Mathematics ECAT Pre Engineering Chapter 15 Inverse Trigonometric Functions Online Test

Sr	Questions	Answers Choice
1	The domain of the principle sine function is	
2	The range of the principal sine function is	
3	The domain of the principle cos function is	
4	The domain of the principal tan function is	
5	The range of the principle cos function is	
6	The range of the principle cot function is	
7	Question Image	
8	Question Image	
9	Question Image	
10	Question Image	
11	Question Image	
12	Question Image	
13	Question Image	
14	Question Image	A. 0 B. -1 C. 1/2 D. 1
15	Question Image	
16	Question Image	
17	Question Image	
18	Question Image	
19	Question Image	
20	Question Image	
21	Question Image	
22	Question Image	
23	Question Image	
24	Question Image	
25	Question Image	
26	Question Image	
27	Question Image	
28	Question Image	
29	Question Image	
30	Question Image	
31	Question Image	
32	Question Image	
33	Question Image	

34	Question Image	
35	Question Image	
36	Question Image	
37	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. 1/2 cos⁻¹(3/5) B. 1/2 sin⁻¹(3/5) C. 1/2 tan⁻¹(3/5) D. tan⁻¹1/2
38	The value of sin [arc cos (-1/2)] is	
39	Question Image	A. 1 B. -1 C. 0 D. None of these
40	If 2 $\tan^{1}(\cos x) = \tan^{-1}(\text{cosec}^{2}x)$, then x is equal to	A. π/ 3 B. π/ 2 C. π/ 6 D. π
41	Question Image	
42	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
43	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
44	Question Image	A. 1 B. 7 C. 4 D. None of these
45	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$ then $p^{2}+ q^{2}+ r^{2}+ 2pqr$ is equal to	A. 3 B. 1 C. 2 D. -1
46	Question Image	
47	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
48	Question Image	A. 1 B. -1 C. 0 D. None of these
49	Question Image	A. 0 B. 1 C. -1 D. None of these
50	Question Image	

51	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
52	Question Image	A. 1/3 B. 1 C. 3 D. None of these
53	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
54	Question Image	
55	Question Image	A. 1 B. 0 C. 3 D. -3
56	Question Image	A. 20 B. 10 C. 0 D. None of these
57	Question Image	A. 2 B. 5 C. 7 D. None of these
58	The solution set of the equation $\tan^{-1}x - \cot^{-1}x = \cos^{-1}(2 - x)$ is	A. [0, 1] B. [-1, 1] C. [1, 3] D. None of these
59	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these
60	Question Image	A. π / 3 B. π / 4 C. π / 2 D. π
61	Question Image	A. π / 4 B. π / 6 C. π / 3 D. 0
62	$\tan(\cot^{-1}x)$ is equal to	A. cot(tan⁻¹x) B. tan x C. secon x D. None of these
63	$\sin[\cot^{-1}\{\cos(\tan^{-1}x)\}]=$	
64	Question Image	A. π B. π / 2 C. π / 3 D. π / 4
65	Question Image	A. π / 3 B. π / 4 C. π / 6 D. 0
66	Question Image	
67	Question Image	
68	If $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$, then x=	A. 5 B. 1/5 C. 5/14 D. 14/5
69	The number of triplets (x, y, z) satisfying $\sin^{-1}x + \cos^{-1}y + \sin^{-1}z = 2\pi$ is	A. 0 B. 2 C. 1 D. Infinite
70	$\sin^{-1}[-1/2]$ = _____	

71	$Tan^{-1}1/x$ = _____	A. sin x B. sec⁻¹X C. cot⁻¹X D. None of these
72	$Sin^{-1}(-x)$=	A. Cos⁻¹1/x B. - Sin⁻¹X C. Cot⁻¹X D. None of these
73	$Sec^{-1}x$ =	A. Cos⁻¹1/x B. cosec⁻¹1/x C. Cos⁻¹(-x) D. Tan⁻¹x
74	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
75	The principal value of sin^{-1} (-1/2)	A. π/3 B. π/4 C. π/6 D. -π/6
76	The domain of the function y = sin x , is	A. -π/2≤ x≤ π/2 B. π/ ≤ x≤ π C. -2π ≤ x≤ 2π D. -1 ≤ x≤ 1
77	x = sin^{-1} 3, then the value of sin x is	A. √(3/2) B. 3 C. Not possible D. -1
78	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
79	The Principal value of sin-1 (-1/1/2)	A. π/2<o:p></o:p> B. -π/2<o:p></o:p> C. π<o:p></o:p> D. -π<o:p></o:p>
80	The value of sin^{-1} 5/13 is equal to	A. Cos 5/13 B. Tan⁻¹ 5/12 C. cos⁻¹5/12 D. 2 cos⁻¹4/5
81	The value of sin-1 24/25 is equal to	A. csc-1 25/24 B. sec-1 24/25 C. 2 tan-1 4/5 D. 2cos-1 24/25
82	The principal value of sin^{-1}[-√(√3) /2] is	A. 5π/3 B. -2π/3 C. -<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025">π/3 <!--[endif]--><o:p></o:p> D. π/3
83	sin (sin^{-1}(1/2))=	A. 0 B. 2 C. ∞ D. 1/2
84	Sin -1 x=	A. sin(π/2-x) B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
85	sn (2sin-10.8)	A. 0.56 B. 0.69 C. -0.16 D. 0.96
86	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
87	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
		A. tan⁻¹ x

88	$\sin^{-1} x =$	B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
89	What is the value of cos-1(1/2)?	A. π/3 B. π/4 C. 3π/2 D. π/6
90	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
91	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
92	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
93	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
94	If cos (2 sin-1 x) = 1/9 , then what is the value of x?	A. 1/3 B. -2/3 C. 2/3 D. 2/3 , -2/3
95	If$\pi \leq x \leq 2\pi$, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
96	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
97	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
98	$\cos^{-1}(\cos x) =$	A. x B. cos x C. x = 1/x D. cos⁻² x
99	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
100	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
101	The exact value of $\cos^{-1}(-1) + \cos^{-1}(1) =$	A. π B. -π C. π/2 D. π/3
102	The domain of the principle sine function is	
103	The range of the principal sine function is	
104	The domain of the principle cos function is	
105	The domain of the principal tan function is	
106	The range of the principle cos function is	
107	The range of the principle cot function is	
108	Question Image	
109	Question Image	
110	Question Image	
111	Question Image	

112	Question Image	
113	Question Image	
114	Question Image	
115	Question Image	A. 0 B. -1 C. 1/2 D. 1
116	Question Image	
117	Question Image	
118	Question Image	
119	Question Image	
120	Question Image	
121	Question Image	
122	Question Image	
123	Question Image	
124	Question Image	
125	Question Image	
126	Question Image	
127	Question Image	
128	Question Image	
129	Question Image	
130	Question Image	
131	Question Image	
132	Question Image	
133	Question Image	
134	Question Image	
135	Question Image	
136	Question Image	
137	Question Image	
138	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. 1/2 cos⁻¹(3/5) B. 1/2 sin⁻¹(3/5) C. 1/2 tan⁻¹(3/5) D. tan⁻¹1/2
139	The value of sin [arc cos (-1/2)] is	
140	Question Image	A. 1 B. -1 C. 0 D. None of these
141	If $2\tan^{1}(\cos x) = \tan^{-1}(\text{cosec}^{2}x)$, then x is equal to	A. π/ 3 B. π/ 2 C. π/ 6 D. π
142	Question Image	

143	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
144	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
145	Question Image	A. 1 B. 7 C. 4 D. None of these
146	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$ then $p^2 + q^2 + r^2 + 2pqr$ is equal to	A. 3 B. 1 C. 2 D. -1
147	Question Image	
148	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
149	Question Image	A. 1 B. -1 C. 0 D. None of these
150	Question Image	A. 0 B. 1 C. -1 D. None of these
151	Question Image	
152	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
153	Question Image	A. 1/3 B. 1 C. 3 D. None of these
154	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
155	Question Image	
156	Question Image	A. 1 B. 0 C. 3 D. -3
157	Question Image	A. 20 B. 10 C. 0 D. None of these
158	Question Image	A. 2 B. 5 C. 7 D. None of these

159	The solution set of the equation $\tan^{-1}x - \cot^{-1}x = \cos^{-1}(2 - x)$ is	A. [0, 1] B. [-1, 1] C. [1, 3] D. None of these
160	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these
161	Question Image	A. π / 3 B. π / 4 C. π / 2 D. π
162	Question Image	A. π / 4 B. π / 6 C. π / 3 D. 0
163	tan(cot^{-1}x) is equal to	A. cot(tan⁻¹x) B. tan x C. secon x D. None of these
164	sin[cot^{-1}{cos(tan^{-1}x)}]=	
165	Question Image	A. π B. π / 2 C. π / 3 D. π / 4
166	Question Image	A. π / 3 B. π / 4 C. π / 6 D. 0
167	Question Image	
168	Question Image	
169	If $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$, then x=	A. 5 B. 1/5 C. 5/14 D. 14/5
170	The number of triplets (x, y, z) satisfying $\sin^{-1}x + \cos^{-1}y + \sin^{-1}z = 2\pi$ is	A. 0 B. 2 C. 1 D. Infinite
171	$\sin^{-1}[-1/2]$ = _____	
172	$\text{Tan}^{-1}1/x$ = _____	A. sin x B. sec⁻¹X C. cot⁻¹X D. None of these
173	$\text{Sin}^{-1}(-x)$=	A. Cos⁻¹1/x B. - Sin⁻¹X C. Cot⁻¹X D. None of these
174	$\text{Sec}^{-1}x$ =	A. Cos⁻¹1/x B. cosec⁻¹1/x C. Cos⁻¹(-x) D. Tan⁻¹x
175	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
176	The principal value of $\sin^{-1}$ (-1/2)	A. π/3 B. π/4 C. π/6 D. -π/6
177	The domain of the function y = sin x , is	A. -π/2≤ x≤ π/2 B. π/ ≤ x≤ π C. -2π ≤ x≤ 2π D. -1 ≤ x≤ 1
178	x= $\sin^{-1}$2, then the value of sin x is	A. √(3/2) B. 3

178	x = sin⁻¹3, then the value of sin x is	C. Not possible D. -1
179	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
180	The Principal value of sin-1 (-1/1/2)	A. π/2<o:p></o:p> B. -π/2<o:p></o:p> C. π<o:p></o:p> D. -π<o:p></o:p>
181	The value of $\sin^{-1}$ 5/13 is equal to	A. Cos 5/13 B. Tan⁻¹ 5/12 C. cos⁻¹5/12 D. 2 cos⁻¹4/5
182	The value of sin-1 24/25 is equal to	A. csc-1 25/24 B. sec-1 24/25 C. 2 tan-1 4/5 D. 2cos-1 24/25
183	The principal value of $\sin^{-1}[-\sqrt{(3)}/2]$ is	A. 5π/3 B. -2π/3 C. -<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025">π/3 <!--[endif]--><o:p></o:p> D. π/3
184	sin ($\sin^{-1}$(1/2))=	A. 0 B. 2 C. ∞ D. 1/2
185	Sin -1 x=	A. sin(π/2-x) B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
186	sn (2sin-10.8)	A. 0.56 B. 0.69 C. -0.16 D. 0.96
187	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
188	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
189	$\sin^{-1}$ x =	A. tan⁻¹ x B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
190	What is the value of cos-1(1/2)?	A. π/3 B. π/4 C. 3π/2 D. π/6
191	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
192	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
193	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
194	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
195	If cos (2 sin-1 x) = 1/9 , then what is the value of x?	A. 1/3 B. -2/3 C. 2/3 D. 2/3, -2/3

		D. 2/3 , -2/3
196	If$\pi \leq x \leq 2\pi$, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
197	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
198	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
199	cos^{-1}(cos x) =	A. x B. cos x C. x = 1/x D. cos⁻² x
200	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
201	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
202	The exact value of cos^{-1} (-1) + cos^{-1} (1) =	A. π B. -π C. π/2 D. π/3