PROGRESSIONS DPP

Q.1 p^{th} term of the series

$\left(3-\frac{1}{n}\right)+\left(3-\frac{2}{n}\right)+\left(3-\frac{3}{n}\right)+\cdots$ will be

(a) $3+\frac{p}{n}$ (b) $3-\frac{p}{n}$ (c) $3+\frac{n}{p}$ (d) $3-\frac{n}{p}$

Ans: (b)

Q.2 if the 9^{th} term of an A.P be zero, then the ratio of it's 29^{th} and 19^{th} term is

(a) 1:2 (b) 2:1 (c) 1:3 (d) 3:1

Ans: (b)

Q.3 if the p^{th} term of an A.P. be q and q^{th} term be p, then it's r^{th} term will be

(a) $p+q+r$ (b) $p+q-r$ (c) $p+r-q$

(d) $p-q-r$

Ans: (b)

Q.4 The Sum of the first four terms of an A.P. is 56. The Sum of the Last four terms is 112. if it's first term is 11, the no. of term is

(a) 10 (b) 11 (c) 12 (d) N.O.T

Ans: (b)

Q.5 Three numbers are in A.P. such that their sum is 18 and sum of their squares is 158. The greatest No. among them is

(a) 10 (b) 11 (c) 12 (d) N.O.T

Ans: (b)

Q.6 Three numbers are in A.P. whose sum is 33 and product is 792. Then the smallest number from these number is

(a) 4 (b) 8 (c) 11 (d) 14

Ans: (a)

Q.7 The Number of terms in the series

$101 + 99 + 97 + \cdots + 47$ is

(a) 25 (b) 28 (c) 30 (d) 20

Ans: (b)

Q.8 The sum of 24 terms of the following series $\sqrt{2} + \sqrt{8} + \sqrt{18} + \sqrt{32} + \cdots$ is

(a) 300 (b) $300\sqrt{2}$ (c) $200\sqrt{2}$ (d) N.O.T

Ans: (b)

Q.9 If the first, 2nd and last term of an A.P be a, b, 2a respectively, then it's sum will be

(a) $\frac{ab}{a-b}$ (b) $\frac{3ab}{2(b-a)}$ (c) Both (d) N.O.T

Ans: (b)

Q.10 if A_1, A_2 be two Airthmetic Means b/w $\frac{1}{3}$ and $\frac{1}{24}$, then their values are

(a) $\frac{7}{72}, \frac{5}{36}$ (b) $\frac{17}{72}, \frac{5}{36}$ (c) $\frac{7}{36}, \frac{5}{72}$ (d) N.O.T

Q.11 four Airthmetic Means b/w 3 and 23 are

(a) 5, 9, 11, 13 (b) 7, 11, 15, 19 (c) 7, 15, 19, 21

Ans: (b)

Q.12 if a, b, c are in G.P then,

(a) $a(b^2+a^2) = c(b^2+c^2)$ (b) $a(b^2+c^2) = c(a^2+b^2)$

(c) $a^2(b+c) = c^2(a+b)$ (d) N.O.T

Ans: (b)

Q.13 The Number which should be added to the no. 2, 14, 62 so that the resulting no.s may be in G.P, is

(a) 1 (b) 2 (c) 3 (d) 4

Ans: (b)

Q.14) 7^{th} term of the Sequence $\sqrt{2}, \sqrt{10}, 5\sqrt{2}, \ldots$ is

(a) $125\sqrt{10}$ (b) $25\sqrt{2}$ (c) 125 (d) $125\sqrt{2}$

Ans: (d)

Q.15 if the first term of a G.P is 5 and common ratio $b/a = -5$, then which term is 3125

(a) 6th (b) 5th (c) 7th (d) 8th

Ans: (b)

Q.16 The first two terms of a geometric progression add up to 12. The sum of the third and the fourth term is 48. if the terms of the geometric progression are alternately positive and negative, then the first term is

(a) −12 (b) 12 (c) 4 (d) −4

Ans: (a)

Q.17 The sum of 100 terms of the series $0.9 + 0.09 + 0.009 + \cdots$ will be

(a) $1-\left(\frac{1}{10}\right)^{100}$ (b) $1+\left(\frac{1}{10}\right)^{106}$ (c) $1-\left(\frac{1}{10}\right)^{106}$

(d) $1+\left(\frac{1}{10}\right)^{100}$

Ans: (a)

Q.18 The Product of three G.Ms b/w 4 and $\frac{1}{4}$ will be

(a) 4 (b) 2 (c) −1 (d) 1

Ans: (d)

Q.19 The fifth term of the H.P.,

$2, 2\frac{1}{2}, 3\frac{1}{3}, \ldots$ will be

(a) $5\frac{1}{5}$ (b) $3\frac{1}{5}$ (c) $\frac{1}{10}$ (d) 10

Ans: 10

Q.20 if the 7^{th} term of a H.P is $\frac{1}{10}$ and the 12^{th} term is $\frac{1}{25}$, then the 20^{th} term is

(a) $\frac{1}{37}$ (b) $\frac{1}{41}$ (c) $\frac{1}{45}$ (d) $\frac{1}{49}$

Ans: (d)

Q.21) if H is the Harmonic Mean b/w p and q, then the values of $\frac{H}{p} + \frac{H}{q}$ is

(a) 2 (b) $\frac{pq}{p+q}$ (d) N.O.T

Ans: (a)