

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2026

Name of Subject: STATISTICS

Group:

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
	2181		2183		2185		2187	
1	A	Sample Data	D	K	C	1	D	Composite
2	C	37-47	B	$\sqrt{v(x)+v(y)}$	D	variance	B	Simple Ass
3	D	variable	C	Symmetrical	B	n, K, N	A	$A \cap B = \emptyset$
4	B	Classification	D	Composite	C	1	B	0.35
5	A	20	B	Simple Ass	A	Dependent	C	1
6	D	K	A	$A \cap B = \emptyset$	A	Sample Data	D	Variance
7	B	$\sqrt{v(x)+v(y)}$	B	0.35	C	37-47	B	n, K, N
8	C	Symmetrical	C	1	D	variable	C	1
9	D	Composite	D	variance	B	Classical	A	Dependent
10	B	Simple Ass	B	n, K, N	A	20	A	Sample Data
11	A	$A \cap B = \emptyset$	C	1	D	K	C	37-47
12	B	0.35	A	Dependent	B	$\sqrt{v(x)+v(y)}$	D	Variable
13	C	1	A	Sample Data	C	Symmetrical	B	Classific
14	D	variance	C	37-47	D	Composite	A	20
15	B	n, N, K	D	variable	B	Simple Ass	D	K
16	C	1	B	Classifi	A	$A \cap B = \emptyset$	B	$\sqrt{v(x)+v(y)}$
17	A	Dependent	A	20	B	0.35	C	Symmetrical
18								
19								
20								
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	4544		4544		4544		4544	

سرٹیفکٹ بابت صحیح سوال پرچہ مارکنگ Key

ہم نے مشنوں STATIS پرچہ _____ گروپ _____ N/A _____ انٹرمیڈیٹ پہلا سالانہ امتحان 2026 کا سوالیہ پرچہ (Subjective & Objective) کو منظر عین چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 19/06/26

S.#	Name	Designation	Institution	Mobile No	Signature
1	Muhammad Ahsan	Associate Prof	Govt. Graduate College (Science)	0300-6162184	
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3					
4					
5					

Re-Checked By ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) معروضی "Key" اور ہدایات کے حوالہ سے مکمل طور پر تلی کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Mingal Jamar Royce Bar	A.P.	Govt. W.H.I. GC, Multan	0321-6303691	
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Multan 20/06/26

INTERMEDIATE PART-I (11 th Class)		2026 (1 st -A)	Roll No:			
STATISTICS PAPER-I						
TIME ALLOWED: 2.40 Hours		SUBJECTIVE	MAXIMUM MARKS: 68			
NOTE: Write same question number and its parts number on answer book, as given in the question paper.						
SECTION-I						
2. Write answers of any eight parts.			8 × 2 = 16			
(i)	Define "Statistics". ✓					
(ii)	Define the term "Sample". ✓					
(iii)	Define the term Continuous Variable. ✓					
(iv)	Write any two disadvantages of Mean. ✓					
(v)	Find Median of - 3, -1, 0, 8, 6, 4. ✓					
(vi)	Give the definition of percentiles. ✓					
(vii)	Define the term average. ✓					
(viii)	Find A.M of 2 and 9. ✓					
(ix)	Define Composite Index Number. ✓					
(x)	If $\sum p_0 q_0 = 428, \sum p_1 q_0 = 362$. Find Laspeyre's Index Number. ✓					
(xi)	Explain the concept of Value Index Number. ✓					
(xii)	Define the concept of Unweighted Index Number. ✓					
3. Write answers of any eight parts.			8 × 2 = 16			
(i)	Describe the term ogive. ✓					
(ii)	Write a short note on the term tabulation. ✓					
(iii)	The frequencies of a data are: 4, 20, 23, 13, 10. Compute cumulative frequencies. ✓					
(iv)	Define quartile deviation. ✓					
(v)	Explain the term relative measure of dispersion. ✓					
(vi)	Elaborate the term kurtosis. ✓					
(vii)	If $\sum x = 180, S^2 = 36$ and $n = 5$. Calculate $\sum x^2$. ✓					
(viii)	For $m_3 = -0.8$ and $m_2 = 5.2$. Find first moment ratio. ✓					
(ix)	Explain intersection of sets. ✓					
(x)	State the concept of Sample space. ✓					
(xi)	Compute 3P_2 and 7C_3 . ✓					
(xii)	Calculate $P(A \cap B)$ for $P(A) = 0.6, P(B) = 0.5$ and $P(A \cup B) = 0.9$. ✓					
4. Write answers of any six parts.			6 × 2 = 12			
(i)	Define Random Experiment. ✓					
(ii)	Write any two properties of Expectation. ✓					
(iii)	Given $Var(X) = 5$ and $Var(Y) = 4$. Find $Var(X - Y)$. ✓					
(iv)	What are the properties of Distribution Function? ✓					
(v)	Define Bernoulli trials. ✓					
(vi)	Given $n = 5, p = 0.35, q = 0.65$. Find mean and variance of Binomial Distribution. ✓					
(vii)	Define Binomial Probability Distribution. ✓					
(viii)	Write any two properties of Hypergeometric Experiment. ✓					
(ix)	Given $N = 8, k = 3, n = 3$ find $P(X = 0)$. ✓					
SECTION-II						
NOTE: Write answers of any three questions.			3 × 8 = 24			
5.(a)	Calculate Mode from the data given below: 4					
	Marks	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34
	f	05	15	08	07	05
(b)	For the following data given below: 4					
	Classes	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
	f	5	9	16	20	10
	Calculate D_7 . ✓					
6.(a)	Given that, $n = 15, \sum x = 480, \sum x^2 = 15735$ find mean, standard deviation and co-efficient of variation. 4					
(b)	Given that, $\sum f = 120, \sum fx = 296$, Mode=2.9444, variance=1.4884 find co-efficient of Skewness(SK). 4					
7.(a)	Construct the chain indices from the following data: 4					
	Years	Commodities				
		Fire wood	Soft coal	Oil		
	2005	3.25	2.50	0.20		
	2006	3.44	2.80	0.22		
	2007	3.50	2.00	0.25		
(b)	If three(03) coins are tossed, then find the probability of getting (i) Exactly 2 Heads (ii) At least 2 Heads 4					
8.(a)	A function is given by $f(x) = \frac{3+2x}{18}, 2 \leq x \leq 4$. Show that it is probability density function. Also find $P(x > 2.5)$. 4					
(b)	Let x be a random variable with the following probability distribution: 4					
	x	-1	0	1	2	3
	P(x)	0.125	0.50	0.20	0.05	0.125
	Find (i) E(x) (ii) var(x) ✓					
9.(a)	An event has probability $p = \frac{3}{4}$. Find complete Binomial Distribution for $n = 5$ trials. Find its mean and also compare the results. 4					
(b)	Three balls are drawn from a bag contains 5 white and 3 black balls. If x denotes the number of white balls drawn from the bag. What is the probability distribution of x. 4					

PAPER CODE: 2181		2026 (1 st -A)		Roll No:	
INTERMEDIATE PART-I (11 th Class)					
STATISTICS PAPER-I					
TIME ALLOWED: 20 Minutes			OBJECTIVE		MAXIMUM MARKS: 17
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	Statistic is a characteristic calculated from:	Sample data ✓	Population data	Arrayed data	Fictitious data
2	The mid-value of a class is 42 if the class size is 10 then lower and upper class boundary are:	37.5 – 47.5	47 – 37	37 – 47 ✓	47.5 – 37.5
3	A characteristic that can have different values is called:	Random sample	Constant	Arrayed data	Variable ✓
4	The arrangement of data into homogeneous group is called:	Tabulation	Classification ✓	Table	Data array
5	If $\bar{x} = 10$ and $y = 3x - 10$ then arithmetic mean of y is:	20 ✓	24	25	29
6	The median of the letter N, F, E, K, Q, E, C, Y, X, is:	Q	F	E	K ✓
7	If x and y are independent then $S.D(x - y) =$	$S.D(x) - S.D(y)$	$\sqrt{\text{var}(x) + \text{var}(y)}$ ✓	$S.D(x) + S.D(y)$	$\sqrt{\text{var}(x) - \text{var}(y)}$
8	If the third moment about mean is zero, then the distribution is:	Positively skewed	Negatively skewed	Symmetrical ✓	MesoKurtic
9	An index number based on two or more commodities is called:	Link relative	Price relative	Sample relative	Composite index ✓
10	$\frac{\sum p_n}{\sum p_o} \times 100$ is called:	Simple index	Simple aggregative index ✓	Weighted index	Price relative
11	Two event A and B are mutually exclusive. if:	$A \cap B = \phi$ ✓	$A \cup B = \phi$	$A \cap B = S$	$A \cap B = 1$
12	For two independent events A and B $P(A) = 0.7$, $P(B) = 0.5$ then $P(A \cap B)$ is:	0.2	0.35 ✓	0.85	1.2
13	The total area under the curve of a continuous $p.d.f$ is equal to:	0	0.5	1 ✓	100
14	$E(x - \mu)^2$ is equal to:	Quartile deviation	Standard deviation	Mean deviation	Variance ✓
15	The parameters of hypergeometric distribution are:	$n_1 K_1 q$	$n_1 K, N$ ✓	$n_1 P_1 K$	$n_1 P_1 N$
16	p or q cannot be greater than:	$\frac{1}{2}$	0	1 ✓	$\frac{2}{3}$
17	In hypergeometric distribution the successive trials are:	Dependent ✓	Uncertain	Known	Independent

PAPER CODE: 2183		2026 (1 st -A)		Roll No: _____	
STATISTICS PAPER-I		INTERMEDIATE PART-I (11 th Class)			
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The median of the letter N, F, E, K, Q, E, C, Y, X, is:	Q	F	E	K ✓
2	If x and y are independent then $S.D(x - y) =$	$S.D(x) - S.D(y)$	$\sqrt{\text{var}(x) + \text{var}(y)}$ ✓	$S.D(x) + S.D(y)$	$\sqrt{\text{var}(x) - \text{var}(y)}$
3	If the third moment about mean is zero, then the distribution is:	Positively skewed	Negatively skewed	Symmetrical ✓	MesoKurtic
4	An index number based on two or more commodities is called:	Link relative	Price relative	Sample relative	Composite index ✓
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8	The total area under the curve of a continuous $p.d.f$ is equal to:	0	0.5	1 ✓	100
9	$E(x - \mu)^2$ is equal to:	Quartile deviation	Standard deviation	Mean deviation	Variance ✓
10	The parameters of hypergeometric distribution are:	$n_1 K_1 q$	$n_1 K, N$ ✓	$n_1 P_1 K$	$n_1 P_1 N$
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15	A characteristic that can have different values is called:	Random sample	Constant	Arrayed data	Variable ✓
16	The arrangement of data into homogeneous group is called:	Tabulation	Classification ✓	Table	Data array
17	If $\bar{x} = 10$ and $y = 3x - 10$ then arithmetic mean of y is:	20 ✓	24	25	29

PAPER CODE: 2185		2026 (1 st -A)		Roll No: _____	
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TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The total area under the curve of a continuous <i>p.d.f</i> is equal to:	0	0.5	1 ✓	100
2	$E(x - \mu)$ is equal to:	Quartile deviation	Standard deviation	Mean deviation	Variance ✓
3	The parameters of hypergeometric distribution are:	$n_1 K_1 q$	$n_1 K, N$ ✓	$n_1 P_1 K$	$n_1 P_1 N$
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10	If $\bar{x} = 10$ and $y = 3x - 10$ then arithmetic mean of y is:	20 ✓	24	25	29
11	The median of the letter N, F, E, K, Q, E, C, Y, X, is:	Q	F	E	K ✓
12	If x and y are independent then $S.D(x - y) =$	$S.D(x) - S.D(y)$	$\sqrt{\text{var}(x) + \text{var}(y)}$ ✓	$S.D(x) + S.D(y)$	$\sqrt{\text{var}(x) - \text{var}(y)}$
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5	The total area under the curve of a continuous p.d.f is equal to:	0	0.5	1 ✓	100
6	$E(x - \mu)^2$ is equal to:	Quartile deviation	Standard deviation	Mean deviation	Variance ✓
7	The parameters of hypergeometric distribution are:	$n_1 K, q$	$n_1 K, N$ ✓	$n_1 P, K$	$n_1 P, N$
8	p or q cannot be greater than:	$\frac{1}{2}$	0	1 ✓	$\frac{2}{3}$
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