



Roll No. _____

(For all sessions)

Paper Code 5 1 9 2

Group-II-گروپ-II

Mathematics (Science Group) (Objective Type)

ریاضی (سائنس گروپ) (معرضی)

Marks: 15

Time: 20 Minutes وقت: 20 منٹ

نمبر: 15

نوٹ: تمام سوالات کے جوابات دی گئی معروضی جوابی کاپی پر لکھیں ہر سوال کے چار ممکنہ جوابات A, B, C, D دیے گئے ہیں، جس جواب کو آپ درست سمجھیں، جوابی کاپی پر اس سوال نمبر کے سامنے جزو A, B, C یا D کے دائروں میں سے متعلقہ دائرے کو مار کر یا پین کی سیاہی سے بھر دیں۔

NOTE: Write answers to the questions on objective answer sheet provided. Four possible answers A, B, C & D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or pen ink on the answer sheet provided.

- Order of transpose of $\begin{bmatrix} 2 & 1 \\ 0 & 1 \\ 3 & 2 \end{bmatrix}$ is:
 - 3-by-2
 - 2-by-3
 - 1-by-3
 - 3-by-1
- $\begin{bmatrix} \sqrt{2} & 0 \\ 0 & \sqrt{2} \end{bmatrix}$ is called _____ matrix.
 - zero
 - unit
 - scalar
 - singular
- Write $\sqrt[3]{x}$ in an exponential form.
 - x
 - x^7
 - $x^{\frac{1}{3}}$
 - $x^{\frac{7}{2}}$
- Which set have the closure property w.r.t addition?
 - $\{0\}$
 - $\{0, -1\}$
 - $\{0, 1\}$
 - $\left\{1, \sqrt{2}, \frac{1}{2}\right\}$
- $\log e = \dots\dots\dots$, where $e \approx 2.718$.
 - 0
 - 0.4343
 - ∞
 - 1
- $\log_y x$ will be equal to _____.
 - $\frac{\log_z x}{\log_y z}$
 - $\frac{\log_x z}{\log_y z}$
 - $\frac{\log_z x}{\log_z y}$
 - $\frac{\log_z y}{\log_z x}$
- $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b})$ is equal to:
 - $a - b$
 - $a^2 + b^2$
 - $a^2 - b^2$
 - $a + b$
- Factors of $a^4 - 4b^4$ are _____.
 - $(a - b), (a + b), (a^2 + 4b^2)$
 - $(a - 2b), (a^2 + 2b^2)$
 - $(a - b), (a + b), (a^2 - 4b^2)$
 - $(a^2 - 2b^2), (a^2 + 2b^2)$
- H.C.F of $a^2 - b^2$ and $a^3 - b^3$ is _____.
 - $a - b$
 - $a + b$
 - $a^2 + ab + b^2$
 - $a^2 - ab + b^2$
- L.C.M of $15x^2, 45xy$ and $30xyz$ is _____.
 - $90xyz$
 - $90x^2yz$
 - $15xyz$
 - $15x^2yz$
- If x is no larger than 10, then _____.
 - $x \geq 8$
 - $x \leq 10$
 - $x < 10$
 - $x > 10$
- If $(x - 1, y + 1) = (0, 0)$, then (x, y) is:
 - $(1, -1)$
 - $(-1, 1)$
 - $(1, 1)$
 - $(-1, -1)$
- Distance between the points $(1, 0)$ and $(0, 1)$ is _____.
 - 0
 - 1
 - $\sqrt{2}$
 - 2
- The right bisectors of the three sides of a triangle are _____.
 - congruent
 - collinear
 - concurrent
 - parallel
- If two medians of a triangle are congruent then the triangle will be:
 - isosceles
 - equilateral
 - right angled
 - acute angled