

Mathematics General Science Test Medium Mode

| Sr | Questions | Answers Choice |
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| 1 | The point R dividing externally the line joining the points $P(x_1, y_1)$ and $Q(x_2, y_2)$ in the ratio $k_1 : k_2$ has the coordinates | |
| 2 | $x = \underline{\hspace{2cm}}$ is in the solution of $2x + 3 < 0$ | A. 0 B. 2 C. -1 D. -2 |
| 3 | Question Image | |
| 4 | Question Image | |
| 5 | If (0,4) and (0,2) are vertex and focus of the parabola respectively, the the equation of the parabola is: | A. $x^2 = 4y - 32$ B. $x^2 = 8y - 32$ C. $y^2 = 16x$ D. $x^2 + 8y = 32$ |
| 6 | Three points whose position vector a, b, c are collinear | A. $ax + by + cz = 0$ B. a, b, c are collinear C. a, b, c are not collinear D. $a + b + c = 0$ |
| 7 | What is the number of elements of the power set of $\{0, 1\}$ | A. 1 B. 2 C. 3 D. 4 |
| 8 | Question Image | |
| 9 | If the angle between two vectors with magnitude 6 and 2 is 60° when their scalar product is | A. 12 B. 6 C. 3 D. 0 |
| 10 | A class contains nine boys and three girls, in how many ways can the teacher choose a committee of four? | A. 60 B. 460 C. 495 D. 272 |
| 11 | For each natural number n , $n(n+1)$ is | A. an even B. an odd C. multiple of 3 D. Irrational |
| 12 | The sum of all 2 digit number is | A. 4750 B. 3776 C. 4895 D. 4905 |
| 13 | A quadratic equation in x is an equation that can be witten in the form | A. $ax^2 + b = 0$ B. $ax^3 + b = 0$ C. $ax^2 + bx + c = 0$ D. $ax^3 + bx^2 + cx = 0$ |
| 14 | The point $\underline{\hspace{2cm}}$ is in the solution of the inequality $2x - 3y < 4$ | A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0) |
| 15 | If (2, 3) is the mid point of (a, 3) and (5, b) then | A. $a = 1, b = -3$ B. $a = -1, b = 3$ C. $a = 1, b = 3$ D. $a = -1, b = -3$ |
| 16 | Question Image | C. $\ln f(x) + c$ D. $f(x) - c$ |
| 17 | The graph of a linear function is | A. a circle B. triangle C. a straight line D. none of these |

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| 18 | Question Image | D. none of these |
| 19 | The 8th term of $(1+2x)^{-1/2}$ is | A. $-\frac{221}{16} x^{7/2}$ B. $-\frac{225}{18} x^{7/2}$ C. $-\frac{407}{9} x^{3/2}$ D. $-\frac{429}{16} x^{7/2}$ |
| 20 | If $uv = \text{Proj}_v u$ then | A. u and v are parallel B. u is a unit vector C. u is a unit vector D. Both b and c |