		e compulsory					
' '	h question c	arries the sam	e marks.				
(3) Onl		culators are a					
	J P		7.10				
Q1 (A) Atter	mpt any 7 su	b-questions o	out of 10.				(7)
		combined me		oups.			
		median for gr		-			
		imum frequen		dal class (T/I	7)		
		ed to locate gr					
(e) Write the			. 01				
$(f)D_{30}=P_{40}, ($	TRUE/FAL	SE)					
(g)Write the	formula of	S.D. for contin	nuous data.				
(h) A function	on is given a	$s f(x)=5x^2-3$,	find the value	e at $x=4$.			
(i)Write the	formula of t	otal revenue f	function.				
(j)At equilib	rium point s	upply will be	equal to dem	and.(TRUE/I	FALSE)		
O1 (D) A#-							(0)
		nt sub-question	ns out of ten.				(8)
(a) Write the							
(b) Find A.N							
		P ₉₀ , in continu					
		profit will be	equal to	Qu lantiny			
		50,57,67,68.	D) called as				
		₀₁ (L) andP ₀₁ (I er quartile for		with denotion	<u>'</u>		
		$=838, \sum P_0 Q_0$		vitti denotion:	S.		
		M.D. from M		loto			
	Torritara or	IVI.D. HOIII IVI	out for law t	lala.			
Q2 (a) Kand bank promis years. Find to	chan wanted sed to pay he the principal	er Rs. 73205 is amount she v	ertain amoun f she invested wanted to inv	s at in a bank a d in for 4 year est and the ra	rs and Rs. 88 te of compo	8578.05, if shound interest.	e invested it for 6 (7)
Q2 (a) Kand bank promis years. Find to (b) A compa (i) If each no loss? (ii) If the so needs to be (iii) If it is	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an	to invest a cer Rs. 73205 in amount she watures notebook old at Rs.25, wo of a notebook d sold to ensulvance that at	ertain amount f she invested wanted to invoks. The week what is the much k is increase are no loss?	at in a bank at in for 4 year est and the rackly total cost inimum quand by 20%, we tebooks can	es and Rs. 83 te of composition is gottity that need what would	8578.05, if shound interest. given by C= 1 ds to be prodube the minim	und interest. The e invested it for 6 (7) $5x + 3000$. (8) uced to ensure no num quantity that he selling price to
Q2 (a) Kand bank promis years. Find to (b) A compa (i) If each no loss? (ii) If the so needs to be (iii) If it is	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in ad	to invest a cer Rs. 73205 in amount she watures notebook old at Rs.25, wo of a notebook d sold to ensulvance that at	ertain amount f she invested wanted to invoks. The week what is the much k is increase are no loss?	at in a bank a d in for 4 year est and the rackly total cost thin inimum quand by 20%, we	es and Rs. 83 te of composition is gottity that need what would	8578.05, if shound interest. given by C= 1 ds to be produced be the minima week, find the	e invested it for 6 (7) $5x + 3000$. (8) uced to ensure no
Q2 (a) Kandbank promise years. Find to (b) A compart (i) If each not loss? (ii) If the seneeds to be (iii) If it is ensure the compart (iiii) If it is ensure the compart (iiii) If it is ensure the compart (iii)	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in adompany, no ome theatre stalments of	to invest a cer Rs. 73205 in amount she watures notebook old at Rs.25, wo fan notebook doold to ensulvance that at loss.	ertain amount f she invested wanted to invoks. The week what is the multiple was a single was a	at in a bank a d in for 4 year est and the rackly total cost inimum quand by 20%, we tebooks can be or	rs and Rs. 83 te of composition is getity that need what would be sold per that Rs.6000	8578.05, if shound interest. given by C= 1 ds to be prodube the minim week, find the part of the part	e invested it for 6 (7) $5x + 3000$. (8) uced to ensure no
Q2 (a) Kandbank promise years. Find to (b) A compart (i) If each not loss? (ii) If the some needs to be (iii) If it is learner the compart (iii) If it is le	chan wanted sed to pay he the principal any manufactotebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be	to invest a cer Rs. 73205 is amount she watures notebooold at Rs.25, wo of a notebooold sold to ensulvance that at loss. is purchased Rs.3000, each price of the second sold to ensulvance that at loss.	ertain amount f she invested wanted to invoks. The week what is the modern the invested what is the modern the invested with the invested was a second with	at in a bank a d in for 4 year est and the rackly total cost d inimum quand d by 20%, we tebooks can be or	rs and Rs. 83 te of composition is getity that need that would be sold per that Rs.6000 th quarter. If	8578.05, if shound interest. given by C= 1 ds to be produced be the minima week, find the contract of the rate of C	e invested it for 6 (7) $5x + 3000$. (8) uced to ensure no turn quantity that the selling price to aid initially and 4 ompound Interest (7)
Q2 (a) Kand bank promis years. Find to (b) A compa (i) If each no loss? (ii) If the so needs to be (iii) If it is lensure the compared to the quarterly insis 7% p.a., for the principal to the p	chan wanted sed to pay he the principal any manufactotebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be it.	to invest a cer Rs. 73205 is amount she watures notebooold at Rs.25, wo of a notebooold sold to ensulvance that at loss. is purchased Rs.3000, each price of the second sold to ensulvance that at loss.	ertain amount f she invested wanted to invoks. The week what is the mk is increase are no loss? least 400 no on instalment h payable at the system.	at in a bank a d in for 4 year est and the rackly total cost inimum quand d by 20%, we tebooks can be to basis such the end of each eertain amount of the cost of the end of each eertain amount of the end of each eertain end end eertain end eertain end end eertain end eertain end end eertain	rs and Rs. 83 te of composition is getity that need what would be sold per that Rs.6000 th quarter. It	8578.05, if shound interest. given by C= 1 ds to be produced be the minima week, find the contract of the rate of C	the invested it for 6 (7) (5x + 3000. (8) (8) (9) (9) (10) (10) (10) (11) (11) (12) (13) (14) (15) (15) (17) (18) (18) (19) (19) (19) (19) (19) (19) (19) (19
Q2 (a) Kand bank promis years. Find to (b) A compa (i) If each no loss? (ii) If the so needs to be (iii) If it is lensure the compared to the quarterly insis 7% p.a., for the principal to the p	chan wanted sed to pay he the principal any manufactotebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be it.	to invest a cer Rs. 73205 in amount she was tures notebook old at Rs.25, wo fa notebook doubt to ensure that at loss. is purchased Rs.3000, each price of the setween S.I. are	ertain amount f she invested wanted to invoks. The week what is the mk is increase are no loss? least 400 no on instalment h payable at the system.	at in a bank a d in for 4 year est and the rackly total cost inimum quand d by 20%, we tebooks can be to basis such the end of each eertain amount of the cost of the end of each eertain amount of the end of each eertain end end eertain end eertain end end eertain end eertain end end eertain	rs and Rs. 83 te of composition is getity that need what would be sold per that Rs.6000 th quarter. It	8578.05, if shound interest. given by C= 1 ds to be produced be the minima week, find the part of C are to be part the rate of C are at 10% p.a.	the invested it for 6 (7) (5x + 3000. (8) (8) (9) (9) (10) (10) (10) (11) (11) (12) (13) (14) (15) (15) (17) (18) (18) (19) (19) (19) (19) (19) (19) (19) (19
Q2 (a) Kandbank promise years. Find to (b) A compact (i) If each not loss? (ii) If the some eds to be (iii) If it is learned to be (iii) If it is learned to be quarterly in the principal (ii) If f(x)=2	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be di.	to invest a cer Rs. 73205 is amount she watures notebooold at Rs.25, wo of a notebooold sold to ensulvance that at loss. is purchased Rs.3000, each price of the setween S.I. are and x for which	ertain amount f she invested wanted to invoks. The week what is the multiple who in instalment h payable at the system. In f(x)=f(x+2).	at in a bank a d in for 4 year est and the rackly total cost dinimum quand d by 20%, where the books can be the end of each eertain amount.	rs and Rs. 83 te of composition is getity that need what would be sold per that Rs.6000 th quarter. It	8578.05, if shound interest. given by C= 1 ds to be produced be the minimal week, find the control of the rate of C are at 10% p.a.	the invested it for 6 (7) (5x + 3000. (8) (8) (9) (9) (10) (10) (10) (10) (11) (11) (12) (13) (14) (15) (15) (17) (18) (18) (19) (19) (19) (19) (19) (19) (19) (19
Q2 (a) Kandbank promisyears. Find to (b) A compa (i) If each no loss? (ii) If the soneeds to be (iii) If it is lensure the compact of the principal (ii) If f(x)=2 Q3 (a) If the	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be l. 2x²-3x+7, first e mode of the	to invest a cer Rs. 73205 is amount she watures notebook old at Rs.25, wo of a notebook doold to ensure that at loss. is purchased Rs.3000, each price of the setween S.I. are not x for which the following is	ertain amount of she invested wanted to invoks. The week what is the modern the invested was a second on instalment on instalment of the invested of t	tin a bank a din for 4 year est and the rackly total cost inimum quand by 20%, we tebooks can be total frequence to the first total frequ	rs and Rs. 83 the of composition is gettity that need what would be sold per that Rs.6000 th quarter. If the for 4 years are given by the sold per that for 4 years are given by the sold per that for 4 years are given by the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that the sold per the sold per that the sold per	3578.05, if shound interest. given by C= 1 ds to be produced be the minimal week, find the date of C are to be part the rate of C are at 10% p.a.	e invested it for 6 (7) 5x + 3000. (8) uced to ensure no um quantity that he selling price to hid initially and 4 compound Interes (7) is Rs.1282. Finc (4) (4)
Q2 (a) Kandbank promis years. Find to (b) A compa (i) If each no loss? (ii) If the so needs to be (iii) If it is lensure the compart of the principa (ii) If f(x)=2	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be di.	to invest a cer Rs. 73205 is amount she watures notebooold at Rs.25, wo of a notebooold sold to ensulvance that at loss. is purchased Rs.3000, each price of the setween S.I. are and x for which	ertain amount f she invested wanted to invoks. The week what is the multiple who in instalment h payable at the system. In f(x)=f(x+2).	at in a bank a d in for 4 year est and the rackly total cost dinimum quand d by 20%, where the books can be the end of each eertain amount.	rs and Rs. 83 te of composition is getity that need what would be sold per that Rs.6000 that for 4 years recy is 186, for 1000-	3578.05, if shound interest. given by C= 1 ds to be produced be the minimal week, find the distance of C are to be part the rate of C are at 10% p.a.	the invested it for 6 (7) $5x + 3000$. (8) the uced to ensure not the price to the selling pr
Q2 (a) Kandbank promisyears. Find to (b) A compa (i) If each no loss? (ii) If the soneeds to be (iii) If it is lensure the compact of the principal (ii) If f(x)=2 Q3 (a) If the	chan wanted sed to pay he the principal any manufac otebook is so elling price produced an known in adompany, no ome theatre stalments of find the cash difference be l. 2x²-3x+7, first e mode of the	to invest a cer Rs. 73205 is amount she watures notebook old at Rs.25, wo of a notebook doold to ensure that at loss. is purchased Rs.3000, each price of the setween S.I. are not x for which the following is	ertain amount of she invested wanted to invoks. The week what is the modern the invested was a second on instalment on instalment of the invested of t	tin a bank a din for 4 year est and the rackly total cost inimum quand by 20%, we tebooks can be total frequence to the first total frequ	rs and Rs. 83 the of composition is gettity that need what would be sold per that Rs.6000 th quarter. If the for 4 years are given by the sold per that for 4 years are given by the sold per that for 4 years are given by the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that the sold per that Rs.6000 the quarter. If the sold per that for 4 years are given by the sold per that the sold per the sold per that the sold per	3578.05, if shound interest. given by C= 1 ds to be produced be the minimal week, find the date of C are to be part the rate of C are at 10% p.a.	e invested it for 6 (7) 5x + 3000. (8) uced to ensure no num quantity that he selling price to hid initially and 4 compound Interest (7) is Rs.1282. Finc (4) (4)

Instructions:

were from pune and the rest from Nasik. Amongst the graduates from pune, 350 were experienced and 80 were inexperienced. While, the corresponding figures for undergraduates from Nasik were 615 and 52 respectively. The total number of inexperienced candidates from Poona and Nasik were 175 and 192 respectively. Present the above information in a suitable tabular form. (8)

Commission	10-20	20-40	40-60	60-80	80-100	100-120	120-150
in Rs.		·					
No. of	4	5	7	8	3	2	2
salesmen							27.1 7.15

(b) Represent the following data by a subdivided bar diagram. The data represents figures of production of papers in thousand tonnes for the years 2010, 2011, 2012. (8)

Types	2010	2011	2012
Printing and writing	35	40	50
Wrapping	18	19	15
Boards	16	15	15
Special varieties	7	5	5

Q4(a)Calculate M.D. from the mean and its coefficient for the following data

(7)

Class-interval	0-10	10-20	20-30	30-40	40-50
frequency	15	20	40	20	5

(b) For the following data find (1) $P_{01}(L)$ (2) $P_{01}(P)$ (3) $P_{01}(F)$ (4) $P_{01}(D-B)$

(8)

Commodity	Base year		Current year		
	Price	Quantity	Price	Quantity	
A	4	10	5	12	
В	3	8	6	10	
C	2	8	3	9	
D	5	4	8	5	

OR

Q4 (a) Find the standard deviation and C.V. for the following data.

(7)

Marks	0-20	20-25	25-30	30-35	35-40	40-50
No. of	16	28	42	30	18	14
students	XC1 = 3 41	noals st notion	ur ros istor vid	DOKS, I DE VECH	nachires noten	main ynagmes A

(b) From the following data calculate the cost of living index number for 2006 by the Family Budget Method. Also obtain the expenditure of a persons in the year 2006 if his expenditure in 2001 was Rs. 6000.

Group	Price in 2001	Price in 2006	Weight
Food	15	36	60
Clothing	48	96	5
Lighting &fuel	30	90	10
Rent	60	180	15
Miscellaneous	45	90	10

Q5 (A)Write in short uses of statistics in business and limitations of statistics.

(7)

(B) Write in short uses of index number and type of index number

(8)

OR

Q5 Attempt any three out five.

(15)

(A) Write in short of census and sample survey.

(B) Write in short on present and future value.

(C) Write in short on Qualitative and Quantitative data.

(D) Write in short on Partition values.

(E) Write short note on immediate annuity and annuity due with formula