

## NAT I Computer Science Mathematics

| Sr | Questions                                                                | Answers Choice                                                                                            |
|----|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1  | Which is an explicit function                                            | A. $y = x^{2/2} + 2x - 1$<br>B. $x^{2/2} + xy$<br>C. $xy^{2/2} - y + 9/xy = 1$<br>D. All are              |
| 2  | Which is not included in the domain of $\cos^{-1} x$                     | A. 0<br>B. 1<br>C. -1<br>D. 2                                                                             |
| 3  | $P(x) = 2x^4 - 3x^3 + 2x - 1$ is polynomial of degree                    | A. 1<br>B. 2<br>C. 3<br>D. 4                                                                              |
| 4  | If $f(x) = x/x^2 - 4$ then which is not included in the domain of $f(x)$ | A. 0<br>B. -2<br>C. 1<br>D. 4                                                                             |
| 5  | If $f(x) = x^3 - 2x^2 + 4x - 1$ , then $f(-2) = ?$                       | A. 0<br>B. -25<br>C. 5<br>D. 45                                                                           |
| 6  | Which of the following is the solution of $\cot^2 x = 1/\sqrt{3}$        | A. $\pi/5$<br>B. $\pi/3$<br>C. $\pi/7$<br>D. $\pi/9$                                                      |
| 7  | Which of the following is solution of $\tan^2 x = 1/3$                   | A. $7\pi/6$<br>B. $5\pi/6$<br>C. $\pi/6$<br>D. All                                                        |
| 8  | If $x$ lies in $\{0, 2\pi\}$ and $\operatorname{Cosec} x = 2$ then $x =$ | A. $\pi/6$ and $5\pi/6$<br>B. $\pi + 2n\pi$<br>C. $n\pi$<br>D. $2\pi/3$ and $\pi/3$                       |
| 9  | If $1 + \cos x = 0$ then $x =$                                           | A. $\pi + 2n\pi$<br>B. $\pi + n\pi$<br>C. $\pi - n\pi$<br>D. $\pi/2$                                      |
| 10 | If $\theta = 60^\circ$ then                                              | A. $\sin \theta = 1/2$<br>B. $\tan \theta = \cot 30^\circ$<br>C. $\theta = \pi/4$<br>D. $\sec \theta = 4$ |