

BOARD OF INTERMEDIATE & SECONDARY EDUCATION, SAKHIAL

1-6/13

SUBJECT: Statistics EXAM Inter 2nd A/2022 CLASS: 2nd year

GROUP: DATE: 05.12.22

(GENERAL INSTRUCTIONS FOR MARKING KEY)

Q. No. 6 (a) $N=4, n=2$, with replacement

All possible samples = $N^n = 4^2 = 16$

Samples	means $\bar{x}$	f	$p(\bar{x})$	$\bar{x}p(\bar{x})$	$\bar{x}^2 p(\bar{x})$
1,1	1	1	1/16	1/16	1/16
1,3	2	2	2/16	4/16	8/16
1,5	3	3	3/16	9/16	27/16
1,7	4	4	4/16	16/16	64/16
3,1	2	3	3/16	15/16	75/16
3,3	4	2	2/16	12/16	48/16
3,5	5	1	1/16	7/16	49/16
3,7	6	1	1/16	6/16	36/16
5,1	3	4	4/16	12/16	36/16
5,3	4	5	5/16	20/16	80/16
5,5	5	6	6/16	30/16	90/16
5,7	6	7	7/16	42/16	126/16
7,1	4	4	4/16	16/16	64/16
7,3	5	5	5/16	25/16	125/16
7,5	6	6	6/16	36/16	216/16
7,7	7	7	7/16	49/16	343/16
	(2 means)	16	1	64/16	296/16

$$\sigma_{\bar{x}}^2 = \sum \bar{x}^2 p(\bar{x}) - [\sum \bar{x} p(\bar{x})]^2$$

$$= \frac{296}{16} - \left(\frac{64}{16}\right)^2$$

$$= 18.5 - 16$$

$$= 2.5$$

(01 marks)

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