

NAT-IE Pre Engineering Quantitative Hard Test

Sr	Questions	Answers Choice
1	Maria's test scores were 96, 97, 86, 98 and 92. What would he need on his next test to have an average of 94?	A. 92 B. 90 C. 95 D. 100 E. 98
2	The circumference of a circle whose diameter is 6 inches is approximately	A. 22 inches B. 19 inches C. 14 inches D. 38 inches E. 16 inches
3	The ratio from 5 feet to 3 inches is	A. 3/5 B. 5/3 C. 3/60 D. 1/20 E. 20
4	15% of 32 equal	A. 3.80 B. 2.50 C. 4.80 D. 4 E. 5
5	If $3a - 5 = 3 + 2a$, then $a =$	A. 8 B. 9 C. 10 D. 12 E. 6
6	The average (arithmetic mean) of $8a + 5$, $-3a$, 9, 0 and $7a - 2$?	A. $3a + 1$ B. $3a + 3$ C. $4a + 1$ D. $4a + 4$ E. $12a + 12$
7	What is the percent profit made on the sale of 1000 shares of stock bought at Rs. 10 per share and sold at Rs. 12 per share?	A. 2% B. 0.2% C. 25% D. 20% E. 41%
8	$\frac{2}{3} \times 12 =$	A. 4 B. 6 C. 8 D. 10 E. 18
9	If the radius of the circle is halved, then its area	A. Remains same B. Become half C. Become quarter D. Become double E. Not changed
10	If $3(p + 5q) = 24$, then what is the value of q , when $p = 3$?	A. 1 B. 5 C. 9 D. 3 E. 7
11	A number which is divisible by both 6 and 8 is also divisible by	A. 7 B. 5 C. 11 D. 9 E. 24
12	If $3p + 2 = 12$, then $p - \frac{1}{3}$ equals:	A. 10 B. 3 C. $\frac{10}{3}$ D. 4 E. 12
13	If Adil can finish a job in 5 hours and Moeed can finish the same job in 10 hours, how many minutes will it take both of them together to finish the job?	A. 210 B. 220 C. 200 D. 180

		D. 160 E. 180
14	If the area of rectangle is 12, then its perimeter is	A. 6 B. 7 C. 8 D. 12 E. Cannot be determined from the given information
15	The area of the circle is 16π . The length of the diameter of the circle is	A. 2 B. 32 C. 4 D. 16 E. 8
16	What is 1/5% of 5000	A. 10 B. 12 C. 16 D. 1000 E. 5000
17	If $p = 2$, then $3p + (p^3)^2 =$	A. 18 B. 45 C. 42 D. 70 E. 73
18	Successive discounts of 10% and 15% is equivalent to a single discount of	A. 24% B. 24.5% C. 23.5% D. 22% E. 25%
19	Which of the following is closest to the square root of $1/2$?	A. 0.7 B. 0.6 C. 0.8 D. 0.25 E. 0.5
20	Question Image	A. 1.425 B. 1.585 C. 1.330 D. 0.750 E. 1.750
21	Mr. Kashif got an average of 50 in 6 tests. What should he get in the next to attain the average of 60?	A. 120 B. 60 C. 100 D. 70
22	If a pipe can fill a tank in 2 hours and another pipe can fill the same tank in 40 minutes. How much time in minutes is needed to fill the tank if both the pipes are working together?	A. 90 B. 50 C. 60 D. 30
23	A clerk filed 73 forms on Monday, 85 forms on Tuesday, 54 on Wednesday, 92 on Thursday and 66 on Friday. What was the average number of forms filed per day?	A. 50 B. 95 C. 84 D. 74
24	Find the arithmetic mean of 25.2, 13.5, 18.5, and 34.8	A. 13 B. 23 C. 27 D. 5
25	The average of x , y , z and 40 is 10. What is the average of x , y and z .	A. 10 B. 0 C. 2 D. 15
26	A and B can do in 6 days. If A does the job alone he takes 10 days. What will be the time required by B to complete the job alone?	A. 8 B. 6 C. 15 D. 3
27	The average height of a class of 14 boys is 5.3 feet. After new boy is admitted to the class, the new average height now becomes 5.25. What is the height of the new boy?	A. 4.55 B. 5.0 C. 6.0 D. 3.5
28	A man bought 27 packets of Chilli Milli at \$280 each, 9 packets of Chilli Milli at \$320 each and 6 packets of Chilli Milli at \$360 each. Find the average price per packet of Chilli Milli.	A. \$250 B. \$300 C. \$400 D. \$380
29	Out of the 44 boys in a class 9 are of the age of 10, 15 at the age of 9, and the rest are at the age of 8. Find their average age	A. 7.85 B. 8.75 C. 12.2

	the age of C. Find their average age.	C. 12.2 D. 14.35
30	The population of 8 villages is 900, 750, 1100, 1050, 1250, 555, and 630. Find the population of Ninth village if the average population of Nine villages is 900.	A. 1200 B. 1050 C. 1030 D. 7070
31	A team played 30 games of which it won. What part of the games played did it lose?	A. $\frac{1}{5}$ B. $\frac{5}{6}$ C. $\frac{6}{5}$ D. 5
32	What part of an hour elapses between 10: 45 a.m and 11:09 a.m?	A. $\frac{2}{5}$ B. $\frac{3}{5}$ C. $\frac{11}{12}$ D. 2
33	One half of the employees of Al Karim Co. earn salaries above Rs. 18,000 monthly. One third of the remainder earn salaries between Rs. 15,000 and Rs. 18,000. What part of the staff below Rs. 15,000?	A. $\frac{2}{3}$ B. $\frac{1}{3}$ C. $\frac{2}{5}$ D. $\frac{3}{5}$
34	David receives his allowance on Sunday. He spends $\frac{1}{4}$ of his allowance on Monday and $\frac{2}{3}$ of the remainder on Tuesday. What part of his allowance is left for the rest of the week?	A. $\frac{2}{3}$ B. $\frac{4}{5}$ C. $\frac{6}{7}$ D. $\frac{1}{4}$
35	12 is $\frac{3}{4}$ of what number?	A. 20 B. 24 C. 16 D. 8
36	A piece of fabric is cut into three sections so that the first is three times as long as the second and the second is three times as long as the third. What part of the entire piece is the smallest section?	A. $\frac{2}{5}$ B. $\frac{3}{7}$ C. $\frac{2}{3}$ D. $\frac{1}{13}$
37	A factory employs M men and W women. What part of its employees are women?	A. $\frac{W}{(W + M)}$ B. $\frac{W}{M}$ C. $\frac{(W + M)}{M}$ D. $\frac{M}{W}$
38	A motion was passed by a vote of 5: 3. What part of the votes cast was in favor of the motion?	A. $\frac{3}{5}$ B. $\frac{5}{8}$ C. $\frac{3}{8}$ D. $\frac{5}{3}$
39	If the ratio of x : y is 9 : 7, then x + y is	A. 16 B. 2 C. 1 D. None of the above
40	$1250 \div 25 \times 0.5 = ?$	A. 25 B. 50 C. 2.5 D. 100
41	$x^2 = 1681$, x = ?	A. 31 B. 41 C. 51 D. 61
42	$2.08 - (0.5)^2 = ?$	A. -1.20 B. 1.88 C. 1.83 D. 2.16
43	$\sqrt{256} \div \sqrt{64} = ?$	A. $\frac{1}{4}$ B. $\frac{26}{8}$ C. 16 D. 4
44	$816 - 288 \div = 24 ?$	A. 22 B. 828 C. 528 D. 804
45	$9218 - 3546 + 2354 = ?$	A. 8026 B. 8116 C. 10410 D. 23174
46	$350 - 96 \div 18 = ?$	A. 318 B. -132 C. 328 D. 232

47	$\frac{3}{4}$ of 432 = ?	A. 340 B. 232 C. 324 D. 316
48	$(60)^2 = ? \times 7$	A. 3600 B. 3528 C. 0.02 D. 50
49	$? \times 12 = 75\% \text{ of } 336$	A. 48 B. 252 C. 28 D. 21
50	12% of x = 360	A. 250 B. 100 C. 400 D. 3000
51	$\frac{1}{2}$ of $44 \div 2.2 = ?$	A. 20 B. 22 C. 44 D. 100
52	$(190)^2 - (150)^2 = ?$	A. 58600 B. 13600 C. 1360 D. 1600
53	$2244 \div 0.88 = ? \times 1122$	A. 20.02 B. 20.2 C. 19.3 D. 2.27
54	$x\sqrt{0.09} = 3$; x = ?	A. 10 B. $\frac{1}{3}$ C. $\frac{1}{10}$ D. 1
55	$(60)^2 = ? \times 72$	A. 36 B. 3600 C. 40 D. 50
56	$0.027 \div 90 = ?$	A. 0.0003 B. 0.03 C. 3 D. 0.00003
57	25 % of 4 \div 4% of 25 = ?	A. 1 B. 3 C. 0 D. 67
58	If x % of 60 = 48, then x = ?	A. 80 B. 60 C. 90 D. 40
59	$(242 - 17)^2 - (7 - 5)^2 = ?$	A. 49000 B. 49200 C. 94200 D. 49400
60	$72 + 679 + 1439 + 537 + ? = 4036$	A. 1309 B. 1208 C. 2308 D. 2423
61	$.007 \div \sqrt{.000049}$	A. 1 B. .0049 C. 2 D. 7
62	$1.02 - 0.02 + ? = 1.842$	A. 0.222 B. 0.842 C. 2 D. None
63	x + y = 17 and x = 2 then value of y?	A. 13 B. 15 C. 19 D. 10
64	If x + 2y = 11 and x + y = 10 the value of y is?	A. 1 B. 2 C. 3 D. 4

65	If $x + 3y = 7$ and $2x + y = 5$ then x/y is?	A. $1/2$ B. $1/3$ C. $2/5$ D. $8/9$
66	The value of $x^2 + 5x + 6$ at $x = 2$ is?	A. 10 B. 14 C. 18 D. 20
67	If $2x + y = 11$ and $3x + 2y = 17$ then y is?	A. 1 B. 5 C. 6 D. 4
68	$2x^2y$ when multiplied with $x^2 + y^2$ gives?	A. $2x^3y^3 + 2xy^3$ B. $2x^4y + 2x^2y^3$ C. $2xy^2 + 2x^2y$ D. $2xy^3 + 2x^3y$
69	The value of $\{0.54 - 0.44\} / \{0.52 - 0.42\}$ is?	A. 0.9 B. 0.09 C. 0.19 D. 0.31
70	If $a^2 - b^2$ and $a - b = 12$ then average of 'a' and 'b' is?	A. 3 B. 12 C. 6 D. $3/2$
71	If $(x + 1/x)^2 = 96$ what is the value of $x^2 + 1/x^2$?	A. 94 B. 98 C. 100 D. 90
72	$(x + y)^2 = 25$ and $x^2 + y^2 = 13$ then xy is equal to?	A. 16 B. 20 C. 18 D. 6
73	When $3x^2 + 5x + 7$ is subtracted from $x^2 + 8x + 3$ the result is?	A. $5x^2 - 3x + 4$ B. $3x - 2x^2 - 4$ C. $x^2 + 8x + 10$ D. $11x^2 - 3x + 10$
74	The value of $(x + y)^2 + (x - y)^2$ is?	A. 4 B. $2(x^2 + y^2)$ C. $4xy$ D. $-4xy$
75	The value of $(x + y)^2 - (x - y)^2$ is?	A. 4 B. $(x^2 + y^2)$ C. $4xy$ D. $-4xy$
76	$1/x = 1/y + 1/z$ then 'x' in terms of 'y' and 'z' is given by?	A. $(y + z) / (y - z)$ B. $yz / (y + z)$ C. $(y + z) / yz$ D. $1/z - 1/y$
77	If $3x + 5y = 10$ and $3y + 5x = 30$ then average if 'x' and 'y' is?	A. $3/2$ B. 4 C. $5/2$ D. $7/2$
78	$Ay - b = c - dy$ what is 'y' in terms of 'a', 'b' and 'c'?	A. 30 B. $38/2$ C. $38/3$ D. $38/5$
79	$Ay - b = c - dy$ what is 'y' in term of 'a', 'b' and 'c'?	A. $(c + b) / (a + d)$ B. $(c - b) / (a + d)$ C. $(c - b) / (a - d)$ D. $(c + b) / (a - d)$
80	If $x = 7y + 3$ and $z = 49y^2$ then what is 'z' in terms of x?	A. x^2 B. $x^2 - 3$ C. $(x - 3)^2 / 7$ D. None
81	If $4x - y = 13$ and $3x - 2y = 7$ then what is the average of 'x' and 'y'?	A. 4 B. 3 C. 2 D. 6
82	If 'a' and 'b' are positive and $1/a = 3 + 1/b$ is 'a' greater than 'b'?	A. Yes B. No

82	If x and y are positive and $1/x + 1/y$ is x greater than y ?	C. It cannot be determined D. They are equal
83	How many miles are there between two cities if the distance is represented by a 2.4-inch line on a map having a scale of 1 inch to 8 miles?	A. 19.2 B. 12.8 C. 8.5 D. 38
84	If 10 tractors are needed to plow a field in 4 hours, how many tractors are needed below to plow the field in 5 hours?	A. 32 B. 4 C. 16 D. 8
85	What is the number, 5% of which is 10?	A. 200 B. 100 C. 50 D. 10
86	What is the sum of money, 6% of which is 18 dollars?	A. 600 B. 200 C. 300 D. 10
87	Find the sum of money, 11% of which is Rs. 1650.	A. 150 B. 3300 C. 25000 D. 15000
88	A man has Rs. 2000 and spends 18% of it. What money has he left now?	A. 3600 B. 820 C. 1640 D. 4000
89	In a school there are 400 students, of whom 70% are boys. What is the number of girls?	A. 120 B. 200 C. 280 D. 2800
90	The population of a city increased in two years from 25,000 to 30,000; find the percent increase during the time.	A. 10% B. 20% C. 40% D. 5%
91	A man opens a bookstall with a capital of Rs. 25000. In three months his capital amounts to rupees 27500. What is the increase percent?	A. 1% B. 10% C. 20% D. 7%
92	A man spent 10% of his money. After spending 60% of the remainder he has Rs. 72 left. How much had he in the start?	A. 10 B. 100 C. 200 D. 400
93	A word processing operator typed 44 words per minute. After practice, the operator's speed increased to 55 words per minutes. By what percent did the operator's speed increase?	A. 25% B. 50% C. 15% D. 20%
94	The annual decrease in the population of a city was 10% and the present number of inhabitants is 1620. What was the population 2 years hence?	A. 20 B. 400 C. 2000 D. 1000
95	A team played 30 games of which it won. What part of the games played did it loss?	A. 1/5 B. 5/6 C. 6/5 D. 5
96	If a man's weekly salary is \$X and saves \$Y. What part of his weekly salary does he spend?	A. X/Y B. X-Y/X C. Y-X/X D. x-y
97	What part of an hour elapses between 10:45 a.m. and 11:09 a.m.?	A. 2/5 B. 3/5 C. 11/12 D. 2
98	One half of the employees of Al Karim Co. earn salaries above Rs.18,000 monthly. One third of the remainder earn salaries between Rs.15,000 and Rs.18,000. What part of the staff earns below Rs.15,000?	A. 2/3 B. 1/3 C. 2/5 D. 3/5
99	David receives his allowance on Sunday. He spends 1/4 of his allowance on Monday and 2/3 of the remainder on Tuesday. What part of his allowance is left for the rest of the week?	A. 2/3 B. 4/5 C. 6/7 D. 1/4