Advance Level

1) The value of $\sqrt{(-\sqrt{3}+\sqrt{3}+8\sqrt{7}+4\sqrt{3}}$ is

[SSC CGL 2016]

a) 2 b) 4
c) ± 2 c) -2

2) For what value of X,211X will be a perfect square?

[SSC CGL 2017]

a) 4 b) 5
c) 6 d) 9

3) What is the value of positive square root of $69 + 28\sqrt{5}$?

[SSC CPO 2017]

a) $7 + 2\sqrt{5}$ b) $7 - 2\sqrt{5}$
c) $2 + 7\sqrt{5}$ d) $2 - 7\sqrt{5}$

4) The number whose square is equal to the difference of the squares of 37 and 23 is

[AFCAT 2018]

a) 45.09 **b) 28.98**
c) 47.09 d) 28

5) Select the option that can replace the question mark (?) in the following equation $\frac{0.2^3-0.1^3}{0.2+0.1^2} = ?$

[RRB ALP 2018]

a) $\frac{7}{90}$ b) $\frac{-7}{90}$
c) $\frac{1}{18}$ d) $\frac{3}{40}$

6) The square root of $33 - 4\sqrt{35}$ is

[SSC CGL 2013]

a) $\pm(\sqrt{7} - 2\sqrt{5})$ **b) $\pm(2\sqrt{7} - \sqrt{5})$**
c) $\pm(2\sqrt{7} - \sqrt{5})$ d) $\pm(\sqrt{7} - 2\sqrt{5})$

7) If $\sqrt{24025} = 155$, then $\sqrt{240.25} + \sqrt{2.4025} + \sqrt{0.024025} + \sqrt{0.00024025}$ is equal to

a) 16.2205 b) 16.2402
c) 17.2205 d) 155.2205

8) The value of $\sqrt{10+\sqrt{25+\sqrt{108+\sqrt{154+\sqrt{225}}}}}$ is

[SSC PO 2015]

a) 10 b) 8
c) 6 **d) 4**

9) Which smallest number must be subtracted from 0.000326 to make it a perfect square?

a) 0.000004 **b) 0.000002**
c) 0.04 d) 0.02

10) $\left[\frac{1.2.4+2.4.8+3.6.12+\cdots}{1.3.9+2.6.18+3.9.27+\cdots}\right]^{\frac{1}{3}}$ is equal to

a) $\frac{3}{2}$ **b) $\frac{2}{3}$**
c) 1 d) $\frac{7}{8}$

11) $\sqrt[3]{\frac{512}{729}} + \sqrt[3]{\frac{8}{27}} + \sqrt{\frac{25}{81}}$ is equal to

a) $2\frac{1}{8}$ b) $2\frac{1}{7}$
c) $2\frac{1}{9}$ d) $2\frac{1}{11}$

12) The term, that should be added to $4x^2 + 4x$ so that resulting expression be a perfect square, is

[SSC CPO 2016]

a) 1 b) 2
c) 2x **d) 4**

13) Find the square root of $\frac{\left(1\frac{3}{4}\right)^4-\left(2\frac{1}{3}\right)^4}{\left(1\frac{3}{4}\right)^2-\left(2\frac{1}{3}\right)^2}$

a) $2\frac{11}{12}$ b) $7\frac{11}{14}$

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c) $5\frac{11}{9}$ d) $19\frac{11}{16}$

14) The value of (t) for which $m^2 - \frac{3}{2}m + t$ will be a perfect square, is **[SSC CGL 2011]**

a) $\frac{9}{4}$ **b) $\frac{9}{16}$**
c) $\frac{3}{2}$ d) $\frac{3}{4}$

15) If sum of square root of two integers is $\sqrt{14 + 8\sqrt{3}}$, then sum of square of these integers is **[RRB Group D 2016]**

a) 100 b) 288
c) 162 d) 144

16) Which of the following statements is / are true?
I. $\sqrt{121} + \sqrt{12321} + \sqrt{1234321} = 1233$
II. $\sqrt{0.64} + \sqrt{64} + \sqrt{36} + \sqrt{0.36} > 15$
a) Only I b) Only II
c) Neither I nor II **d) Both I and II**

17) A Gardner planted 1936 saplings in a garden such that there were as many rows of saplings as the columns. The number of rows planted is **[SSC CPO 2018]**

a) 46 **b) 44**
c) 48 d) 42

18) A man plants 5184 orange trees in his garden and arranges them, so that there are as many rows as there are orange trees in a row. How many rows are there in the garden? **[SSC CGL 2014]**

a) 70 **b) 72** c) 75 d) 81

19) The number of threes in each row of a garden is equal to the total number of rows in the garden. After 111 trees have been uprooted in a storm, there remain 10914 trees in the garden. The number of rows of trees in the garden **[SSC PO 2007]**

a) 100 **b) 105**
c) 115 d) 125

20) While solving a problem, Samidha squared a number and then subtracted 25 from it rather than the required i.e, first subtracting 25 from the number and then squaring it. But she got the right answer. What was the given number?

a) 13 b) 38
c) 48 d) Cannot be determined