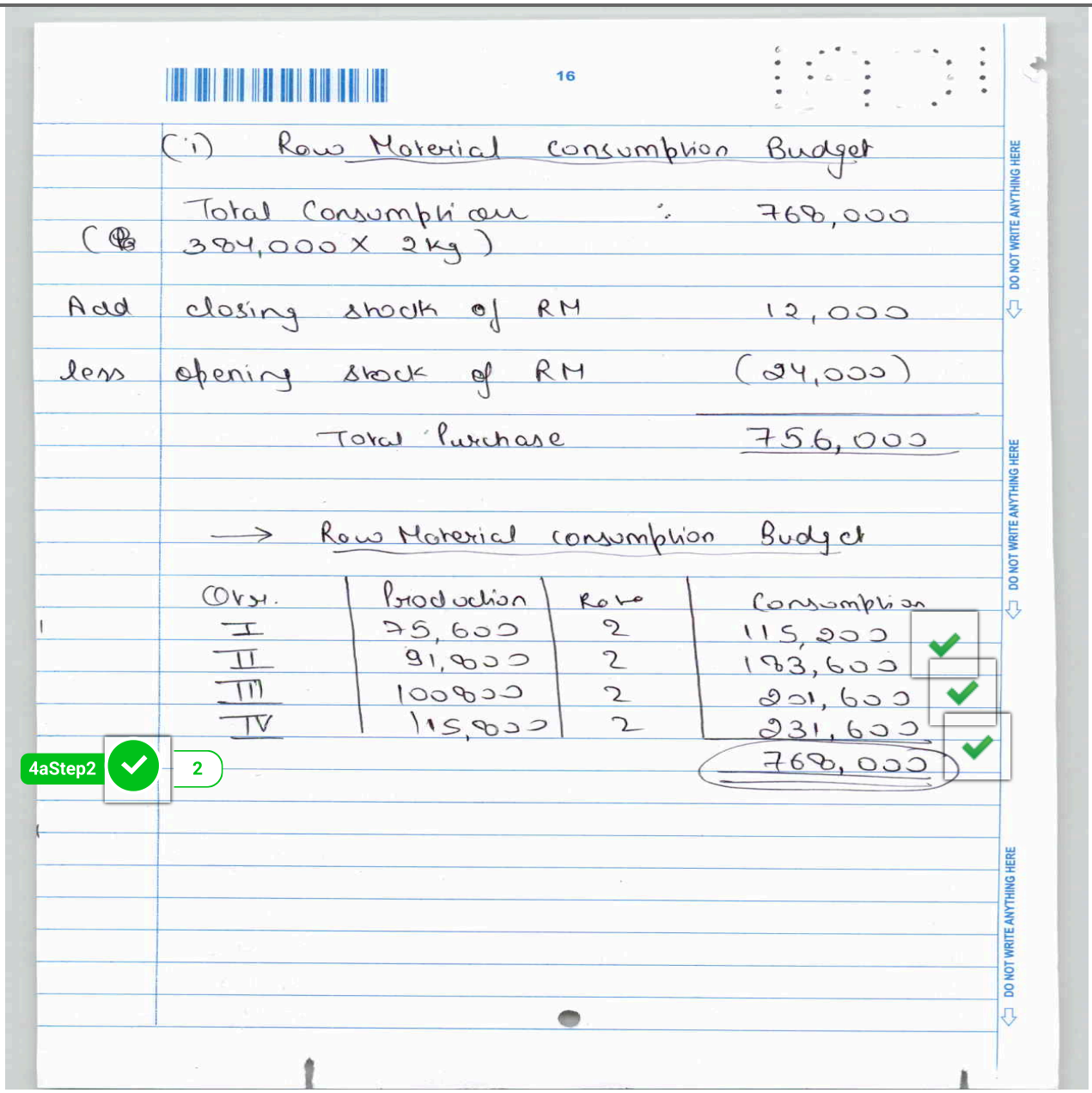
(i) Qtr. Wise Production Budget (units)

Qtr.	I	II	III	IV	Total
Sales	72,000	90,000	99,000	108,000	369,000
80% of Sales current	57,600	72,000	79,200	86,400	295,200
20% of next Qtr Sales	18,000	19,800	21,600	29,400	88,800
Total	75,600	91,800	100,800	115,800	384,000
closing stock	18,000	19,800	21,600	29,400	
of stock	14,400	18,000	19,800	21,600	

4aStep1 4

WN1 Calculation of Total year Production

Total Sales (72,000 + 90,000 + 99,000 + 108,000)	=	369,000
Add closing stock		29,400
less opening stock		(14,400)
Total Production		384,000



16

(i) Raw Material consumption Budget

	Total Consumption (384,000 × 2kg)	768,000
Add	closing stock of RM	12,000
less	opening stock of RM	(24,000)
	Total Purchase	756,000

→ Raw Material consumption Budget

Qtrs.	Production	Rate	Consumption
I	75,000	2	115,200
II	91,800	2	183,600
III	100800	2	201,600
IV	115,800	2	231,600
			768,000

4aStep2 2

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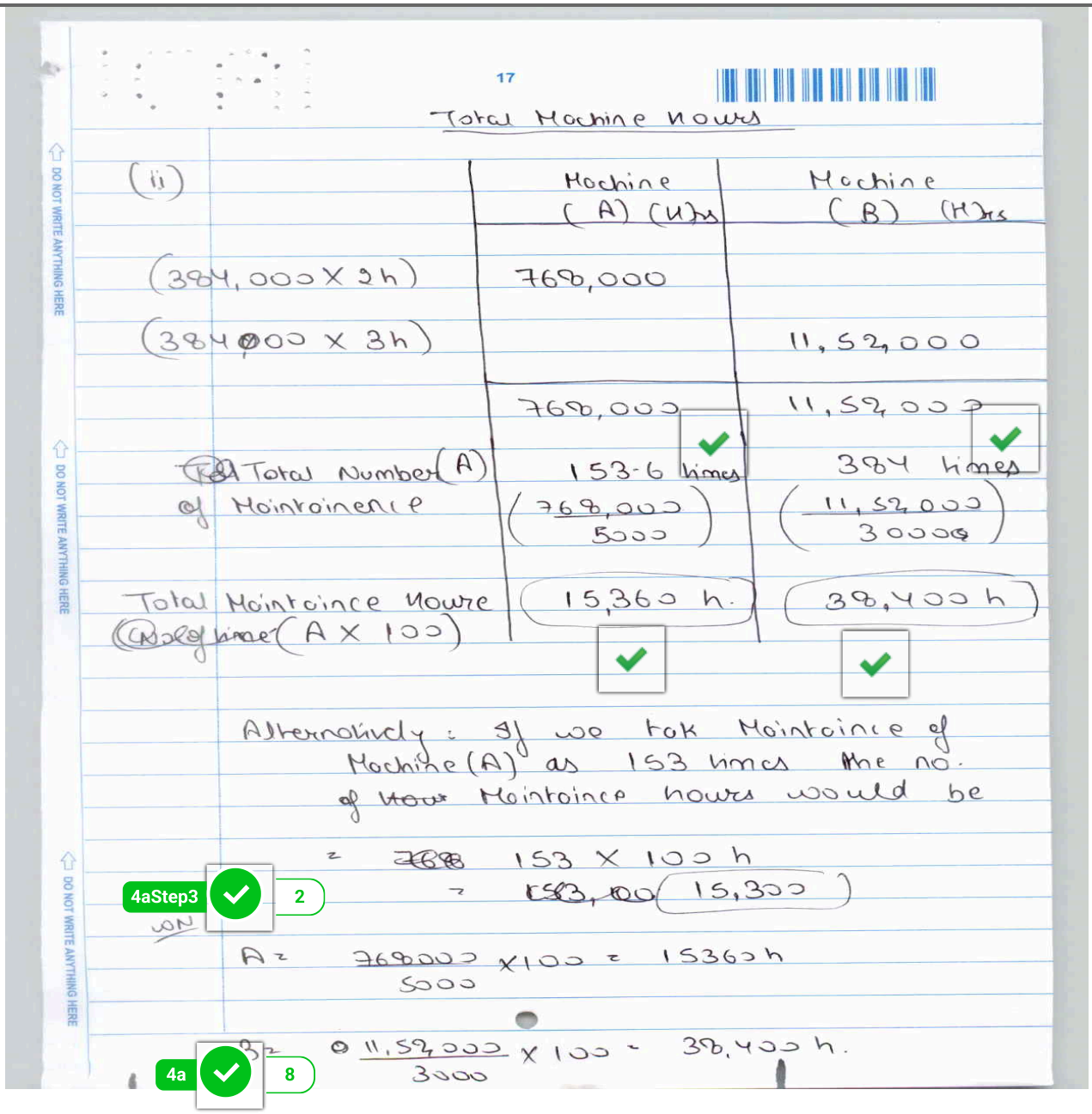


17

Total Machine Hours

(ii)

	Machine (A) (Hrs	Machine (B) (Hrs
(384,000 X 2h)	768,000	
(384000 X 3h)		11,52,000
	768,000	11,52,000
Total Number of Maintenance	153·6 times (768,000 / 5000)	384 times (11,52,000 / 30000)
Total Maintaince Hours (No. of times (A X 100))	15,360 h.	38,400 h

Alternatively : If we tak Maintaince of Machine (A) as 153 times the no. of Maintaince hours would be

= 153 X 100 h

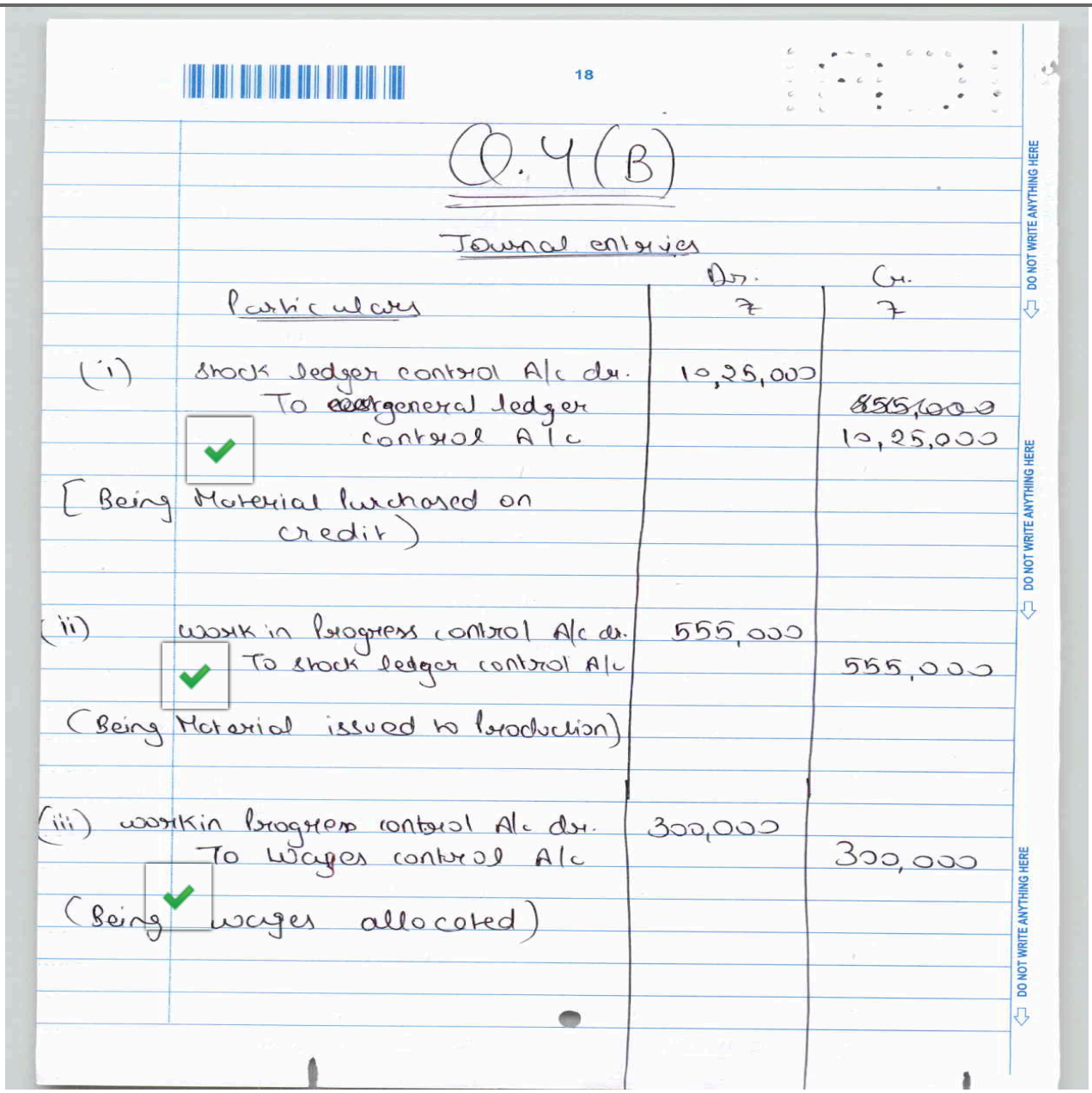
= 15,300

4aStep3 2

A = 768000 / 5000 X100 = 15360 h

B = 11,52,000 / 3000 X 100 = 38,400 h.

4a 8



18

Q.4(B)

Journal entries

Particulars		Dr. ₹	Cr. ₹
(i)	Stock ledger control A/c dr.	10,25,000	
	To ~~co~~general ledger control A/c		~~855,000~~ 10,25,000
	[Being Material purchased on credit)		
(ii)	work in progress control A/c dr.	555,000	
	To stock ledger control A/c		555,000
	(Being Material issued to production)		
(iii)	workin progress control A/c dr.	300,000	
	To Wages control A/c		300,000
	(Being wages allocated)		

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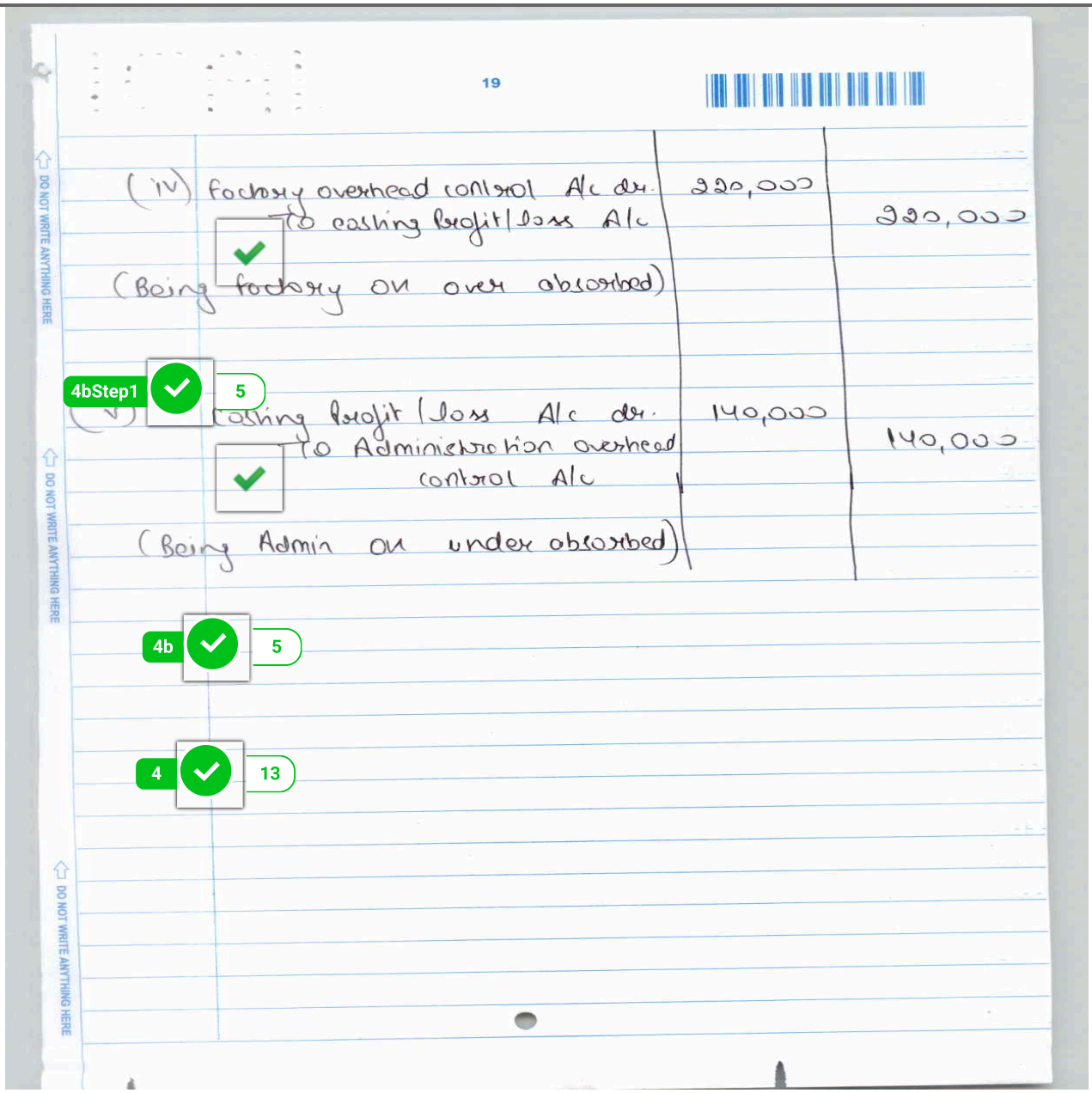

19

(iv) Factory overhead control A/c dr.		220,000	
To costing Profit/loss A/c			220,000
(Being factory OH over absorbed)			
(v) costing Profit/loss A/c dr.		140,000	
To Administration overhead control A/c			140,000
(Being Admin OH under absorbed)			

4bStep1 5

4b 5

4 13

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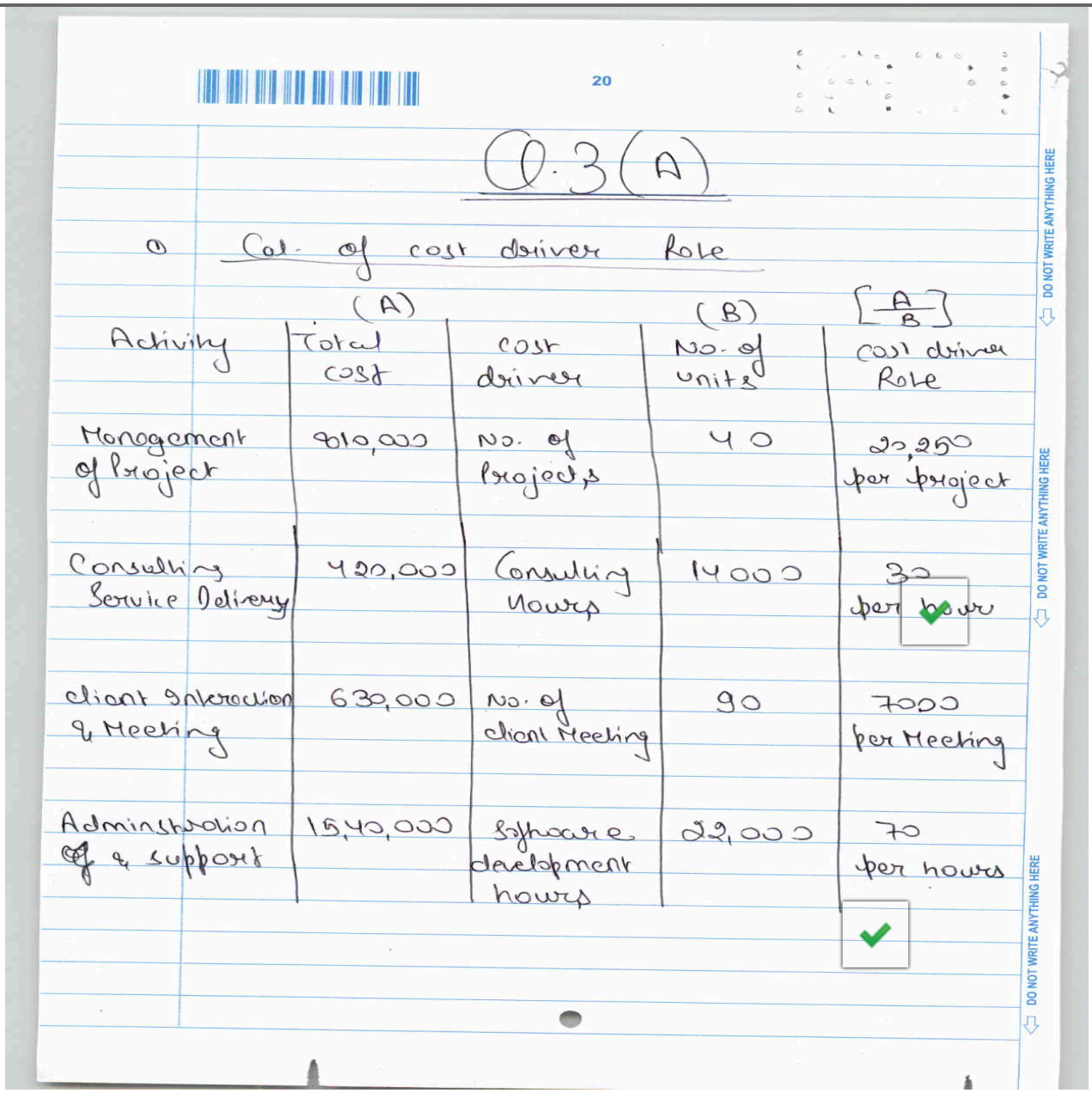

20

Q.3(A)

① Cal. of cost driver Rate

Activity	(A) Total cost	cost driver	(B) No. of units	[A/B] cost driver Rate
Management of Project	810,000	No. of Projects	40	20,250 per project
Consulting Service Delivery	420,000	Consulting Hours	14000	30 per hour
client Interaction & Meeting	630,000	No. of client Meeting	90	7000 per Meeting
Administration & support	15,40,000	Software development hours	22,000	70 per hours

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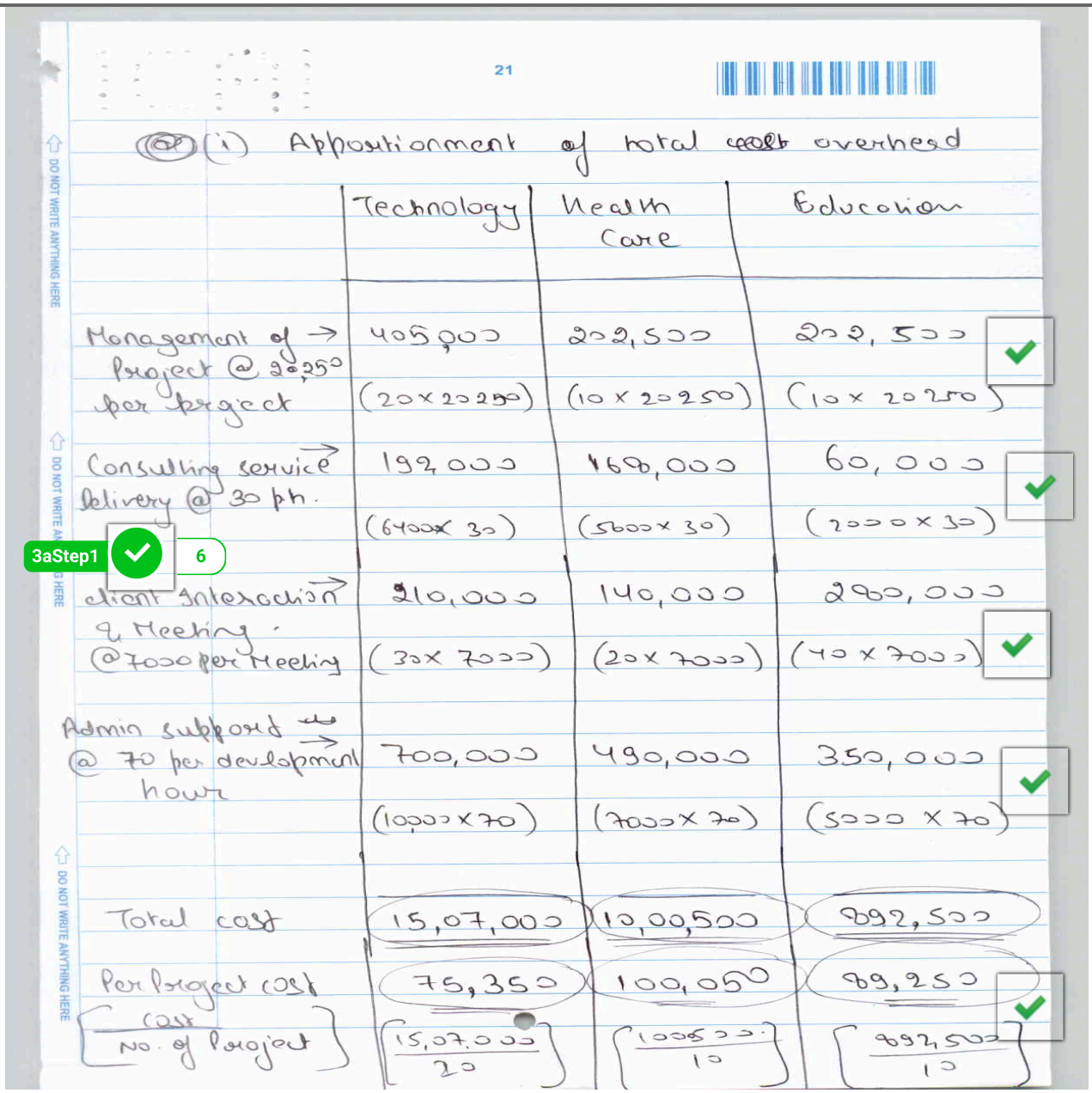
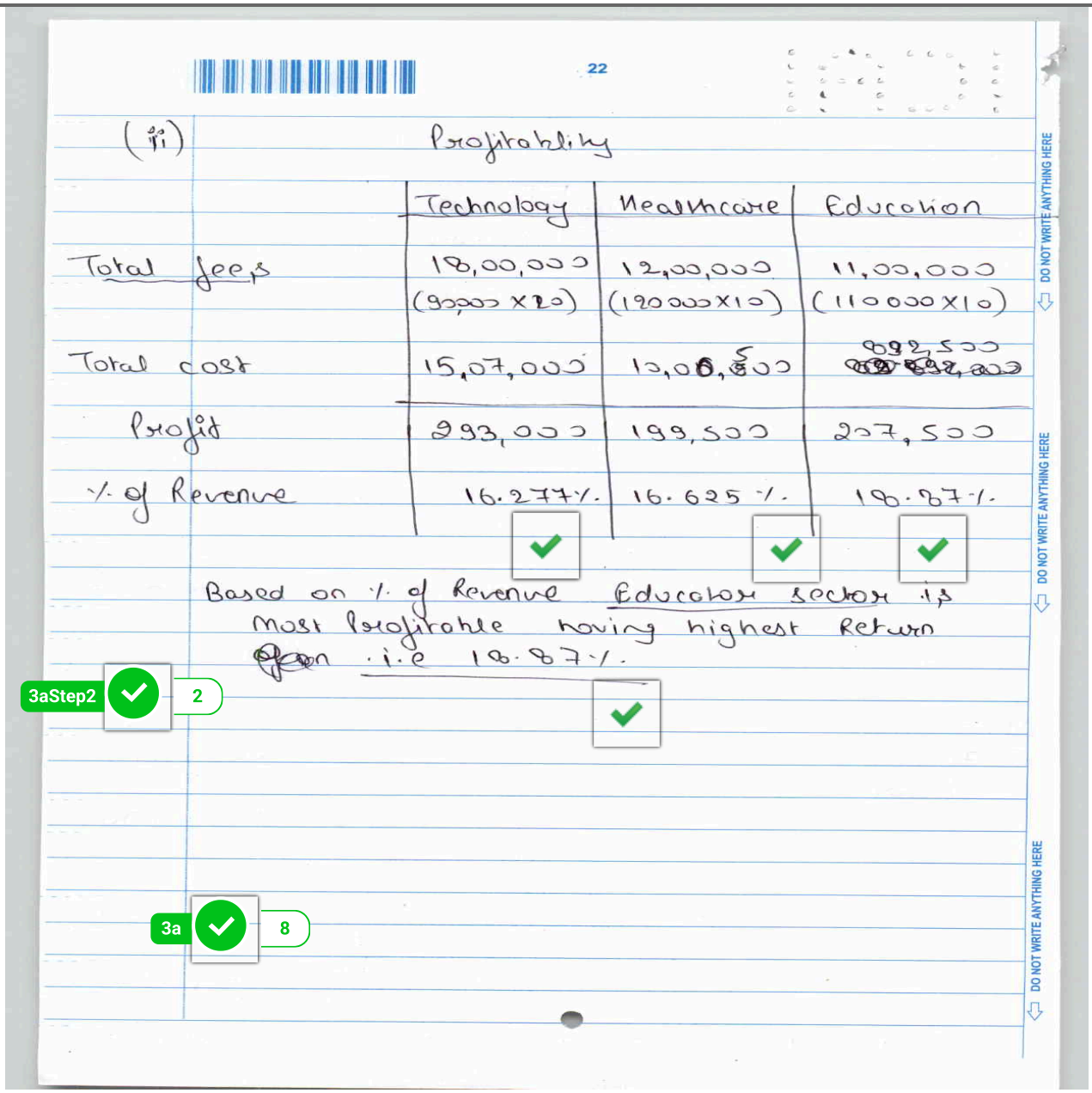


21

(OR) (i) Apportionment of total ~~cost~~ overhead

	Technology	Health Care	Education
Management of Project @ 20,250 per project →	405,000 (20 × 20250)	202,500 (10 × 20250)	202,500 (10 × 20250)
Consulting service delivery @ 30 ph. →	192,000 (6400 × 30)	168,000 (5600 × 30)	60,000 (2000 × 30)
client Interaction & Meeting @7000 per Meeting →	210,000 (30 × 7000)	140,000 (20 × 7000)	280,000 (40 × 7000)
Admin support @ 70 per development hour →	700,000 (10000 × 70)	490,000 (7000 × 70)	350,000 (5000 × 70)
Total cost	15,07,000	10,00,500	892,500
Per Project cost	75,350	100,050	89,250
[Cost / No. of Project]	[15,07,000 / 20]	[1005000 / 10]	[892,500 / 10]

3aStep1 6



22

(ii) Profitability

	Technology	Healthcare	Education
Total fees	18,00,000 (90,000 x 20)	12,00,000 (120000x10)	11,00,000 (110000x10)
Total cost	15,07,000	13,08,500	9,92,500
Profit	293,000	191,500	207,500
% of Revenue	16.277%	16.625 %	18.87 %

Based on % of Revenue Education sector is most profitable having highest Return on i.e 18.87 %.

3aStep2 2

3a 8

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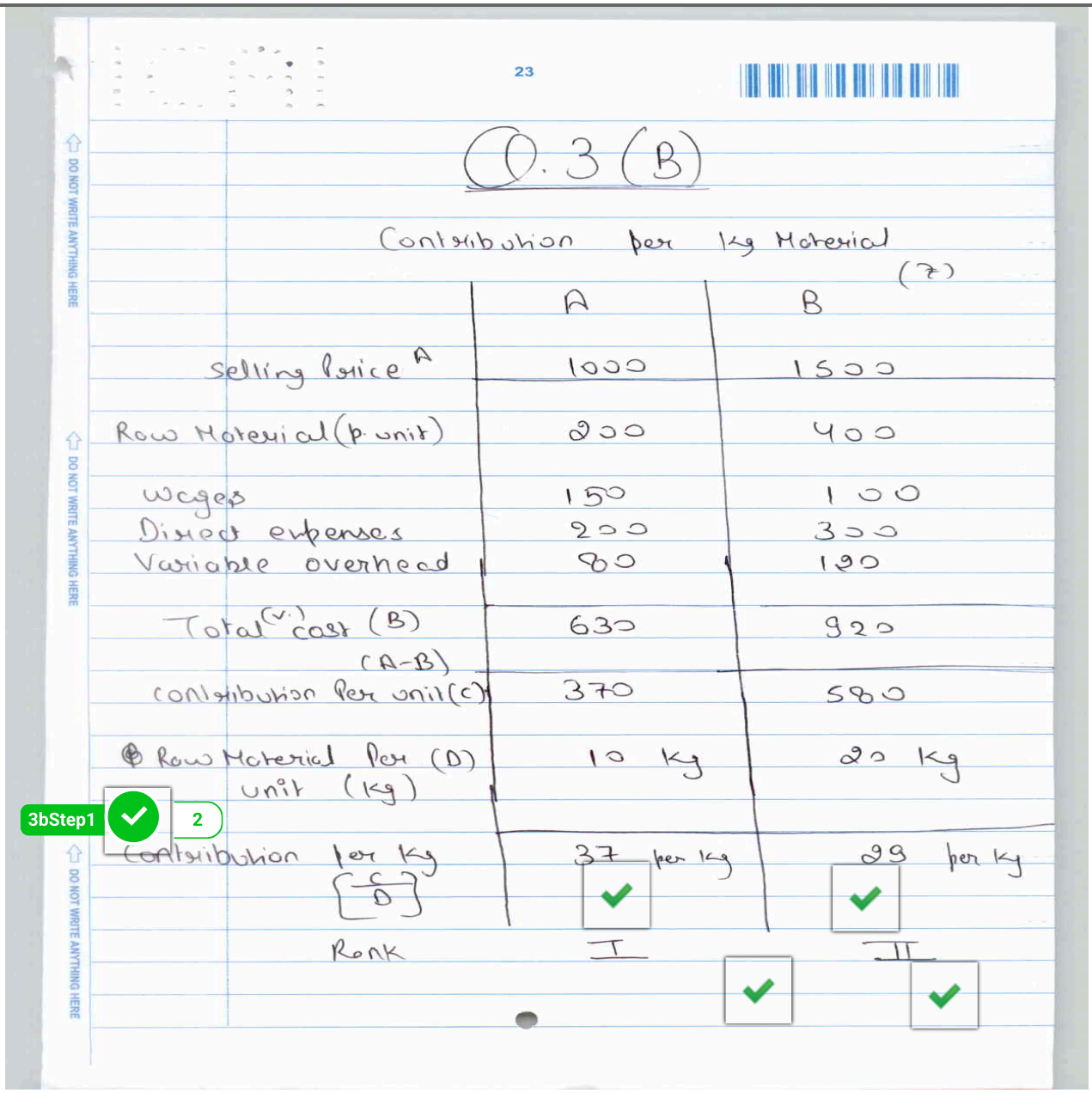


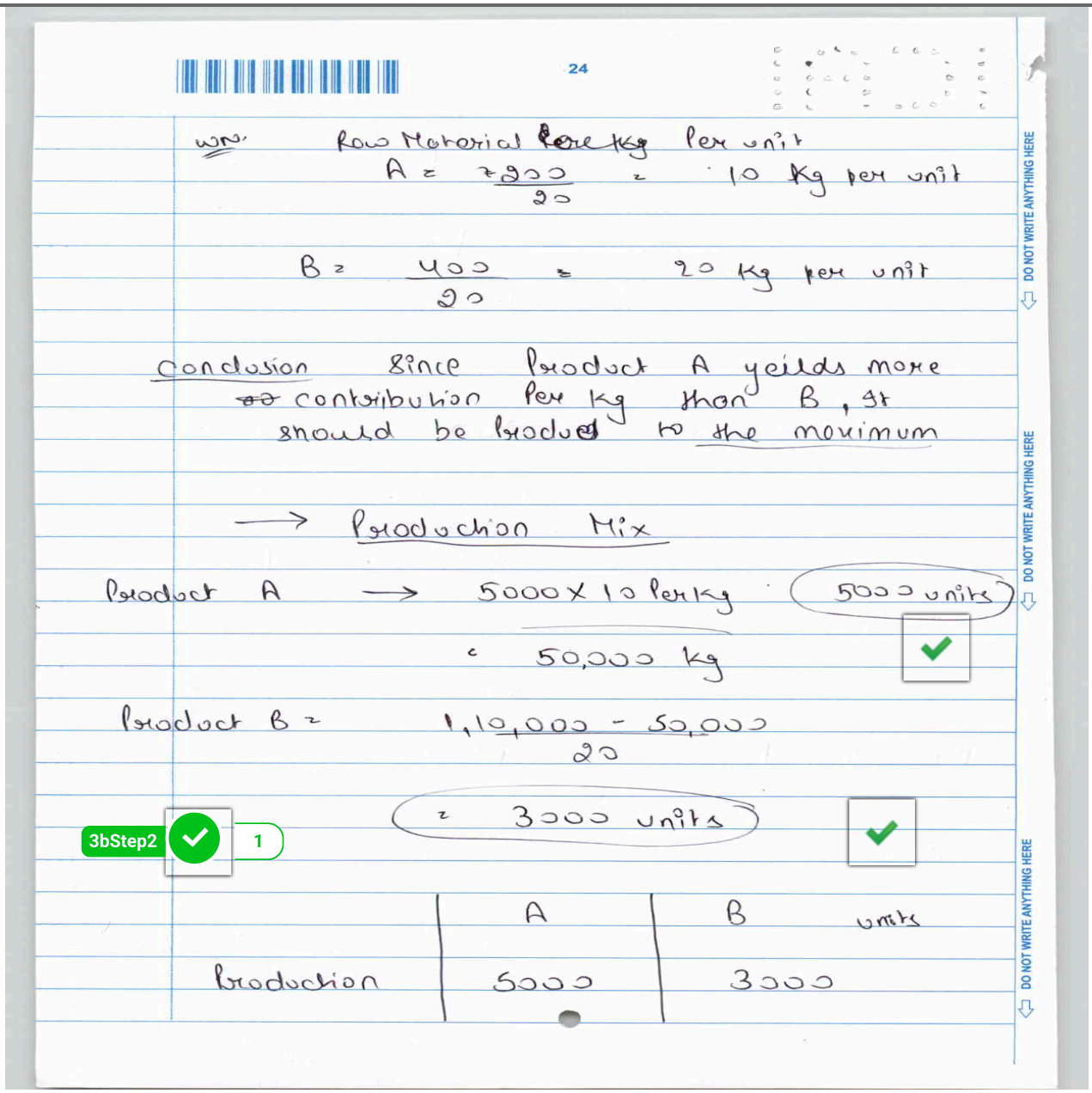
23

Q. 3 (B)

Contribution per kg Material (7)

	A	B
Selling Price	1000	1500
Raw Material (p. unit)	200	400
Wages	150	100
Direct expenses	200	300
Variable overhead	80	120
Total (V.) cost (B)	630	920
Contribution Per unit (C) (A-B)	370	580
Raw Material Per unit (kg) (D)	10 kg	20 kg
Contribution per kg (C/D)	37 per kg	29 per kg
Rank	I	II

3bStep1 2



24

W.N. Raw Material ~~per kg~~ per unit

A = 200 / 20 = 10 kg per unit

B = 400 / 20 = 20 kg per unit

Conclusion Since Product A yields more ~~co~~ contribution per kg than B, it should be produced to the maximum

→ Production Mix

Product A → 5000 × 10 per kg = 50,000 kg ✓ 5000 units ✓

Product B = (1,10,000 − 50,000) / 20

= 3000 units ✓

3bStep2 ✓ 1

	A	B	units
Production	5000	3000	

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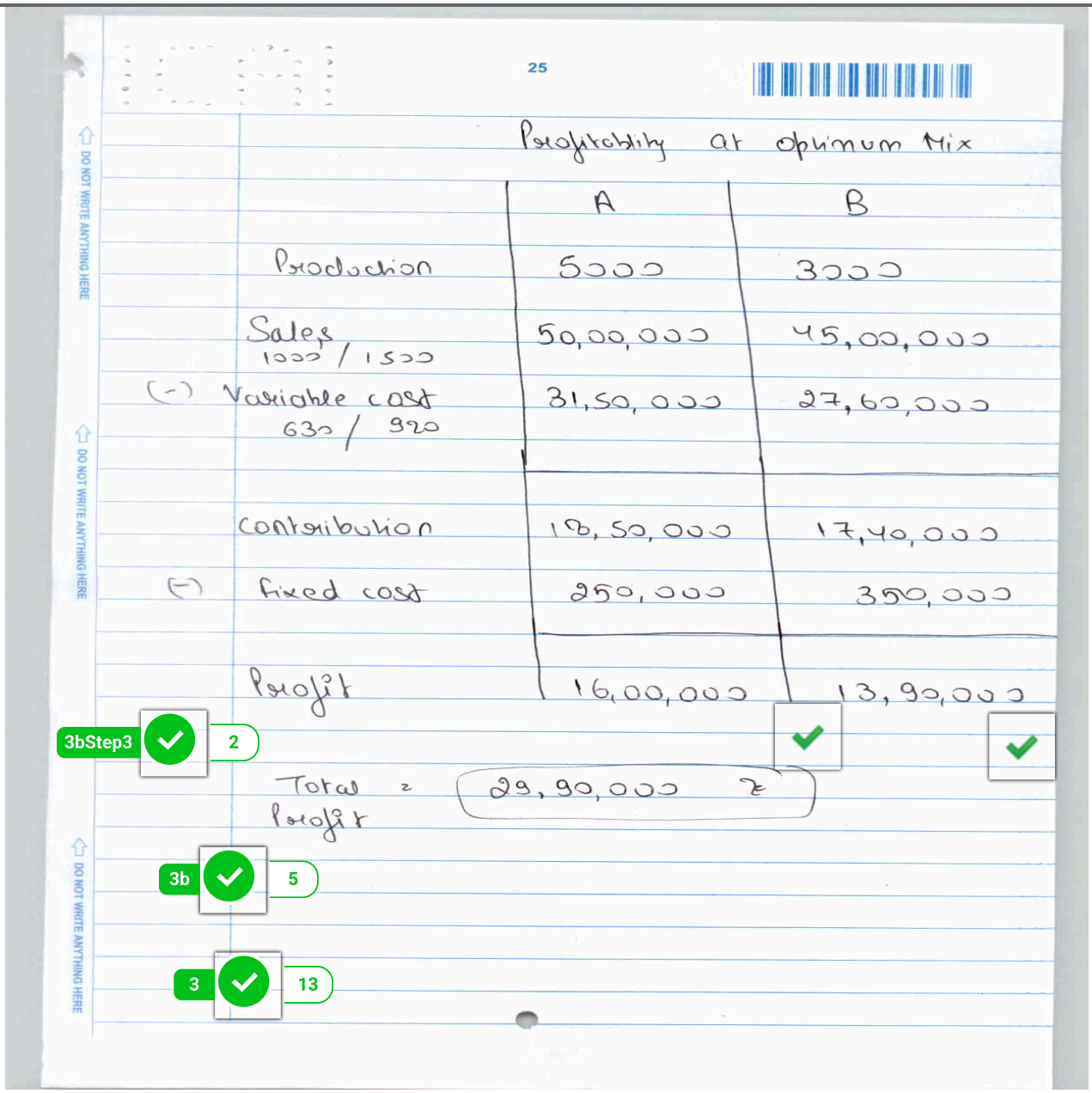


25

Profitability at optimum Mix

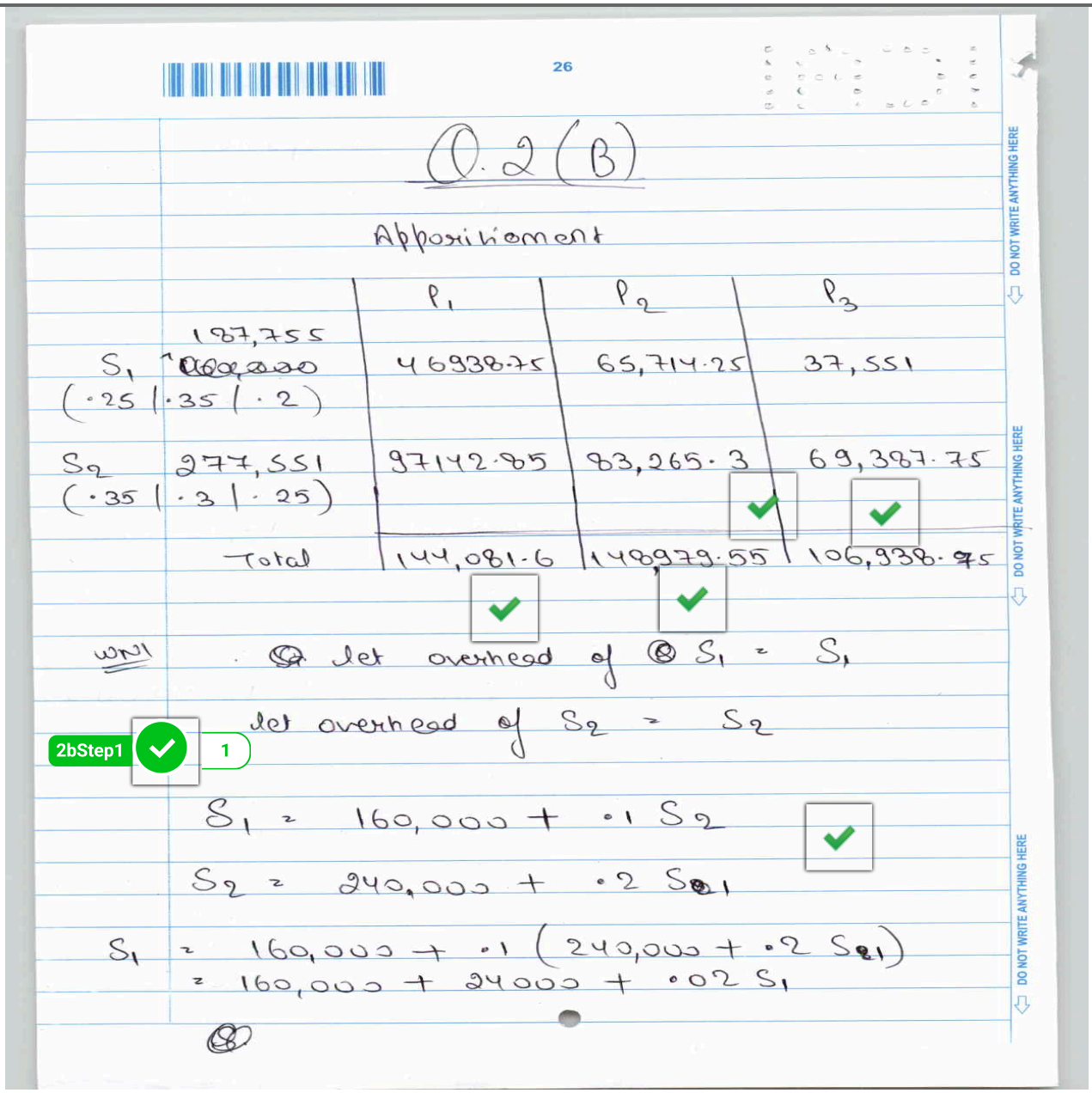
	A	B
Production	5000	3000
Sales 1000 / 1500	50,00,000	45,00,000
(-) Variable cost 630 / 920	31,50,000	27,60,000
Contribution	18,50,000	17,40,000
(-) Fixed cost	250,000	350,000
Profit	16,00,000	13,90,000

Total Profit = 29,90,000 ₹

3bStep3 2

3b 5

3 13



26

Q. 2 (B)

Apportionment

		P_1	P_2	P_3
S_1 (·25 | ·35 | ·2)	187,755	46938.75	65,714.25	37,551
S_2 (·35 | ·3 | ·25)	277,551	97142.85	83,265.3	69,387.75
Total		144,081.6	148979.55	106,938.75

WN1

Let overhead of S_1 = S_1

Let overhead of S_2 = S_2

2bStep1 1

$S_1 = 160,000 + .1 S_2$

$S_2 = 240,000 + .2 S_1$

$S_1 = 160,000 + .1 (240,000 + .2 S_1)$

$= 160,000 + 24000 + .02 S_1$

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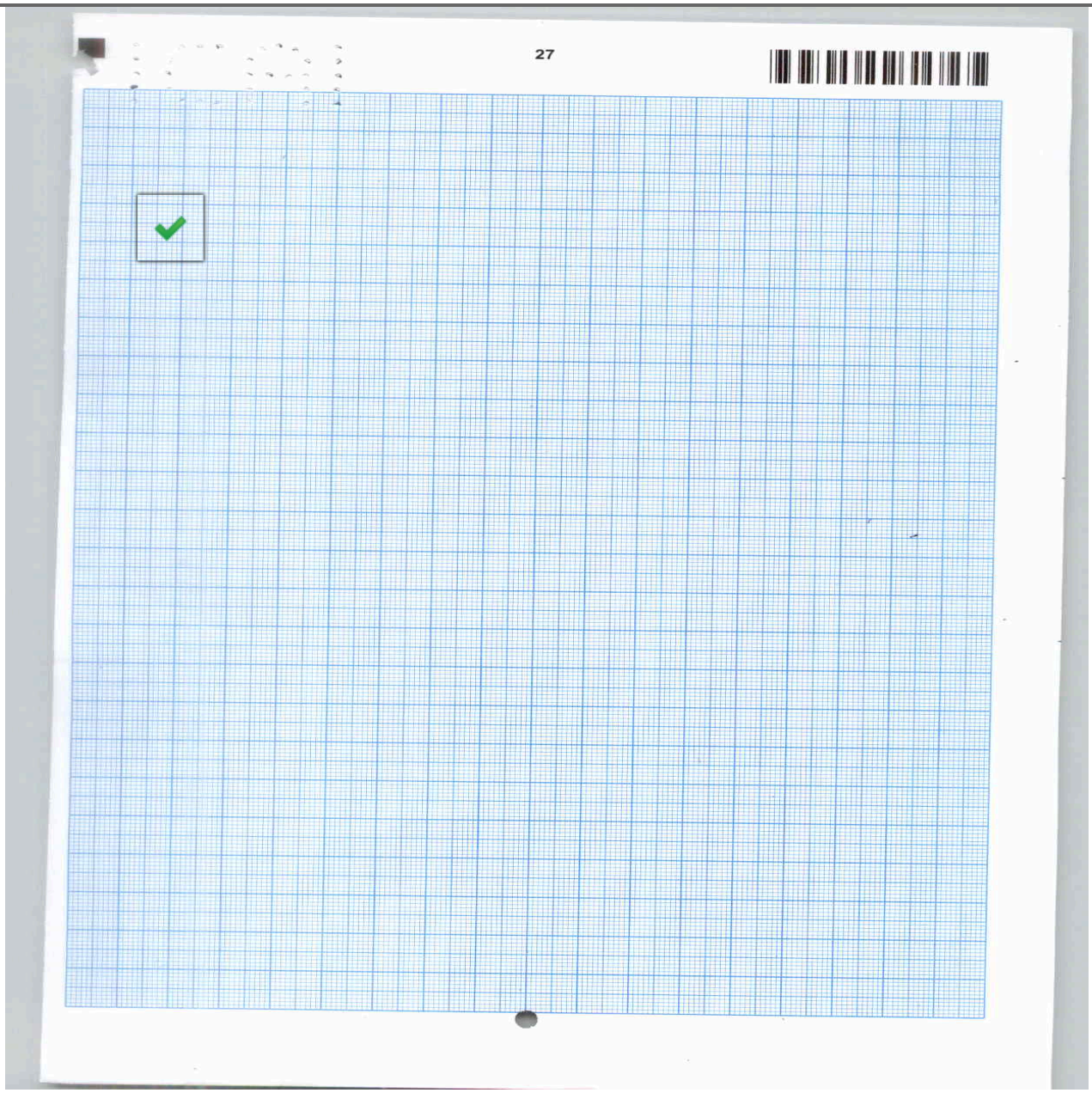
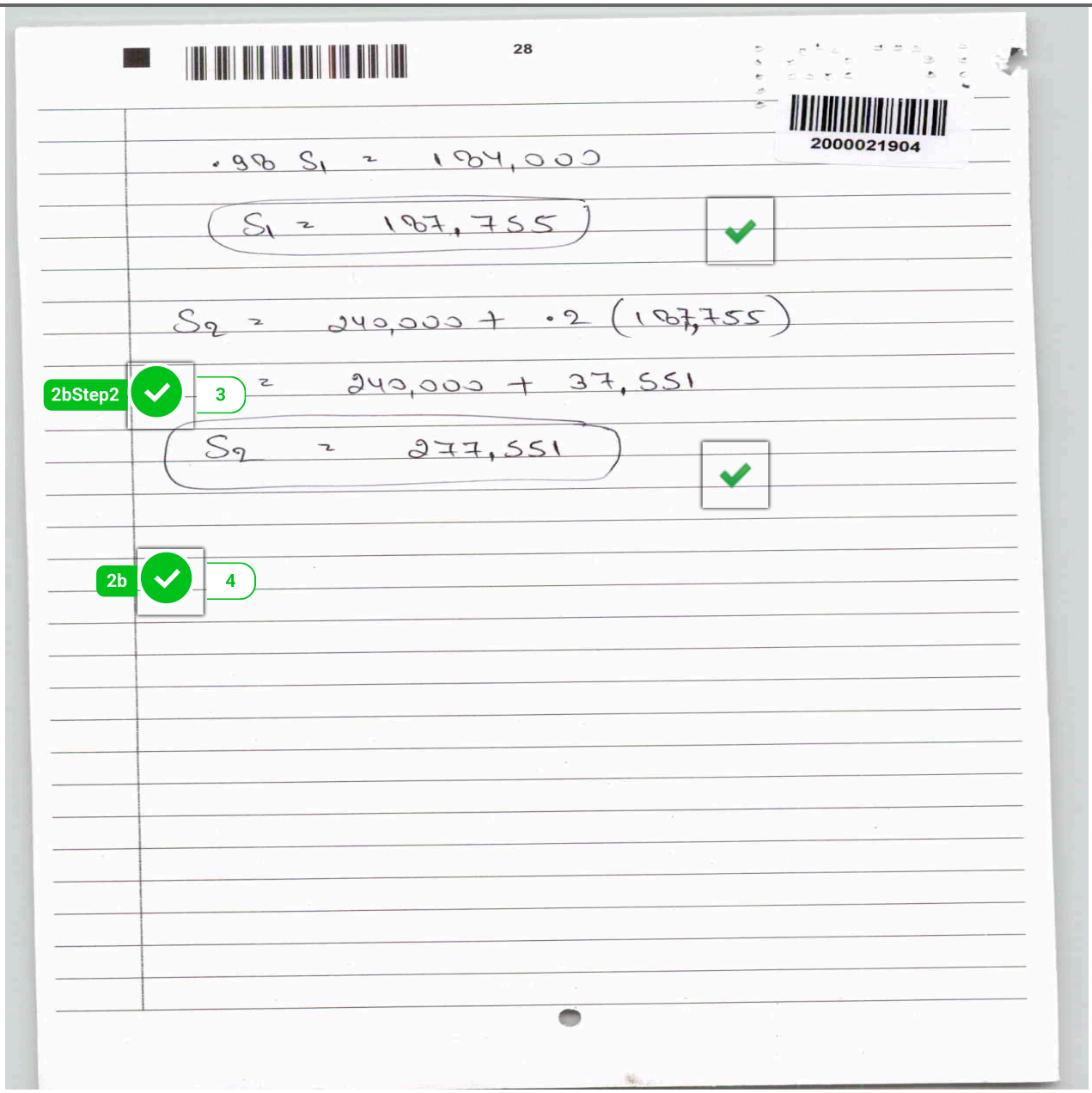
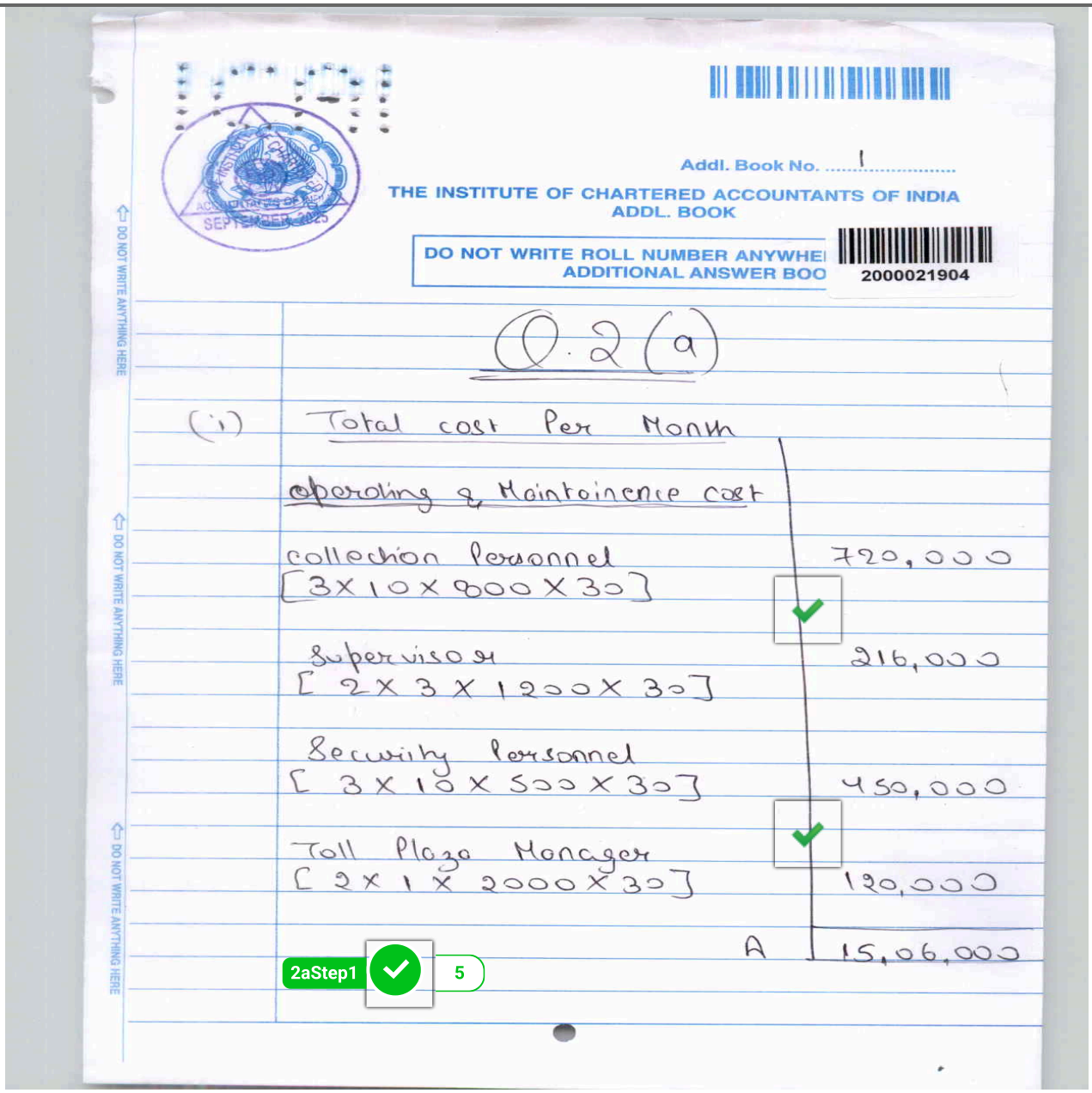
Subject : 04 Cost and Management Accounting Marks Obtained : 63.5




28
2000021904
.98 S1 = 184,000
S1 = 187,755
S2 = 240,000 + .2 (187,755)
2bStep2
3
= 240,000 + 37,551
S2 = 277,551
2b
4

The Institute of Chartered Accountants of India

Code: IN4CM412263 **Total Marks:** 70
Subject : 04 Cost and Management Accounting **Marks Obtained :** 63.5



Addl. Book No. 1

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA
ADDL. BOOK

DO NOT WRITE ROLL NUMBER ANYWHE
ADDITIONAL ANSWER BOO

2000021904

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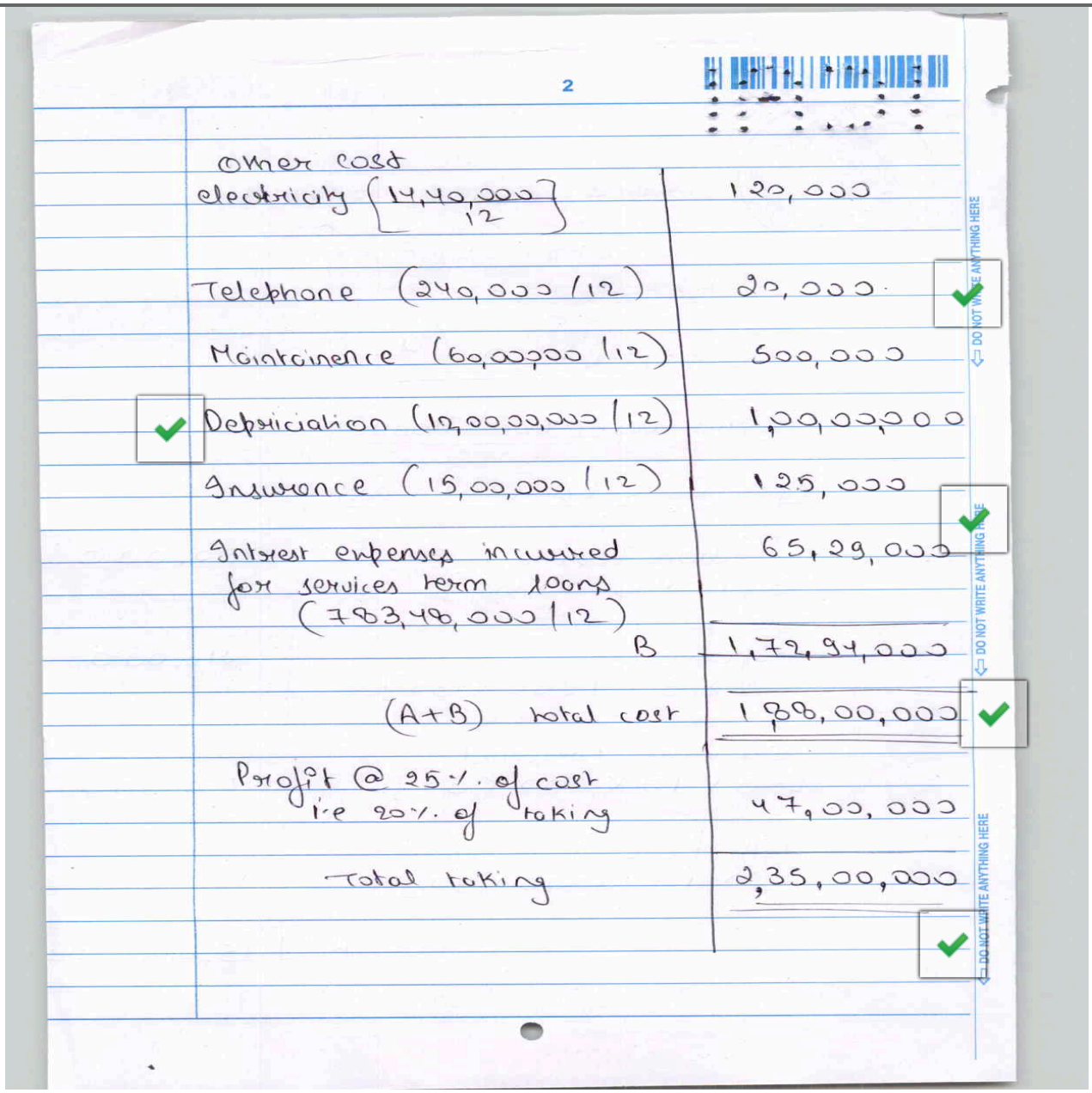
Q.2 (a)

(i) Total cost Per Month

operating & Maintainence cost

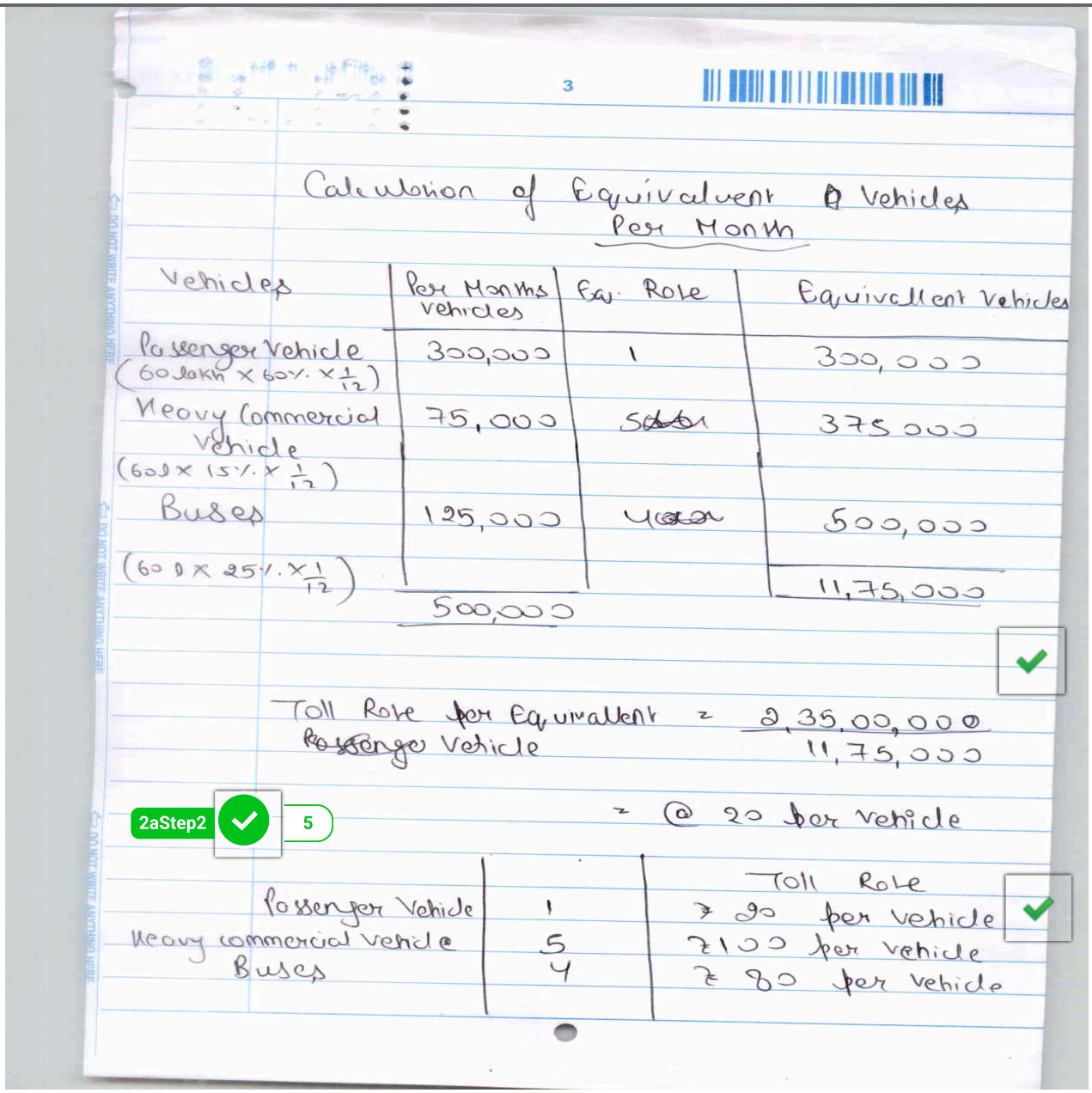
collection personnel [3 × 10 × 800 × 30]	720,000
Supervisor [2 × 3 × 1200 × 30]	216,000
Security personnel [3 × 10 × 500 × 30]	450,000
Toll Plaza Manager [2 × 1 × 2000 × 30]	120,000
A	15,06,000

2aStep1 5



2

Other cost	
electricity (14,40,000 / 12)	120,000
Telephone (240,000 / 12)	20,000
Maintainence (60,00,000 / 12)	500,000
Depriciation (12,00,00,000 / 12)	1,00,00,000
Insurance (15,00,000 / 12)	125,000
Interest expenses incurred for services term loans (783,48,000 / 12)	65,29,000
B	1,72,94,000
(A+B) total cost	1,88,00,000
Profit @ 25% of cost i.e 20% of taking	47,00,000
Total taking	2,35,00,000



3

Calculation of Equivalent Vehicles Per Month

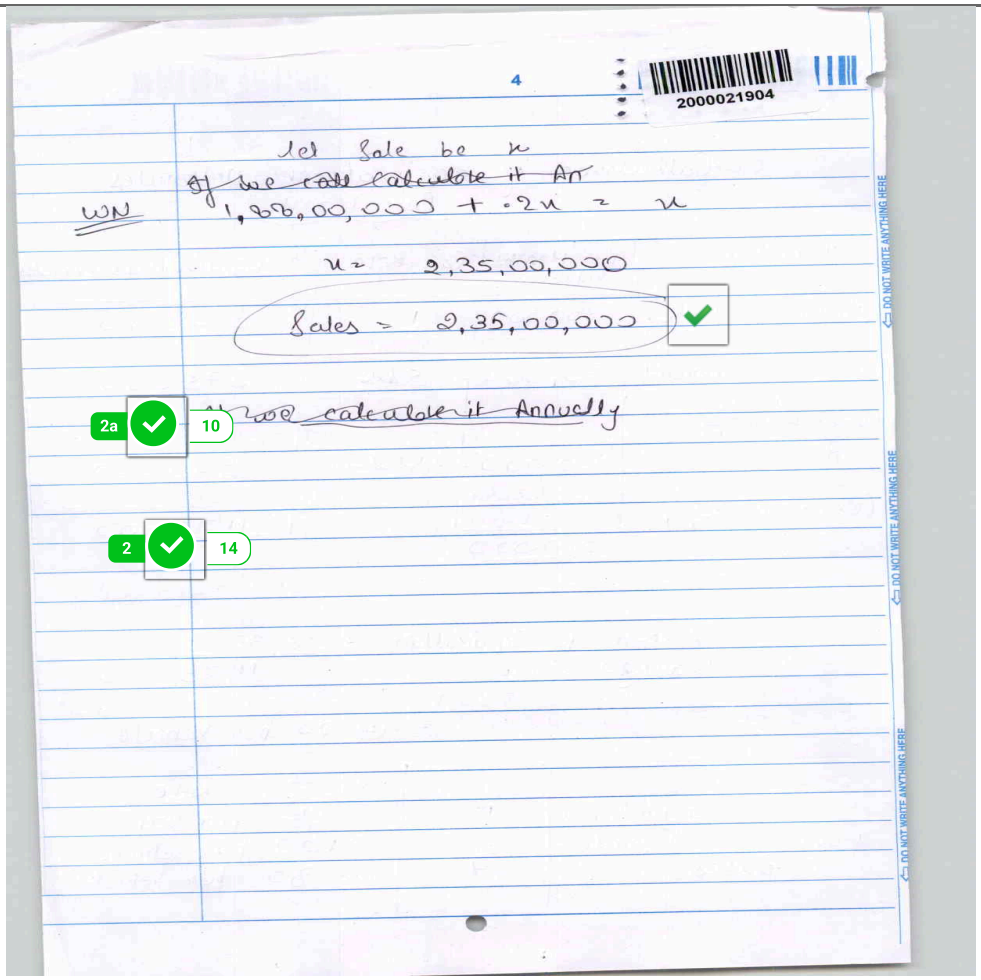
Vehicles	Per Months vehicles	Eq. Rate	Equivalent Vehicles
Passenger Vehicle (60 lakh × 60% × 1/12)	300,000	1	300,000
Heavy Commercial Vehicle (60 × 15% × 1/12)	75,000	5	375,000
Buses (60 × 25% × 1/12)	125,000	4	500,000
	500,000		11,75,000

Toll Rate for Equivalent Passenger Vehicle = 2,35,00,000 / 11,75,000

= @ 20 per vehicle

2aStep2 5

		Toll Rate
Passenger Vehicle	1	₹ 20 per vehicle
Heavy commercial vehicle	5	₹100 per vehicle
Buses	4	₹ 80 per vehicle


4
2000021904
Let Sale be x
WN
If we ~~calculate it An~~
1,86,00,000 + .2x = x
x = 2,35,00,000
Sales = 2,35,00,000
~~calculate it Annually~~
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2a 10

2 14