2019 (A) Roll No: ______________

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-I TIME ALLOWED: 2.30 Hours

SUBJECTIVE MAXIMUM MARKS: 80

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any eight parts. **$8 \times 2 = 16$**

(i) Express $\left(2+\sqrt{-3}\right)\left(3+\sqrt{-3}\right)$ in the form of $a+bi$ and simplify.

(ii) Find the multiplicative inverse of $(-4, 7)$

(iii) Factorize $9a^2+16b^2$

(iv) Define union of two sets and give an example.

(v) If A and B are any two sets then prove $(A \cup B)' = A' \cap B'$

(vi) Define tautology and absurdity.

(vii) If A and B are non singular matrices then prove $(AB)^{-1} = B^{-1}A^{-1}$

(viii) Find the inverse of matrix $A = \begin{bmatrix} -2 & 3 \\ -4 & 5 \end{bmatrix}$

(ix) If $A = \begin{bmatrix} 0 & 2-3i \\ -2-3i & 0 \end{bmatrix}$ then show that A is skew-hermitian.

(x) Solve the equation $x^{1/2} - x^{1/4} - 6 = 0$

(xi) Using factor theorem show that $(x-1)$ is a factor of x^2+4x-5

(xii) The sum of a positive number and its reciprocal is $\frac{26}{5}$. Find the number.

3. Attempt any eight parts. **$8 \times 2 = 16$**

(i) Define "Proper Rational Fraction".

(ii) Resolve $\frac{x^2+1}{(x+1)(x-1)}$ into Partial Fractions.

(iii) For the identity $\frac{2x+1}{(x-1)(x+2)(x+3)} = \frac{A}{x-1} + \frac{B}{x+2} + \frac{C}{x+3}$ Calculate the value of B.

(iv) Find the next two terms of the sequence: $1, 3, 7, 15, 31, ----$

(v) If the nth term of the A.P is $3n-1$, find its first three terms.

(vi) Find the 11th term of the geometric sequence: $1+i,\ 2,\ \frac{4}{1+i}, ---$

(vii) Insert two G. Ms. between 1 and 8.

(viii) Find the 12th term of the harmonic sequence: $\frac{1}{3}, \frac{2}{9}, \frac{1}{6}, ----$

(ix) Find the value of n when ${}^{n}P_4 : {}^{n-1}P_3 = 9:1$

(x) Prove the formula for $n=1$ and $n=2$: $1+4+7+---+(3n-2) = \frac{n(3n-1)}{2}$

(xi) Calculate $(0.97)^3$ by using binomial theorem.

(xii) Expand upto 4 terms: $(2-3x)^{-2}$ taking the values of x such that expansion is valid.

P.T.O.

4. **Attempt any nine parts.** **$9 \times 2 = 18$**

(i) Find θ, if $\ell = 1.5\,cm,\ r = 2.5\,cm$

(ii) Prove $2\sin 45^o + \frac{1}{2}\operatorname{cosec}45^o = \frac{3}{\sqrt{2}}$

(iii) Prove $(\tan\theta + \cot\theta)^2 = \sec^2\theta\operatorname{cosec}^2\theta$

(iv) Prove $\frac{\tan\alpha + \tan\beta}{\tan\alpha - \tan\beta} = \frac{\sin(\alpha+\beta)}{\sin(\alpha-\beta)}$

(v) Prove $\frac{\tan\frac{\theta}{2} + \cot\frac{\theta}{2}}{\cot\frac{\theta}{2} - \tan\frac{\theta}{2}} = \sec\theta$

(vi) Prove $\sin\left(\frac{\pi}{4} - \theta\right)\sin\left(\frac{\pi}{4} + \theta\right) = \frac{1}{2}\cos 2\theta$

(vii) Find the period of $\cos 2x$.

(viii) Find the area of a ΔABC, if $b = 37,\ c = 45,\ \alpha = 30^o50'$

(ix) Prove $R = \frac{abc}{4\Delta}$

(x) Prove $r\,r_1 r_2 r_3 = \Delta^2$

(xi) Prove $\cos(Sin^{-1}x) = \sqrt{1 - x^2}$

(xii) Find the solution of $\sec x = -2$ which lie in $[0,\ 2\pi]$

(xiii) Find the values of θ satisfying the equation $2\sin\theta + \cos^2\theta - 1 = 0$

SECTION-II

NOTE: - Attempt any three questions. **$3 \times 10 = 30$**

5.(a) Show that the set $\{1, w, w^2\}$ when $w^3 = 1$ is an abelian group w.r.t. ordinary multiplication. 5

(b) Find n so that $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ may be A.M between a and b. 5

6.(a) Find the inverse of the matrix $A = \begin{bmatrix} 2 & 5 & -1 \\ 3 & 4 & 2 \\ 1 & 2 & -2 \end{bmatrix}$ by using column operation. 5

(b) A die is thrown twice. What is the probability that the sum of dots shown is 3 or 11. 5

7.(a) Find the condition that $\frac{a}{x-a} + \frac{b}{x-b} = 5$ may have roots equal in magnitude but opposite in signs. 5

(b) Use binomial theorem to prove that $1 + \frac{1}{4} + \frac{1.3}{4.8} + \frac{1.3.5}{4.8.12} + - - - - = \sqrt{2}$ 5

8.(a) If $\cot\theta = \frac{5}{2}$ and the terminal arm of the angle is in the I quadrant, then find the value of $\frac{3\sin\theta + 4\cos\theta}{\cos\theta - \sin\theta}$ 5

(b) Find the value of $\sin 18^o$ without using table or calculator. Hint: $5\theta = 2\theta + 3\theta = 90^o$ 5

9.(a) Prove that $\frac{1}{2rR} = \frac{1}{ab} + \frac{1}{bc} + \frac{1}{ca}$ 5

(b) Prove that $Tan^{-1}\frac{1}{11} + Tan^{-1}\frac{5}{6} = Tan^{-1}\frac{1}{3} + Tan^{-1}\frac{1}{2}$ 5

Paper Code Number:	2191

2019 (A) Roll No: ____________

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-I

TIME ALLOWED: 30 Minutes

OBJECTIVE

MAXIMUM MARKS: 20

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) If $i = \sqrt{-1}$, then $i^{14} =$

(A) 1 (B) -1 (C) i (D) $-i$

(2) The symbol used to denote a biconditional between two propositions is:

(A) $\longrightarrow$ (B) $\wedge$ (C) $\longleftrightarrow$ (D) $\vee$

(3) For a non singular matrix A, if $AX = B$, then $X =$

(A) $A^{-1}B$ (B) BA^{-1} (C) $(AB)^{-1}$ (D) $(BA)^{-1}$

(4) If $A = \begin{bmatrix} 1 & -2 & 3 \\ 0 & 0 & 1 \\ 4 & 5 & 2 \end{bmatrix}$, then $M_{13} =$ (A) 13 (B) 0 (C) 10 (D) 7

(5) The number of roots of polynomial $8x^6 - 19x^3 - 27 = 0$ are: (A) 2 (B) 4 (C) 6 (D) 8

(6) If s = sum of roots and p = product of roots, then quadratic equation can be written as:

(A) $x^2 + sx + p = 0$ (B) $x^2 - sx - p = 0$ (C) $x^2 - sx + p = 0$ (D) $sx^2 - sx + p = 0$

(7) $\dfrac{2x^2}{(x-3)(x+2)^2}$ is a fraction: (A) Proper (B) Improper (C) Identity (D) Irrational

(8) If $a_n = (-1)^{n+1}$, then $a_{26} =$ (A) 1 (B) -1 (C) i (D) $-i$

(9) Geometric Mean between $4i$ and $-16i$ is: (A) 8 (B) -8 (C) ± 8 (D) ± 64

(10) The factorial form of $n(n-1)(n-2)---(n-r+1)$ is:

(A) $\dfrac{n!}{(n-r)!}$ (B) $(n-1)!$ (C) $n!$ (D) $\dfrac{n!}{(n-r+1)!}$

(11) When A and B are two disjoint events, then $P(A \cup B) =$

(A) $P(A) - P(B)$ (B) $P(A) + P(B) - P(A \cap B)$ (C) $P(A) - P(A \cap B)$ (D) $P(A) + P(B)$

(12) The statement $4^n > 3^n + 4$ is true if: (A) $n < 2$ (B) $n \neq 2$ (C) $n \geq 2$ (D) $n \leq 2$

(13) In the expansion of $(3 - 2x)^8$, 5th term will be its:

(A) Last term (B) 2nd last term (C) 3rd last term (D) Middle term

(14) The measure of angle between hands of a watch at 3 0'clock is: (A) 30^o (B) 60^o (C) 90^o (D) 120^o

(15) The angle $\dfrac{3\pi}{2} - \theta$ lies in quadrant: (A) I (B) II (C) III (D) IV

(16) Range of the function $y = \cos x$ is:

(A) $-\infty < x < \infty$ (B) $-\infty < y < \infty$ (C) $-1 \leq y \leq 1$ (D) $-1 \leq x \leq 1$

(17) In a ΔABC with usual notation $\sqrt{\dfrac{s(s-a)}{bc}} =$ (A) $\sin\dfrac{\alpha}{2}$ (B) $\cos\dfrac{\alpha}{2}$ (C) $\cos\dfrac{\beta}{2}$ (D) $\sin\dfrac{\beta}{2}$

(18) Area of ΔABC in terms of measure of its all sides is:

(A) $\dfrac{1}{2}bc\sin\alpha$ (B) $\dfrac{c^2 \sin\alpha \sin\beta}{2\sin\gamma}$ (C) $\dfrac{1}{2}ca\sin\beta$ (D) $\sqrt{s(s-a)(s-b)(s-c)}$

(19) $Tan\left(Tan^{-1}(-1)\right) =$ (A) -1 (B) 1 (C) 2 (D) -2

(20) Solution set of $\sin x = \dfrac{1}{2}$ is:

(A) $\left\{\dfrac{4\pi}{3}, \dfrac{5\pi}{3}\right\}$ (B) $\left\{\dfrac{\pi}{6}, \dfrac{5\pi}{6}\right\}$ (C) $\left\{\dfrac{\pi}{3}, \dfrac{4\pi}{3}\right\}$ (D) $\{0, \pi\}$

Paper Code Number: 2193

2019 (A) Roll No: ________________

INTERMEDIATE PART-I (11^{th} CLASS)

MATHEMATICS PAPER-I GROUP-I TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) Range of the function $y = \cos x$ is:

(A) $-\infty < x < \infty$ (B) $-\infty < y < \infty$ (C) $-1 \le y \le 1$ (D) $-1 \le x \le 1$

(2) In a ΔABC with usual notation $\sqrt{\dfrac{s(s-a)}{bc}} =$ (A) $\sin\dfrac{\alpha}{2}$ (B) $\cos\dfrac{\alpha}{2}$ (C) $\cos\dfrac{\beta}{2}$ (D) $\sin\dfrac{\beta}{2}$

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(4) $Tan\left(Tan^{-1}(-1)\right) =$ (A) -1 (B) 1 (C) 2 (D) -2

(5) Solution set of $\sin x = \dfrac{1}{2}$ is:

(A) $\left\{\dfrac{4\pi}{3}, \dfrac{5\pi}{3}\right\}$ (B) $\left\{\dfrac{\pi}{6}, \dfrac{5\pi}{6}\right\}$ (C) $\left\{\dfrac{\pi}{3}, \dfrac{4\pi}{3}\right\}$ (D) $\{0, \pi\}$

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(8) For a non singular matrix A, if $AX = B$, then $X =$

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(9) If $A = \begin{bmatrix} 1 & -2 & 3 \\ 0 & 0 & 1 \\ 4 & 5 & 2 \end{bmatrix}$, then $M_{13} =$ (A) 13 (B) 0 (C) 10 (D) 7

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(A) $x^2 + sx + p = 0$ (B) $x^2 - sx - p = 0$ (C) $x^2 - sx + p = 0$ (D) $sx^2 - sx + p = 0$

(12) $\dfrac{2x^2}{(x-3)(x+2)^2}$ is a fraction: (A) Proper (B) Improper (C) Identity (D) Irrational

(13) If $a_n = (-1)^{n+1}$, then $a_{26} =$ (A) 1 (B) -1 (C) i (D) $-i$

(14) Geometric Mean between $4i$ and $-16i$ is: (A) 8 (B) -8 (C) ± 8 (D) ± 64

(15) The factorial form of $n(n-1)(n-2)---(n-r+1)$ is:

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(16) When A and B are two disjoint events, then $P(A \cup B) =$

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(20) The angle $\dfrac{3\pi}{2} - \theta$ lies in quadrant: (A) I (B) II (C) III (D) IV

Paper Code Number: 2195	2019 (A) Roll No: ________

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-I TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

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Q.No.1

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(13) Solution set of $\sin x = \frac{1}{2}$ is:

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(20) $\frac{2x^2}{(x-3)(x+2)^2}$ is a fraction: (A) Proper (B) Improper (C) Identity (D) Irrational

Paper Code Number: 2197	2019 (A)	Roll No: ______

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-I TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

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Q.No.1

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(2) If s = sum of roots and p = product of roots, then quadratic equation can be written as:

(A) $x^2 + sx + p = 0$ (B) $x^2 - sx - p = 0$ (C) $x^2 - sx + p = 0$ (D) $sx^2 - sx + p = 0$

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(20) If $A = \begin{bmatrix} 1 & -2 & 3 \\ 0 & 0 & 1 \\ 4 & 5 & 2 \end{bmatrix}$, then $M_{13} =$ (A) 13 (B) 0 (C) 10 (D) 7

2019 (A) Roll No: ________________

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-II TIME ALLOWED: 2.30 Hours

SUBJECTIVE MAXIMUM MARKS: 80

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any eight parts. **$8 \times 2 = 16$**

(i) Find the multiplicative inverse of $(-4, 7)$

(ii) Simplify $(i)^{-3}$

(iii) Simplify $\left(-\frac{1}{2} + \frac{\sqrt{3}}{2}i\right)^3$

(iv) Write down the power set of $\{a, \{b, c\}\}$

(v) Show that $p \to (q \vee p)$ is tautology or not.

(vi) For $A = \{1, 2, 3, 4\}$ find the relation $\{(x, y) | x + y < 5\}$ in A.

(vii) State any two properties of determinants.

(viii) Show that for a non-singular matrix A, $(A^{-1})^{-1} = A$

(ix) Without expansion prove that $\begin{vmatrix} 1 & 2 & 3x \\ 2 & 3 & 6x \\ 3 & 5 & 9x \end{vmatrix} = 0$

(x) Reduce $2x^4 - 3x^3 - x^2 - 3x + 2 = 0$, into quadratic form.

(xi) Solve the equation $x^3 + x^2 + x + 1 = 0$

(xii) Define exponential equation.

3. Attempt any eight parts. **$8 \times 2 = 16$**

(i) Resolve $\frac{x^2 + 1}{(x + 1)(x - 1)}$ into partial fractions.

(ii) Define improper rational fraction.

(iii) For the identity $\frac{1}{(x+1)^2 (x^2 - 1)} \equiv \frac{A}{x - 1} + \frac{B}{x + 1} + \frac{C}{(x+1)^2} + \frac{D}{(x+1)^3}$
Calculate the values of A and D.

(iv) Write first four terms of the sequence $a_n = 3n - 5$

(v) Find the 13th term of the sequence $x, 1, 2 - x, 3 - 2x, -----$

(vi) How many terms of the series $-7 + (-5) + (-3) + ----$ amount to 65?

(vii) Insert two G.Ms. between "2" and "16".

(viii) Write two relations between A, G, H, in which A = Arithmetic Mean, G = Geometric Mean, H = Harmonic Mean.

(ix) How many arrangements of the letters of the word "ATTACKED", taken all together, can be made?

(x) Prove the given formula for $n = 1, 2$ $\quad 1 + \frac{1}{2} + \frac{1}{4} + ----- + \frac{1}{2^{n-1}} = 2\left[1 - \frac{1}{2^n}\right]$

(xi) Calculate $(9.98)^4$ by means of binomial theorem.

(xii) If x is so small that its square and higher powers can be neglected, then show that $\frac{1 - x}{\sqrt{1 + x}} = 1 - \frac{3}{2}x$

P.T.O.

4. Attempt any nine parts. **9 × 2 = 18**

(i) Prove that $\sec^2 A + \operatorname{cosec}^2 A = \sec^2 A \operatorname{cosec}^2 A$ where $A \neq \frac{n\pi}{2}, n \in Z$

(ii) Write two fundamental identities.

(iii) Show that $\cot^4\theta + \cot^2\theta = \operatorname{cosec}^4\theta - \operatorname{cosec}^2\theta$

(iv) Prove that $\tan(45^o + A)\tan(45^o - A) = 1$

(v) Express $\sin 5x + \sin 7x$ as a product.

(vi) Prove that $\dfrac{\sin A + \sin 2A}{1 + \cos A + \cos 2A} = \tan A$

(vii) Write down domain and range of $y = \tan x$

(viii) Find the area of the triangle ABC, given three sides $a = 18,\ b = 24,\ c = 30$

(ix) Show that $r = (s - a)\tan\dfrac{\alpha}{2}$

(x) The area of triangle is 2437. If $a = 79$, and $c = 97$, then find angle β.

(xi) Show that $\cos(Sin^{-1}x) = \sqrt{1 - x^2}$

(xii) Solve the equation $\sin 2x = \cos x$

(xiii) Define trigonometric equation. Give one example

SECTION-II

NOTE: - Attempt any three questions. **3 × 10 = 30**

5.(a) Show that the set $\{1, -1, i, -i\}$ is an abelian group under multiplication where $i^2 = -1$ 5

(b) If $y = \frac{2}{3}x + \frac{4}{9}x^2 + \frac{8}{27}x^3 + ----$ and if $0 < x < \frac{3}{2}$, then show that $x = \dfrac{3y}{2(1+y)}$ 5

6.(a) Prove that $\begin{vmatrix} b+c & a & a^2 \\ c+a & b & b^2 \\ a+b & c & c^2 \end{vmatrix} = (a+b+c)(a-b)(b-c)(c-a)$ 5

(b) Find the probability that the sum of dots appearing in two successive throws of two dice is every time 7. 5

7.(a) Use synthetic division to find the values of p and q if $x + 1$ and $x - 2$ are the factors of the polynomial $x^3 + px^2 + qx + 6$ 5

(b) If x is so small that its cube and higher powers can be neglected, then show that $\sqrt{1 - x - 2x^2} \approx 1 - \frac{1}{2}x - \frac{9}{8}x^2$ 5

8.(a) Prove that $\dfrac{\tan\theta + \sec\theta - 1}{\tan\theta - \sec\theta + 1} = \tan\theta + \sec\theta$ 5

(b) If α, β, γ are the angles of ΔABC then prove that
$\tan\frac{\alpha}{2}\tan\frac{\beta}{2} + \tan\frac{\beta}{2}\tan\frac{\gamma}{2} + \tan\frac{\gamma}{2}\tan\frac{\alpha}{2} = 1$ 5

9.(a) Prove that $r_1 + r_2 + r_3 - r = 4R$ 5

(b) Prove that $2\tan^{-1}\frac{1}{3} + \tan^{-1}\frac{1}{7} = \frac{\pi}{4}$ 5

Paper Code Number: **2192**	

2019 (A) Roll No: ________________

INTERMEDIATE PART-I (11^{th} CLASS)

MATHEMATICS PAPER-I GROUP-II TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) If $a > 0$ then: (A) $2a < 0$ (B) $\frac{1}{a} < 0$ (C) $-a > 0$ (D) $-a < 0$

(2) The number of subsets of a set having 4 elements is: (A) 4 (B) 16 (C) 8 (D) 10

(3) If all the entries of a column of a square matrix A are zero then:
(A) $|A| > 0$ (B) $|A| < 0$ (C) $|A| = 0$ (D) None of these

(4) If A and B are two non-singular matrices then $(AB)^{-1}$ is equal to:
(A) $A^{-1}B^{-1}$ (B) $B^{-1}A^{-1}$ (C) BA (D) AB

(5) If $x^2 - 3 = 0$ then sum of roots is: (A) Zero (B) 3 (C) -3 (D) 1

(6) If one root of $x^2 + 1 = 0$ is i then other root is: (A) -1 (B) $-i$ (C) 1 (D) ± 1

(7) A fraction $\frac{N(x)}{D(x)}$ is called Proper Rational Faction if:
(A) Degree of $N(x) <$ Degree of $D(x)$ (B) Degree of $N(x) >$ Degree of $D(x)$
(C) Degree of $N(x) \leq$ Degree of $D(x)$ (D) Degree of $D(x) \leq$ Degree of $N(x)$

(8) For an infinite Geometric series for which $|r| < 1$, $S_n =$ ____ where $n \to \infty$
(A) $\frac{a_1(1+r)}{1-r}$ (B) $\frac{a_1}{1+r}$ (C) $\frac{a_1}{2r}$ (D) $\frac{a_1}{1-r}$

(9) With usual notations, $\sum_{k=1}^{n} k^3$ equal to:
(A) $\frac{n(n+1)}{4}$ (B) $\frac{n(n+1)}{2}$ (C) $\left(\frac{n(n+1)}{2}\right)^2$ (D) $n(n+1)$

(10) How many ways 5 keys can be arranged on a circular key ring? (A) 12 (B) 5 (C) 4 (D) 3

(11) ${}^nP_r$ equals: (A) ${}^nC_r$ (B) $r! \times {}^nC_r$ (C) $\frac{1}{r!} \times {}^nC_r$ (D) $r \times {}^nC_r$

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(16) Domain of $\cos x$ function is: (A) W (B) N (C) $\mathbb{R}$ (D) Z

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(18) With usual notations, $\frac{c^2 \sin\beta \sin\alpha}{2\sin\gamma}$ is equal to: (A) Δ (B) Δ^2 (C) $\frac{\Delta}{2}$ (D) $\frac{\Delta^2}{2}$

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(20) Solution of equation $\tan x = \frac{1}{\sqrt{3}}$ is in:
(A) I and II quadrant (B) I and III quadrant (C) II and IV quadrant (D) I quadrant

Paper Code Number: 2194	2019 (A)	Roll No: ____________
	INTERMEDIATE PART-I (11th CLASS)	

MATHEMATICS PAPER-I GROUP-II TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

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Paper Code Number: 2196	2019 (A)	Roll No: ______	

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-II TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

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Paper Code Number: 2198	2019 (A) Roll No: ____________

INTERMEDIATE PART-I (11th CLASS)

MATHEMATICS PAPER-I GROUP-II TIME ALLOWED: 30 Minutes

OBJECTIVE MAXIMUM MARKS: 20

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BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL EXAMINATION,2019

Name of Subject: Mathematics Session: ANNUAL

Group : 1st

Q. Nos	Paper Code 2191	Paper Code 2193	Paper Code 2195	Paper Code 2197
1	B	C	B	C
2	C	B	C	C
3	A	D	A	A
4	B	A	D	B
5	C	B	C	C
6	C	B	D	A
7	A	C	C	D
8	B	A	C	C
9	C	B	C	D
10	A	C	B	C
11	D	C	D	C
12	C	A	A	C
13	D	B	B	B
14	C	C	B	D
15	C	A	C	A
16	C	D	A	B
17	B	C	B	B
18	D	D	C	C
19	A	C	C	A
20	B	C	A	B

Group: 2nd

Q. Nos	Paper Code 2192	Paper Code 2194	Paper Code 2196	Paper Code 2198
1	D	C	C	A
2	B	A	A	B
3	C	A	B	A
4	B	C	C	D
5	A	B	B	C
6	B	D	D	A
7	A	B	A	B
8	D	C	C	C
9	C	B	A	B
10	A	A	A	D
11	B	B	C	A
12	C	A	B	C
13	B	D	D	A
14	D	C	B	A
15	A	A	C	C
16	C	B	B	B
17	A	C	A	D
18	A	B	B	B
19	C	D	A	C
20	B	A	D	B

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون ___MATH___ پرچہ ___I___ گروپ ___I + II___ سکیم ___MCQs___ انٹر سالانہ امتحان 2019 کا سوالیہ پرچہ انشائیہ ومعروضی(Subjective & Objective) کو بنظر عمیق چیک کرلیا 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 کرلیا 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 کرکے ان کا بغور مطالعہ کرلیا 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: 03. 06. 2019

S.#	Name	Designation	Institution	Mobile No	Signature
1	Dr. Zafar Iqbal	Associate Prof	Govt. Emerson College, Multan	0300-6900433	
2	Kousar Ali Tahir	Asso. Prof.	Govt. Millat College Multan	0306510670	
3					
4					
5					

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

1	M. Iqbal	Assoc. Prof	Govt. College of Sc. Multan	0301-7553646	
2					
3					

تاریخ ____________