

Roll Number		
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A



INDIAN SCHOOL MUSCAT FIRST PERIODIC ASSESSMENT

MATHEMATICS

CLASS: XI

Sub. Code: 041

Time Allotted: 50 mts.

17.11.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

- All questions are compulsory.
- Questions 1 to 4 carry TWO marks each.
- Questions 5 to 7 carry FOUR marks each.

1. Find r , If ${}^4P_r = 6 \cdot {}^5P_{r-1}$ 2
2. What is the conjugate of $\frac{\sqrt{5+12i}+\sqrt{5-12i}}{\sqrt{5+12i}-\sqrt{5-12i}}$. 2
3. Find the number of different 8 letter arrangements that can be formed from the letters of the word 'TRIANGLE' so that all vowels occur together. 2
4. If $x - iy = \sqrt{\frac{a-ib}{c-id}}$, Prove that $(x^2 + y^2)^2 = \frac{a^2+b^2}{c^2+d^2}$ 2
5. Express the complex number $z = \frac{3}{2} - \frac{i\sqrt{3}}{2}$ in polar form. 4
6. Find the square root of the complex number $-15 + 8i$ 4
7. A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has (i) no girls (ii) at least one boy and one girl (iii) at least three girls. 4

End of the Question Paper

Roll Number		
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B



INDIAN SCHOOL MUSCAT FIRST PERIODIC ASSESSMENT

MATHEMATICS

CLASS: XI

Sub. Code: 041

Time Allotted: 50 mts.

17.11.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

- All questions are compulsory.
- Questions 1 to 4 carry TWO marks each.
- Questions 5 to 7 carry FOUR marks each.

1. Find r , If ${}^5P_r = 2 \cdot {}^6P_{r-1}$ 2
2. What is the conjugate of $\frac{\sqrt{5+12i}-\sqrt{5-12i}}{\sqrt{5+12i}+\sqrt{5-12i}}$. 2
3. Find the number of different 8 letter arrangements that can be formed from the letters of the word 'DAUGHTER' so that all vowels occur together. 2
4. If $x + iy = \frac{a+ib}{a-ib}$, Prove that $x^2 + y^2 = 1$ 2
5. Express the complex number $z = -\frac{3}{2} + \frac{i\sqrt{3}}{2}$ in polar form. 4
6. Find the square root of the complex number $-15 - 8i$ 4
7. A group consists of 4 girls and 7 boys. In how many ways can a team of 4 members be selected if the team has (i) no girls (ii) at least one boy and one girl (iii) at least three girls. 4

End of the Question Paper

Roll Number		
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C



INDIAN SCHOOL MUSCAT

FIRST PERIODIC ASSESSMENT

MATHEMATICS

CLASS: XI

Sub. Code: 041

Time Allotted: 50 mts.

17.11.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

- All questions are compulsory.
- Questions 1 to 4 carry TWO marks each.
- Questions 5 to 7 carry FOUR marks each.

1. Find r , If ${}^4P_r = 6 \cdot {}^5P_{r-1}$ 2
2. What is the conjugate of $\frac{\sqrt{8+6i}+\sqrt{8-6i}}{\sqrt{8+6i}-\sqrt{8-6i}}$ 2
3. Find the number of different 8 letter arrangements that can be formed from the letters of the word 'EQUATION' so that all vowels occur together. 2
4. If $x - iy = \sqrt{\frac{c+id}{a+ib}}$, Prove that $(x^2 + y^2)^2 = \frac{c^2+d^2}{a^2+b^2}$ 2
5. Express the complex number $z = -\frac{3}{2} - \frac{i\sqrt{3}}{2}$ in polar form. 4
6. Find the square root of the complex number $-7 + 24i$ 4
7. A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has (i) Exactly one boy (ii) at least one boy and one girl (iii) at most one boy. 4

End of the Question Paper