

# UGC NET Paper 1 2011 dec

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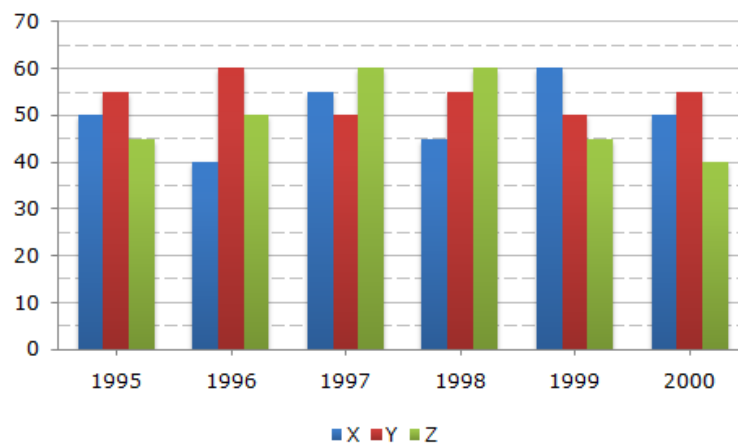
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## Previous Years Solved Questions - UGC NET Paper 1 for July 2018

### DI (Hindi/Eng)-36 with ANS

A soft drink company prepares drinks of three different flavours - X, Y and Z. The production of three flavours over a period of six years has been expressed in the bar graph provided below.

Production of Three Different Flavours X, Y and Z by a Company over the years (in lakh bottles)



The total production of flavour Z in 1997 and 1998 is what percentage of the total production of flavour X in 1995 and 1996? 1997 और 1998 में फ्लेवर Z का कुल उत्पादन 1995 और 1996 में फ्लेवर X के कुल उत्पादन का कितना प्रतिशत है?

- A. 96.67%
- B. 102.25%
- C. 115.57%
- D. 133.33%

**Answer:** Option D

**Explanation:**

$$\begin{aligned} \text{Required percentage} &= \left[ \frac{(60 + 60)}{(50 + 40)} \times 100 \right] \% \\ &= \left[ \frac{120}{90} \times 100 \right] \% \\ &= 133.33\%. \end{aligned}$$

For which flavour was the average annual production maximum in the given period? दी गई अवधि में किस फ्लेवर का औसत वार्षिक उत्पादन अधिकतम था?

- A. X only
- B. Y only
- C. Z only
- D. X and Y

**Answer:** Option B

**Explanation:**

Average annual productions over the given period for various flavours are:

$$\text{For Flavour X} = \left[ \frac{1}{6} \times (50 + 40 + 55 + 45 + 60 + 50) \right] = 50 \text{ lakh bottles.}$$

$$\text{For Flavour Y} = \left[ \frac{1}{6} \times (55 + 60 + 50 + 55 + 50 + 55) \right] = 54.17 \text{ lakh bottles.}$$

$$\text{For Flavour Z} = \left[ \frac{1}{6} \times (45 + 50 + 60 + 60 + 45 + 40) \right] = 50 \text{ lakh bottles.}$$

∴ Maximum average production is for Flavour Y.

What is the difference between the average production of flavour X in 1995, 1996 and 1997 and the average production of flavour Y in 1998, 1999 and 2000? 1995, 1996 और 1997 में फ्लेवर X के औसत उत्पादन और 1998, 1999 और 2000 में फ्लेवर Y के औसत उत्पादन के बीच कितना अंतर है?

- A. 50,000 bottles
- B. 80,000 bottles
- C. 2,40,000 bottles

D. 5,00,000 bottles

**Answer:** Option D

**Explanation:**

Average production of flavour X in 1995, 1996 and 1997

$$\begin{aligned} &= \left[ \frac{1}{3} \times (50 + 40 + 55) \right] \\ &= \left( \frac{145}{3} \right) \text{ lakh bottles.} \end{aligned}$$

Average production of flavour Y in 1998, 1999 and 2000

$$\begin{aligned} &= \left[ \frac{1}{3} \times (55 + 50 + 55) \right] \\ &= \left( \frac{160}{3} \right) \text{ lakh bottles.} \end{aligned}$$

$$\therefore \text{Difference} = \left( \frac{160}{3} - \frac{145}{3} \right)$$

$$= \frac{15}{3}$$

$$= 5 \text{ lakh bottles}$$

$$= 5,00,000 \text{ bottles.}$$

What was the approximate decline in the production of flavour Z in 2000 as compared to the production in 1998? 1998 में उत्पादन की तुलना में 2000 में फ्लेवर Z के उत्पादन में लगभग कितनी गिरावट आई थी?

A. 50%

B. 42%

C. 33%

D. 25%

**Answer:** Option C

**Explanation:**

Percentage decline in the production of flavour Z in 2000 as compared to the production in 1998

$$= \frac{(60 - 40)}{60} \times 100 \%$$

$$= \left[ \frac{20}{60} \times 100 \right] \%$$

$$= 33.33\%$$

$$\approx 33\%.$$

For which of the following years the percentage of rise/fall in production from the previous year is the maximum for the flavour Y? निम्नलिखित में से किस वर्ष के लिए पिछले वर्ष से उत्पादन में वृद्धि/गिरावट का प्रतिशत Y फ्लेवर के लिए अधिकतम है?

- A. 1996
- B. 1997
- C. 1998
- D. 1999

**Answer:** Option B

**Explanation:**

The percentage rise/fall in production from the previous year for flavour Y during various years are:

$$\begin{aligned} \text{In 1996} &= \left[ \frac{(60 - 55)}{55} \times 100 \right] \% = 9.09\% \text{ (increase)} \\ \text{In 1997} &= \left[ \frac{(60 - 50)}{60} \times 100 \right] \% = 16.67\% \text{ (decrease)} \\ \text{In 1998} &= \left[ \frac{(55 - 50)}{55} \times 100 \right] \% = 10\% \text{ (increase)} \\ \text{In 1999} &= \left[ \frac{(55 - 50)}{55} \times 100 \right] \% = 9.09\% \text{ (decrease)} \\ \text{In 2000} &= \left[ \frac{(55 - 50)}{50} \times 100 \right] \% = 10\% \text{ (increase)} \end{aligned}$$

∴ Maximum change is decrease of 16.67% during 1997.