



# SHIKSHA CLASSES

Sub. : Maths

Question Paper

Marks : 20

Std. : VIII<sup>th</sup> - S.B.

7. Variation

Time : 45 min.

**Q.1 : A) Select the most appropriate Alternative.** 02

1) y varies as x. Express this statement symbolically.

- a)  $y \propto x$       b)  $y \propto \frac{1}{x}$       c)  $y \propto -x$       d)  $x \propto -y$

2)  $A = \pi r^2$ . What statement of variation do we get ?

- a)  $A \propto r$       b)  $A \propto r^2$       c)  $A \propto \frac{1}{r}$       d)  $A \propto \frac{1}{r^2}$

**: B) Solve the following.** 01

1) Write the following statement using the symbol of variation:

Circumference (c) of a circle is directly proportional to its radius (r).

**Q.2 : A) Solve any one of the following. (Activity)** 02

1) Complete the following table considering that the cost of apples and their number are in direct variation.

Number of apples (x)	1	4	....	12	....	....
Cost of apples (y)	8	32	56	....	160	24

2) If n varies directly as m, complete the following table.

m	3	5	6.5	....	1.25	....
n	12	20	....	28	....	10

**: B) Solve any one of the following.** 02

1) y varies directly as the square root of x. When  $x = 16$ ,  $y = 24$ . Find the constant of variation and the equation of variation.

2) The boxes are to be filled with apples. If 24 apples are put in a box, then 27 boxes are needed. If 36 apples are filled in a box how many boxes will be needed ?

**Q.3 : A) Solve any one of the following. (Activity)** 03

1) If a varies inversely as b then complete the following table.

a	6	12	15	...	2.5
b	20	...	...	4	...
a × b	120	120	...	...	120

- 2) The information about number of workers and number of days to complete a work is given in the following table. Complete the table.

Number of workers	30	20	...	10	...
Days	6	9	12	...	36

**: B) Solve any one of the following.**

03

- 1) If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours ?
- 2) The total remuneration paid to labourers, employed to harvest soya bean, is in direct variation with the number of labourers. If the remuneration of 4 labourers is ₹ 1000, find the remuneration of 17 labourers.

**Q.4 : Solve any one of the following.**

04

- 1) Suneeta types 1080 words in one hour. What is her GWAM (gross words a minute rate) ?
- 2) A car with speed 60 km/h takes 8 hours to travel some distance. What should be the increase in the speed, if the same distance is to be covered in  $7\frac{1}{2}$  hours ?

**Q.5 : Solve any one of the following.**

03

- 1) 15 women finish the work of harvesting a groundnut crop in 8 days. Find the number of women if the same job is to be completed in 6 days.
- 2) Which of the following statements are of inverse variation ?
  - i) Number of workers on a job and time taken by them to complete the job.
  - ii) Number of pipes of same size to fill a tank and the time taken by them to fill the tank.
  - iii) Area of circle and its radius.

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