

CHOITHRAM SCHOOL MANIKBAGH INDORE**CLASS – XI Session: 2016-17**Subject: Mathematics
Allotment Date: 06.01.17Assignment No: 4
Submission Date: 11.01.17

S.No	QUESTIONS	MARKS	LEVEL
VERY SHORT ANSWER TYPE			
1	Differentiate $\frac{1}{x^2}$ with respect to x from first principle.	1 MARK	Knowledge
2	Evaluate $\lim_{x \rightarrow 0} \frac{[\sin(2+x) - \sin(2-x)]}{x}$	1 MARK	Understanding
3	Find all possible values of a, if $\lim_{x \rightarrow a} \frac{x^5 - a^5}{x - a} = 405$.	1 MARK	H.O.T
SHORT ANSWER TYPE I			
4	Differentiate $(ax^5 + b^2)^6$ with respect to x .	2 MARKS	Knowledge
5	Differentiate $\frac{\sin x - x \cos x}{x \sin x + \cos x}$ with respect to x .	2 MARKS	Understanding
6	Differentiate $\frac{x^2 \cos \frac{\pi}{4}}{\sin x}$ with respect to x .	2 MARKS	H.O.T
7	Find the probability that when a hand of 7 cards is drawn from a well shuffled deck of 52 cards, it contains (i) all Kings (ii) atleast 3 Kings.	2 MARKS	Logical Reasoning
SHORT ANSWER TYPE II			
8	Out of 100 students, two sections of 40 and 60 are formed. If you and your friend are among the 100 students, what is the probability that (a) you both enter the same section? (b) you both enter the different sections? 'HAR EK FRIEND JARURI HOTA HAI', COMMENT ON THIS SLOGAN.	3 MARKS	Value Based
9	Differentiate $\sqrt{\sin x}$ with respect to x from first principle.	3 MARKS	Multi conceptual
10	Evaluate: $\lim_{x \rightarrow 0} \frac{\sec 4x - \sec 2x}{\sec 3x - \sec x}$	3 MARKS	Understanding
LONG ANSWER TYPE			
11	Differentiate $\sqrt{\frac{1 - \cos 2x}{1 + \cos 2x}}$ with respect to x . where $x \neq \frac{\pi}{2}$.	5 MARKS	H.O.T
12	If 4-digit numbers greater than 5,000 are randomly formed from the digits 0, 1, 3, 5, and 7, what is the probability of forming a number divisible by 5 when, (i) the digits are repeated? (ii) the repetition of digits is not allowed?	5 MARKS	Logical Reasoning