ECAT UET Test 2005

Mathematics:

1. Polar form of $1+3\sqrt{i}$ is .....
2. Multiplicative inverse of (a, -b) is .....
3. Which one of following is biconditional ..... $(p \leftrightarrow q, p \rightarrow q, p \leftarrow q, p \Rightarrow q)$
4. The inverse of $\begin{pmatrix} 3 & -1 \\ 2 & 1 \end{pmatrix}$ is .....
5. The quadratic equation with roots α and β is .....
6. $\frac{3x-1}{(x^2+1)(x+3)}$ = ...
7. Sum of infinite geometic series is .....
8. $\sum_{k=1}^{n} K$ = ...
9. General expression in the expansion of binomial formula is .....
10. $\frac{1}{1+\sin\theta}+\frac{1}{1-\sin\theta}$ = ...
11. $\tan(2\alpha)$ = ...
12. Law of cosines is .....
13. $\tan^{-1}(A)-\tan^{-1}(B)$ = ...
14. $\lim_{x\to 0}\frac{\sin ax}{\sin bx}$ = ...
15. If $y=\cos^{-1}(x)$ then y' = ...
16. For x = c of f(x) the relative maxima is for .....
17. $\int x\cos x dx$ = ...
18. Area under the curve $y = x^2+1$ from x = -2 to x = -1 is .....
19. Equation of normal to $x^2+y^2=25$ at (4,3) is .....
20. Latusrectum of ellipse has length .....
21. The centre of $\frac{(x-1)^2}{2}-\frac{(y-1)^2}{9}=1$ is .....
22. The projection of vector **A** along **B** is .....
23. Which of the following points represents a right triangle .....
24. $\int(\sqrt{x}-\frac{1}{\sqrt{x}})^2 dx$ = ...
25. $\cos^2 h2x$ = ...

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