Assignment for the Examinees of HSC 2022

Subject: Higher Mathematics Paper: Second Subject Code: 266 Level: HSC

Assignment No.	Assignment	Learning Outcomes/ Contents	Instructions (Symbol/Step/Edge)	Instruction for Evaluation (Rubrics)			Remarks
2 Chapter: 3 (Complex Number)	$z_1 = -1 + i$ And $z = p + p^{-1}$ Where, $p = 3(cos\theta + isin\theta)$	• Be able to explain modulus and arguments • Be able to explain conjugate complex number • Be able to explain geometrical representation of addition, subtraction and multiplication of complex numbers • Be able to explain the square root of complex number, cubic root of unity and their characteristics	a. If $\frac{z_1}{3+4i} = m + in$, Find the value of $m^4 - m^2n^2 + n^4$	Question	Directions	Marks	
				A	Find Value	02	
					Find value of m and n	01	
			b. Express $\bar{z_1}$ in polar form.	B	Express in polar form	03	
					Find modulus & argument	02	
					Find modulus	01	
			c. Determine $\sqrt{z_1}$.	C	Find square root	02	
					Apply formula	01	
			d. If $z = x + iy$ then prove that, $\frac{9x^2}{100} + \frac{9y^2}{64} = 1$	D	Proof	03	
					Find real & imaginary part	02	
					Express in $z = x + iy$ form	01	
			e. If $\frac{1}{2}(z_1 + \bar{z_1}) = a$ then find the value of $\sqrt[6]{a}$.	E	Find all the values	04	
					Find two values of x	03	
					Factorization	02	
					Find a	01	

Allocated Marks-14

S. No	Interval	Remarks
1	11-14	Excellent
2	09-10	Better
3	07-08	Good
4	00-06	Need improvement