ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	Question Image	A. 0 B. -2 C. 1 D. 4
2	If $f(x) = x^3 - 2x^2 + 4x - 1$, then f(-2) = ?	A. 0 B. -25 C. 5 D. 45
3	Question Image	A. -2 B. -1 C. 1 D. 2
4	Question Image	A. One-one but not onto B. One-one and onto C. Onto but not one-one D. Neither one-one nor onto
5	Question Image	
6	Which of the following function form 1 to itself are bi-jective	A. F(x) = x + 3 B. F(x) = x⁵ C. F(x) = 3x + 2 D. F(x) = x²+ x
7	$\pi$is the period of the function	A. |sin x| + |sin x| B. sin⁴x + cos x C. sin (sin x) + sin (cos x) D. None of these
8	The periods of the function f(x) = x[x] is	A. 1 B. 2 C. Non periodic D. None of these
9	The period of the function $f(x) = \sin^4 x + \cos^4 x$ is	A. π B. π /2 C. 2π D. None of these
10	The period $\sin^2\theta$is	A. π² B. π C. 2π D. π/2
11	Question Image	A. π B. 2π C. π/2 D. None of these
12	Question Image	A. One-to-one and onto B. One-to-one but not on to

		C. Onto but not one-to-one D. Neither one-to-one nor onto
13	Question Image	A. 2 B. 4 C. 8 D. 12
14	Question Image	A. [0,1[B. [0, 1] C.]0, 1[D. None of these
15	Question Image	
16	Question Image	
17	The number of points of intersection of two curves y = 2 sin x and $y = 5x^2 + 2x + 3$ is	A. 0 B. 1 C. 2 D. None of these
18	Question Image	A. 1 B. 2 C. 3 D. None of these
19	Question Image	
20	The general value of θ satisfying the equation $2\sin^2\theta - 3\sin\theta - 2 = 0$ is	
21	Question Image	A. From an empty set B. 1 C. 2 D. >2
22	Question Image	A. 7 B. 5 C. 6 D. None of these
23	If $\sin(\pi\cos\theta) = \cos(\pi\sin\theta)$, then which of the following is correct?	
24	The solution of the equation $\cos^2\theta + \sin\theta + 1 = 0$ lies in the interval	
25	One root of the equation $\cos x - x + 1/2 = 0$ lies in the interval	
26	General solution of $\tan 5\theta = \cot 2\theta$ is	
27	The smallest positive root of the equation $\tan x - x = 0$ lies on	
28	Question Image	A. A finite non-empty set B. Null set C. Both a and b D. None of these
29	The number of solution of the equation $\tan x + \sec x = 2\cos x$ lying in the interval $[0, 2\pi]$ is	A. 0 B. 1 C. 2 D. 3
30	If $\sin 6\theta + \sin 4\theta + \sin 2\theta$, then θ =	