



# PUNJAB BOARD OF TECHNICAL EDUCATION

21-A, Kashmir Block Allama Iqbal Town, Lahore

[www.pbte.edu.pk](http://www.pbte.edu.pk) - R&D Section Tel # 042-99260273

SAY NO TO CORRUPTION

No: PBTE/R&D/2024//

Dated: 11-01-24

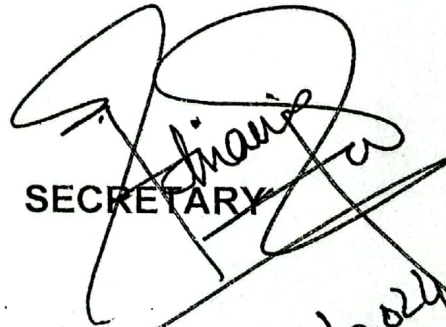
## NOTIFICATION

It is for the information of all concerned that the academic wing of TEVTA has rationalized the number of chapter-wise exercise problems for the subjects of **Math-223**. It is clarified that problem mentioned in the communiqué of Academics Wing TEVTA will only be considered by the paper setters for setting of question papers of this variant of Mathematics offered in DAE stream.

In addition, the other contents within the detailed chapters of said books i.e. examples, numerical as well as theory, definitions, theorems and derivations etc. will be considered intact and included for paper setting w.e.f. current session i.e. 2023-24 and onward. The paper setters are advised that, while setting the question papers, only approved textbook for this variant of Mathematics must be used to avoid any ambiguity, in future.

The detail of rationalized problems is available on Board's website and may be downloaded from the link i.e. <https://www.pbte.edu.pk/Ptextbooks.aspx>

All concerned are requested to note, please.

  
SECRETARY  
11/01/2024




Copy for information to:

- 1- The DG Academics, TEVTA, Lahore.
- 2- The DG Operations-I, TEVTA, Lahore.
- 3- PA to Chairman, PBTE, Lahore.
- 4- PA to Secretary, PBTE, Lahore.
- 5- PA to Controller of Examinations, PBTE, Lahore.
- 6- The principals concerned.
- 7- Deputy Controller of Examinations (Conduct), PBTE, Lahore.
- 8- Deputy Controller of Examinations (Secrecy), PBTE, Lahore.
- 9- Assistant Controller of Examinations (Conduct), PBTE, Lahore.
- 10- Assistant Controller of Examinations (Secrecy), PBTE, Lahore.
- 11- Assistant Controller of Examinations (Technical), PBTE, Lahore.
- 12- Assistant Controller of Examinations (P&P-I), PBTE, Lahore.
- 13- Assistant Controller of Examinations (P&P- II), PBTE, Lahore.
- 14- Web Administrator, PBTE Lahore to upload on Board Website.

Rationalized Exercise and related problems to be included during paper setting by PBTE

Math-223 Paper (A)		
Chapter No	Exercise	Rationalized Exercise Problem
1	<b>Function &amp; Limits</b>	
	Ex# 1.1	Q#1,2,3,6,7,8,10,11,12
	EX#1.2	Q#1(i-iv),Q#2 (i-v),3(I,ii),4(i-iv),5(i-iv)
	EX#1.3	Q#1(i-viii),2,3(i,iii)
	Short Questions	1-5,8-10,12,14,15
	MCQ.s	All
2	<b>Derivative</b>	
	Ex#2.1	Q#1 ( i-v ) , 2 (I)
	EX#2.2	Q#1 (i-ix) , 2 (i-iv,vii,viii) , 3(1-iv,vii,viii,ix) , 4(i-v,viii,ix) , 5(i-iv)
	EX#2.3	Q#1(i-iii),v-viii),2(I,ii),3(i-iii,vi,vii),4(i-iii)
	Ex#2.4	Q#1 (i-v)
	Short Questions	2,4,5,6,7,8,9,10,11,12,13,14,17,18
MCQ.s	ALL	
3	<b>Inverse Trigonometric Functions</b>	
	Ex#3.1	Q#2(i-vi,viii) , 3(i-iv,viii,ix),5(I,ii),6,7(ii),8(i),9(i-iv)
	EX#3.2	Q#1(i-iii),2 (I,iii,v),3,4(i),5
	EX#3.3	Q#1(i-vi,viii,x,xii),2 (i-v,x) , 3(I,iii)
	Short Questions	3,5,6-10,14,15,17
	MCQ.s	1-10
4	<b>Rate of Change of variable</b>	
	Ex#4.1	Q# 1-3
	EX#4.2	Q#1(i-iv) , Q#2 (i-vi) , 3 ( I,ii ) , 4 , 8
	Short Questions	1,2,6,7,10,14,15,16,17,19
	MCQ.s	ALL
5	<b>Statistics</b>	
	Ex#5.1	Q#1,2,3,5,6,9
	EX#5.2	Q#1-6
	Short Questions	Q#7-21
	MCQ.s	10-20
6	<b>Probabilities</b>	
	Ex#6.1	Q#1-5
	EX#6.2	Q#1,2,3,5,6
	Short Questions	Q#1-9
	MCQ.s	Q#1-5,11-15

Signature of Committee:

- 1- KHALID SULTAN<sub>MP</sub> (GCT (W), Sargodha) 
- 2- MOHSIN NAIZ<sub>Lec.</sub> (GCT, Faisalabad) . 
- 3- M IRFAN A SLAM<sub>Lec.</sub> (GCT, SAHIWAL) 

  
Dir (cur.)

## Math-223 Paper (B)

7	<b>Integration</b>	
	Ex#7.1	Q#1-11, 14-17
	EX#7.2	Q#1-2 , 4-6, 8,9,11
	EX#7.3	Q#1 (i-vi,ix- xi,xiii), 2 ( i-iii , v )
	Short Questions	1-5 , 7, 8 , 10, 11, 12, 15
	MCQ.s	All
8	<b>Method of Integration</b>	
	Ex#8.1	Q#1 ( I - iv ) , 2 ( i-iii ) , 3 ,4 (i-iv)
	EX#8.2	Q#1 ( i -ii,iv,viii)
	EX#8.3	Q#1 (i-iv), 2 ( ii, iv ) , 3 (i-iii,vi), 4 (i-ii)
	Short Questions	1-10 ,13-15
	MCQ.s	All
9	<b>Definite Integral</b>	
	Ex#9.1	Q#1 (i-viii) , 2 (i-iii,vii)
	EX#9.2	Q#2 , 3 ,5-10
	Short Questions	2-5,7-12,14,17
	MCQ.s	ALL
10	<b>Differential Equation</b>	
	Exercice 10	Q#1 -10,16,17
	Short Questions	1-3,5,10-14
	MCQ.s	ALL
11	<b>The Straight Line</b>	
	Ex#11.1	Q:1 - 5
	EX#11.2	Q:1-5
	EX#11.3	Q:1-5
	EX#11.4	Q:1-10
	EX#11.5	Q:1,3,4,7,8
	EX#11.6	Q:1-4
	Short Questions	Q:1-4, 9 to 20
	MCQ.s	1 to 10
12	<b>The Circle</b>	
	Exercise 12	Q#1,2,3(I,ii,iii),4,6(i),7,8,9
	Short Questions	1 to 10 ,12 to 14,16,17
	MCQ.s	1 to 10

Signature of Committee:

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