

## Mathematics ECAT Pre Engineering Chapter 12 Trigonometric Functions and Identities Online Test

| Sr | Questions                                                               | Answers Choice                                                                                                        |
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| 1  | Question Image                                                          |                                                                                                                       |
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| 23 | Question Image                                                          |                                                                                                                       |
| 24 | In any triangle ABC, with usual notation $a \sin \beta =$ ____;         | A. $b \sin \alpha$<br>B. $b \sin \beta$<br>C. $a \sin \alpha$<br>D. None of these                                     |
| 25 | The law of cosines reduces to $a^2 + c^2 = b^2$ for                     | A. $\alpha = 90^\circ$<br>B. $\beta = 90^\circ$<br>C. $\gamma = 90^\circ$<br>D. $\alpha + \beta + \gamma = 180^\circ$ |
| 26 | If $\triangle ABC$ is right triangle then the law of Cosines reduces to | A. The Pythagoras Theorem<br>B. The law of Sines<br>C. The law of cosines<br>D. The law of tangents                   |
| 27 | With usual notations $b^2 = a^2 + c^2 - 2ac \cos$ is called _____;      | A. None of these<br>B. Law of sines<br>C. Law of cosines<br>D. Law of tangents                                        |
|    |                                                                         | A. $3 \sin a - 4 \sin^3 a$<br>B. $4 \sin^3 a - 3 \sin a$<br>C. $4 \sin^3 a - 3 \sin a$<br>D. $3 \sin a - 4 \sin^3 a$  |

|    |                                |                                                                                                             |
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| 28 | $\cos 3a =$ _____;             | B. $4\sin a - 3\sin^3 a$<br>C. $3\cos^3 a - 4\cos a$<br>D. $4\cos^3 a - 3\cos a$                            |
| 29 | $\sin 3a =$ _____;             | A. $3\sin a - 4\sin^3 a$<br>B. $4\sin a - 3\sin^3 a$<br>C. $3\cos^3 a - \cos a$<br>D. $4\cos^3 a - 3\cos a$ |
| 30 | $2\cos^2 \frac{a}{2} =$ _____; | A. $1 + \sin a$<br>B. $1 - \sin a$<br>C. $1 + \cos a$<br>D. $1 - \cos a$                                    |
| 31 | $\cos 2a =$ _____;             | A. $\cos^2 a - \sin^2 a$<br>B. $2\cos^2 a - 1$<br>C. $1 - 2\sin^2 a$<br>D. All of these                     |