

**Quantitative Techniques**

XXV. The findings of Oxfam India's latest 'India Discrimination Report 2022' indicate that there is a significant gap in the earnings between men and women in the case of regular and self-employment in urban areas. The lower wages for salaried women are due to 67 percent of discrimination and 33 percent due to lack of education and work experience. The average earning is ₹ 16,000 for men and merely ₹ 6,600 for women in urban areas in self-employment. The average earning of men is ₹ 19,800 as against ₹ 15,600 for women in regular/salaried employment in urban areas. Also, in urban areas the average earnings of men (₹ 9,000) are significantly higher than women (₹ 5,700) even in casual employment. Apart from women, historically oppressed communities along with religious minorities also continue to face discrimination in accessing jobs, livelihoods, and agricultural credit. The mean income for Scheduled Castes or Scheduled Tribes ("SC/ST") persons in urban areas who are in regular employment is ₹ 15,300 as against ₹ 20,300 for persons belonging to the non-SC/ST category. The average earning of self-employed workers is ₹ 15,900 for non-SC/STs and ₹ 10,500 for SC/STs. The average monthly earning for the SC/ST workers in casual work is ₹ 8,000 below the corresponding figure of ₹ 8,600 for the non-SC/ST.

[Data Source: Oxfam India]

[Note: Values have been approximated to the nearest hundred]

136. Choose the correct option:
- (A) Women's average earnings in urban areas in casual work is 30% lower than that of men
 - (B) Men's average earning in urban areas in self-employment is nearly 2.5 times that of earnings of women
 - (C) In casual work, women earn more in rural areas than in urban areas
 - (D) The difference in earnings of men and women in regular/salaried employment in urban areas is ₹ 3,500
137. Of the regular employed in urban areas, the earnings of a non-SC/ST worker is what percent more than a SC/ST worker?
- (A) Between 20% and 25%
 - (B) Less than 15%
 - (C) Between 30% and 35%
 - (D) More than 35%
138. Of those in casual employment, if a man's average earnings was deposited at a rate of 16% simple interest for 20 years, in how many years at the same rate of simple interest a SC/ST worker must deposit their average earnings to earn the same amount as a man in 20 years?
- (A) 24 years
 - (B) 22.5 years
 - (C) 21 years
 - (D) 23.2 years



139. The findings also indicate discrimination as a driving factor behind low Women's Labour Force Participation Rate (LFPR) in the country. As per the Union Ministry of Statistics & Programme Implementation (MoSPI), LFPR for women in India was only 25.1 percent in 2020-21 for urban and rural women. This is considerably lower than South Africa where the LFPR for women is 46 percent in 2021 as per the latest World Bank estimates. The LFPR for women in India has rapidly declined from 42.7 percent in 2004-05 to mere 25.1 percent in 2020-2021 showing the withdrawal of women from the workforce despite rapid economic growth during the same period. In 2019-20, 60 percent of all males aged 15 years and more have regular salaried and self-employed jobs while 19 percent of all similarly aged females get regular and self-employment. Use the additional data in the passage above to answer this and the next question.

If the number of women in India in 2020-2021 is 670 million which is 24% more than in 2004-2005, what is the difference in the number of women in LFPR 2004-05 and 2021?

- (A) Less than 5 crores (B) Between 6 and 8 crores
(C) Between 10 and 12 crores (D) More than 15 crores
140. In 2019-20, if the number of males aged 15 years and more is 76% of the total male population and the number of females aged 15 years and more is 72% of the total female population and the total male population is 1.05 times the total female population, what is the ratio of females to males aged 15 years and more that have regular salaried and self-employed jobs?
- (A) 2 : 7 (B) 3 : 10 (C) 5 : 9 (D) 1 : 3

XXVI. World fruit production went up 54 percent between 2000 and 2019, to 883 million tonnes. Five fruit species accounted for 57 percent of the total production in 2019, down from 63 percent in 2000. Use the data in the passage to answer the following questions.

[Data source: FAO]

141. What was the world fruit production in 2000?
- (A) 474 million tonnes (B) 517 million tonnes
(C) 573 million tonnes (D) 406 million tonnes
142. Of the five fruit species mentioned in the passage above, the share of bananas and plantains increased by 1 percentage point between 2000 and 2019, watermelons in 2019 was 6 percentage points lower than bananas and plantains in 2000, apples remained stable at 10%, and the percentage share of oranges and grapes reduced to half of bananas in 2019 . What was the percentage of bananas and plantains in 2019?
- (A) 17% (B) 18% (C) 16% (D) 21%
143. Of the watermelons in 2000, one-eighth perished, one-fifth of the remaining was sold to be juiced and 30% of the remaining was exported. If the percentage share of oranges in 2000 was equal to the percentage share of watermelons in 2019, how many watermelons were retained for home sale and consumption?
- (A) 39.2 million tonnes (B) 1.6 million tonnes
(C) 16.8 million tonnes (D) 2.7 million tonnes



144. Assume that all grapes and apples were sold through a single organisation in 2000. Grapes and apples were sold to 4 different customers such that a certain quantity of apples were sold to the first customer, same number of apples were sold to the second customer as to the first and a certain number of grapes were sold to that customer after which apples were over. Twice the quantity of grapes sold to the second was sold to the third customer and twice the quantity sold to the third was sold to the fourth customer. The total quantity of grapes is equal to the total quantity of apples sold and the remaining grapes were stored. How many grapes were sold to each customer?
- (A) 19.1 million tonnes (B) 8.2 million tonnes
(C) 28.6 million tonnes (D) 9.4 million tonnes
145. Frutopia and Fruitfix both sold oranges at the same selling price. However, Frutopia gave customers a 15% discount on the marked price whereas Fruitfix sold the oranges for a discount of 20% on the marked price. If the marked price of oranges on Frutopia is ₹ 75/kg, what is the marked price of oranges on Fruitfix?
- (A) ₹ 78 (B) ₹ 82 (C) ₹ 90 (D) ₹ 80

XXVII. Players are selected for Judo based on their body weights from the following 10 weight groups:

- | | |
|--------------------|---------------------|
| 1. (48 kg - 52 kg) | 6. (68 kg - 72 kg) |
| 2. (52 kg - 56 kg) | 7. (72 kg - 76 kg) |
| 3. (56 kg - 60 kg) | 8. (76 kg - 80 kg) |
| 4. (60 kg - 64 kg) | 9. (80 kg - 84 kg) |
| 5. (64 kg - 68 kg) | 10. (84 kg - 88 kg) |

The average weight of the players after selecting one player from each group is 68 kg. If one of the players (named *S*) leaves the team, their average weight comes down to 66.5 kg.

146. Player *S* is from the weight group:
- (A) 1 (B) 9 (C) 5 (D) 10
147. If *S* leaves the group and two new players join the group, their average weight increases to 68 kg. These players can NOT be from groups:
- (A) 1 and 3 (B) Both from group 7 (C) 4 and 10 (D) 5 and 9
148. What is the average weight of all the players taken together?
- (A) 68 kg (B) 66 kg (C) 69 kg (D) Cannot be determined
149. In the average of all the groups together, which group contributes most in overall average?
- (A) 10 (B) 8 (C) 1 (D) Cannot be determined
150. If one of the new two players is from group 4, which group the other player is from?
- (A) 5 (B) 7 (C) 10 (D) None of the above



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SPACE FOR ROUGH WORK