



GOVIND VIDYALAYA TAMULIA

(A Senior Secondary School Affiliated to C.B.S.E. (New Delhi) School No - 08249)
An ISO 9001:2008 Certified School bearing no. QCMPL/Q/J/0270

RETEST PRACTICE SHEET FOR FINAL TERM EXAMINATION 2014-2015

SUBJECT:-MATHEMATICS

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- 01) A Bag Contains 4 Red, 3 White, 2 Blue Marbles. 3 Marbles Are Drawn At Random. Determine The Number Of Ways Of Selecting At Least 1 White Marble In This Selection.
- 02) Find The Equation Of An Ellipse, The Length Of Whose Major And Minor Axis Are 10 And 8 Units Respectively.
- 03) If $(X + iy)^{1/3} = (A + ib)$, Prove That $\left(\frac{x}{a} + \frac{y}{b}\right) = 4(a^2 - b^2)$
- 04) Find The Domain And Range Of The Real Function $F(X) = \sqrt{9 - x^2}$
- 05) Prove That $\sin 10^\circ \sin 30^\circ \sin 50^\circ \sin 70^\circ = \frac{1}{16}$
- 06) If $Y = \frac{\cos x - \sin x}{\cos x + \sin x}$, Show That $\frac{dy}{dx} + y^2 + 1 = 0$
- 07) In A Single Throw Of Two Dice, Find
- A) P (A Number Greater Than 3 On Each Die)
 - B) P (A Total Of 10)
 - C) P (A Total Greater Than 8)
 - D) P (A Total Of 9 Or 11)
- 08) The First Term Of A G.P. Is 27 And Its 8th Term Is $\frac{1}{81}$. Find The Sum Of Its First 10 Terms.
- 09) Find The 6th Term In The Expansion Of $\left(\frac{4x}{5} - \frac{5}{2x}\right)^9$
- 10) Let R Be A Relation On Q, Defined By $R = \{(A, B) : A, B \in Q \text{ And } A - B \in Z\}$. Show That R Is An Equivalence Relation.
- 11) Differentiate $Y = \frac{\sqrt{a} + \sqrt{x}}{\sqrt{a} - \sqrt{x}}$
- 12) Prove That $\frac{\sin 2x}{1 - \cos 2x} = \cot x$

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