

SAMPLE PAPER – 2009
CLASS – IX
SUBJECT – MATHEMATICS

SECTION-A

- 1) Express 1.324 in the form p/q. (49/37)
- 2) If $\frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{-\sqrt{7}+1}{\sqrt{7}-1} = a+b\sqrt{7}$. Find a and b. (0.-2/3)
- 3) Find the remainder when $4x^3-3x^2+2x-4$ is divided by $x+1/2$. (-25/4)
- 4) Factorise: $5x^2+16x+3$ ((x+3)(5x+1))
- 5) Is (2,1) a solution of $2x+5y=9$? Why?
- 6) An angle is 16° more than its complement. What is its measure? (53)
- 7) 2 lines AB & CD intersect at O. If one angle is 35° find all the other angles. (35,145,145)
- 8) A semicircular sheet of metal of diameter 28cm is bent into an open conical cup. Find the depth and capacity of the cup. (12.12cm,622.16cc)
- 9) Find the arithmetic mean of first 10 natural numbers. (5.5)
- 10) 2 coins are tossed simultaneously. Find the probability of getting one or more tail. (3/4)

SECTION-B

- 11) Factorise: x^3-3x^2-9x-5 $(x+1)^2(x-5)$
- 12) In a parallelogram if a diagonal bisects one angle prove that it also bisects the opposite angle.
- 13) Given a circle with centre O and PQ is a diameter. PQ is extended to R and ST is a chord which is extended to meet at R. Join QT and OT. $\angle POT=140^\circ$, $\angle SPO=45^\circ$. Find $\angle RTQ$ and $\angle RQT$. (45,160)
- 14) A rectangular sheet of paper 44cm x 18cm is rolled along its length and a cylinder is formed. Find volume of the cylinder. (2772cc)
- 15) Find the combined mean of a group of 150, if the mean of 50 students is 40 and that of the other 100 students is 50. (46.7)

