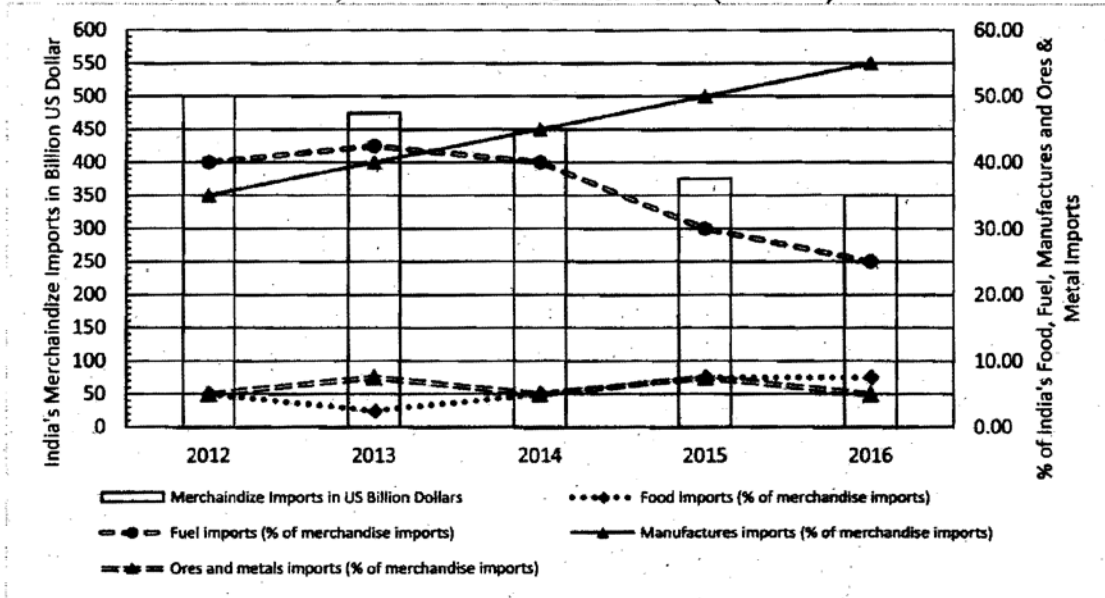


SECTION – DI

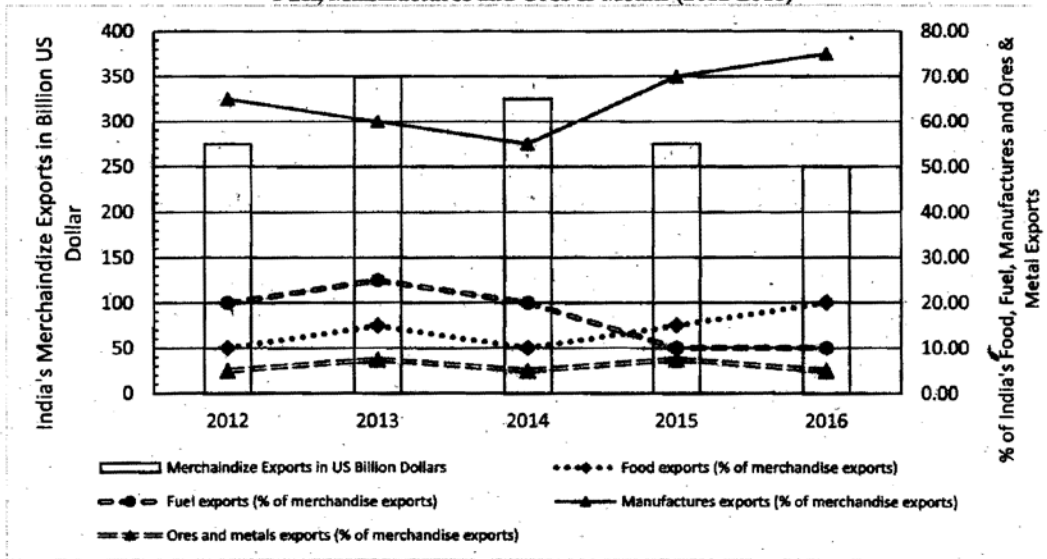
Directions for Questions 41-45: Exhibit 1 as under provides the data of India's Merchandize Imports (Billion US Dollar) on left axis and Percentage of Food, Fuel, Manufactures and Ores & Metals Imports of India's on the right axis. Similarly; Exhibit 2 provides data of India's Merchandize Exports (Billion US Dollar) on left axis and Percentage exports of Food, Fuel, Manufactures and Ores & Metals on the right axis. Attempt the questions in the context of information provided as under:

- a. Trade Balance = Import Minus Exports
- b. Trade Deficit = If Imports are more than Exports
- c. Trade Surplus If Exports are more than Imports

**Exhibit 1 : India's Total Merchandize Imports (US Dollar in Billion) and Percentage Imports of Food, Fuel, Manufactures and Ores & Metals (2012-2016)**



**Exhibit 2: India's Total Merchandize Exports (US Dollar in Billion) and Percentage Exports of Food, Fuel, Manufactures and Ores & Metals (2012-2016)**



41. What shall be approximate Manufactures exports of India in the year 2016 based on average exports for the period 2012-2016?  
 (a) 221 Billion US Dollar (b) 209 Billion US Dollar (c) 239 Billion US Dollar (d) 236 Billion US Dollar

**Sol.** (a); Average =  $\frac{275 + 350 + 325 + 275 + 250}{5} = 295$

$\therefore$  manufactures exports for 2016  
 = 75 x 295  
 = 221.

42. What is the proportion of positive and negative Manufactures trade balance in the period 2012-2016?  
 (a) 3:2 (b) 2:3 (c) 1:4 (d) None of these

**Sol.** (b); 2012  $\Rightarrow 500 \times .35 - 275 \times .65 = - 3.75$   
 2013  $\Rightarrow 475 \times .4 - 350 \times .6 = -20$   
 2014  $\Rightarrow 450 \times .45 - 325 \times .55 = 23.75$   
 2015  $\Rightarrow 375 \times .5 - 275 \times .7 = - 5$   
 2016  $\Rightarrow 350 \times .55 - 250 \times .75 = 5$   
 $\therefore$  ratio of positive to negative trade balance is 2 : 3.

43. In which year, trade deficit of fuel has been the second lowest?  
 (a) 2015 (b) 2014 (c) 2013 (d) 2016

**Sol.** (a); 2012  $\Rightarrow 500 \times .4 - 275 \times .2 = 145$   
 2013  $\Rightarrow 475 \times .425 - 350 \times .25 = 114.375$   
 2014  $\Rightarrow 450 \times .4 - 325 \times .2 = 115$   
 2015  $\Rightarrow 375 \times .3 - 275 \times .1 = 85$   
 2016  $\Rightarrow 350 \times .25 - 250 \times .1 = 62.5$   
 $\therefore$  2<sup>nd</sup> lowest si in year 2015.

44. Assuming India's imports and exports grow by 10% in 2017 and sectoral share of fuel in both imports and exports grow by 5 percentage basis, what shall be the approximate deficit of fuel trade in the year 2017?  
 (a) 88 Billion Fuel Trade Deficit (b) 74 Billion Fuel Trade Deficit  
 (c) 85 Billion Fuel Trade Deficit (d) 78 Billion Fuel Trade Deficit

**Sol.** (b); Import of fuel in 2017 = 350 x 1.1 x .3  
 = 115.5  
 Export of fuel in 2017 = 250 x 1.1 x .15  
 = 41.25  
 = 74.25 bn,

45. 45. Assuming India's absolute trade deficit grows by 54 Billion US Dollar and exports become 324 Billion US Dollar in the year 2017. What shall be India's absolute imports of food and fuel in 2017 if sectoral composition. of food, fuel, manufactures, ores and metals remain same as that of 2016?  
 (a) 36 Billion US Dollar & 119.5 Billion US Dollar (b) 38 Billion US Dollar & 117.5 Billion US Dollar  
 (c) 34 Billion US Dollar & 118.5 Billion US Dollar (d) 38 Billion US Dollar & 116.5 Billion US Dollar

**Sol.** (a); Total import of India = 324 + 154 = 478 bn.

$\therefore$  Food =  $478 \times \frac{7.5}{100} = 36$

Fuel =  $478 \times \frac{25}{100} = 119.5$

Directions for Question 46-47: Table as under provides the monthly prices in US Dollars Per Tonne of Barley, Wheat, Maize and Sorghum for the period July 2016 to June 2017. Attempt the questions given as under in the context of information provided.

Month	Barley Price	Wheat Price	Maize Price	Sorghum Price
Jul-16	140	134	162	174
Aug-16	128	128	150	141
Sep-16	125	123	148	141
Oct-16	128	123	153	139
Nov-16	132	123	151	139
Dec-16	128	123	153	139
Jan-17	132	137	160	140
Feb-17	136	147	163	141
Mar-17	137	146	159	142
Apr-17	139	138	156	143
May-17	142	146	159	144
Jun-17	141	157	158	167

46. In which of the following month, Wheat has the third highest percentage growth in monthly prices?  
 (a) June 2017                      (b) February 2017                      (c) January 2017                      (d) None of these

**Sol.** (b); Percentage growth in monthly prices of wheat

$$\text{Jan 17} = \frac{14}{123} = 11.35\%$$

$$\text{Feb 17} = \frac{10}{137} = 7.3\%$$

$$\text{May 17} = \frac{8}{138} = 5.79\%$$

$$\text{Jun 17} = \frac{11}{146} = 7.53\%$$

∴ Third highest is on Feb 17

47. How many times, the double digit growth in monthly prices occurs across the commodities in the given time period?  
 (a) 2                                      (b) 3                                      (c) 5                                      (d) None of these

**Sol.** (a); Double digit growth in monthly prices occurs twice across all commodities.

$$\text{For wheat in Jan-17} = (137-123)/123 * 100 = 11.38\%$$

$$\text{For Sorghum in Jun-17} = (167-144)/144 * 100 = 15.97\%$$

Directions for Questions 48-50; India has 13 major ports, out of which 6 ports are located in Eastern Coast and 6 ports are in Western Coast of India. 13<sup>th</sup> port is at Port Blair, located in Andaman & Nicobar Island, which has negligible cargo traffic. Table below provides the traffic data handled by 12 major ports (thousand tonnes) of India for the period 2011-12 to 2015-16. Based on the table, answer the questions:

Table : Traffic Handled by Major Ports (Thousand Tonnes)					
Ports	2011-12	2012-13	2013-14	2014-15	2015-16
1. Kolkata	43248	39928	41386	46293	50195
2. Paradip	54254	56552	68003	71011	76386
3. Vizag	67420	59038	58504	58004	57033
4. Kamarajar	14956	17885	27337	30251	32206
5. Chennai	55707	53404	51105	52541	50058
6. Chidambaranar	28105	28260	28642	32414	36849
7. Cochin	20090	19845	20886	21595	22099
8. New Mangalore	32941	37036	39365	36566	35582
9. Mormugao	39049	17738	11739	14711	29776
10. Mumbai	56186	58038	59184	61660	61110
11. J.N.P.T.	65730	64488	62333	63801	64027
12. Kandla	82501	93619	87005	92497	100051

48. In which year, the average growth of all ports is the highest?  
 (a) 2014-15 (b) 2015-16 (c) 2013-14 (d) 2012-13

**Sol.** (a); Average of all the ports in given years

$$\Rightarrow 2011 - 12 = \frac{560187}{12} = 46682.25$$

$$\Rightarrow 2012 - 13 = \frac{545831}{12} = 45485.92$$

$$\Rightarrow 2013 - 14 = \frac{555481}{12} = 46290.08$$

$$\Rightarrow 2014 - 15 = \frac{581344}{12} = 48445.33$$

$$\Rightarrow 2015 - 16 = \frac{606372}{12} = 50531$$

$\therefore$  highest growth is in year 2014 -15.

49. Which of the following port has registered the third highest growth in traffic (000) from year 2011-12 to 2015-16?  
 (a) Paradip (b) Chidambaranar (c) Kandla (d) None of these

**Sol.** (d);

Ports	Growth (2015 - 16 - 2011 - 12)
Kolkata	6947
Paradip	22132
Vizag	Negative
Kamarajar	17250
Chennai	Negative
Chidambarnar	8744
Cochin	2009
New Mangalor	2641
Mormugao	Negative
Mumbai	4924
JNPT	Negative
Kanda	177550

From above table it is clear that third highest growth is in kamarajor.

50. What shall be the total approximate traffic (000) of Kolkata, Vizag and Cochin Port in 2017-18 if traffic continues to grow at the annual growth rate of 10% per annum in each of these ports?  
 (a) 156500 (b) 142300 (c) 129500 (d) 161775

**Sol.** (a); Traffic in 2015 – 16 in Kolkata + Vizag + Cochin  
 = 50195 + 87033 + 22099  
 = 129327  
 Each year it will increase by 10%  
 $\therefore$  in 2017 – 18 =  $129327 \times 1.1 \times 1.1$   
 = 156485  
 = 156500 (Approx).

**Directions for Qs. 51-55:** The table below relates to data on Wholesale Price of India (WPI) for the period 2001-02 to 2015-16. WPI-based inflation is defined as percentage change, in the value of the Index: Based on the table, answer the following questions:

TABLE : WHOLESALE PRICE INDEX - ANNUAL AVERAGE							
Year	Index (Average of weeks)						
1	AC	PA	of which		F&P	MP	
			FA	NF			
	2	3	4	5	6	7	
<b>(Base : 1993-94 = 100)</b>							
2001-02	161.3	168.4	176.1	152.9	226.7	144.3	
2002-03	166.8	174.0	179.2	165.4	239.2	148.1	
2003-04	175.9	181.5	181.5	186.3	254.5	156.5	
2004-05	187.3	188.1	186.3	187.6	280.2	166.3	
<b>(Base : 2004-05 = 100)</b>							
2005-06	104.5	104.3	105.4	96.7	113.6	102.4	
2006-07	111.4	114.3	115.5	102.3	120.9	108.2	
2007-08	116.6	123.9	123.6	114.4	121.0	113.4	
2008-09	126.0	137.5	134.8	129.2	135.0	120.4	
2009-10	130.8	154.9	155.4	136.2	132.1	123.1	
2010-11	143.3	182.4	179.6	166.6	148.3	130.1	
2011-12	156.1	200.3	192.7	182.7	169.0	139.5	
2012-13	167.6	220.0	211.8	201.9	186.5	147.1	
2013-14	177.6	241.6	238.9	213.2	205.4	151.5	
2014-15	181.2	248.8	253.4	212.1	203.5	155.1	
2015-16	176.7	249.6	262.1	219.5	179.8	153.4	
AC: All commodities							
PA: Primary articles.							
FA: Food articles.							
NF: Non-food articles.							
F & P: Fuel & Power.							
MP: Manufactured products.							
FA and NF are part of PA.							

51. What is the approximate percentage change in the WPI of F&P between 2001-02 and 2015-16?  
 (a) 115.5 (b) 122.2 (c) 130.7 (d) 136.4

**Sol. (b);**

	2001 – 02	2015 – 16
F & P	226.7	179.8
	(base 1993 - 94)	(base 2004 - 05)

$$\therefore \text{WPI for 2015 – 16, when converted to base 1993 – 94} = \frac{179.8}{100} \times 280.2$$

$$= 503.44$$

Hence, the required % change

$$= \frac{503.44 - 226.7}{226.7} \times 100$$

$$= 122.2\%$$

52. Between 2001-02 and 2015-16, which of the following components -P A, AC, F&P and MP -have shown the second highest percentage increase in WPI?  
 (a) PA (b) AC (c) F&P (d) MP

**Sol. (c);**

	2001 – 02	2015 – 16 (based 2004 - 05)	2015 – 16 (base 1993 -94)
PA	168.4	249.6	469.5
AC	161.3	176.7	330.96
F&P	226.7	179.8	503.44
MP	144.3	153.4	255.10

% increase

178

105

122

77%

$\therefore$  the second highest increase is for F & P (c).

53. Between 2001-02 and 2015-16 which year has recorded the smallest percentage increase in WPI on FA?  
 (a) 2003-04 (b) 2004-05 (c) 2015-16 (d) None of these

**Sol. (a);** Clearly, the smallest % increase is from 2002 – 03 to 2003 – 04.

54. If P A has a 40 percent weight age in the WPI-based inflation calculation in 2005-06, find the corresponding approximate percentage weights assigned to F&P and MP in the WPI based inflation calculation for the same year.  
 (a) 12 and 48 (b) 15 and 45 (c) 18 and 42 (d) 20 and 40

**Sol. (a);**

	PA	F & P	MP	AC
2005 – 06	40% 104.3	x 113.6	60 – x 102.4	104.5

$$104.3 \times 0.4 + 113.6 \times \frac{x}{100} + 102.4 \times \frac{(60 - x)}{100}$$

$$= 104.5$$

On solving, we get x = 12

$\therefore$  F & P = 12% and MP = 60 – 12

$$= 48\%$$

55. Which component( s) in WPI has registered a decline more than once between two consecutive years?  
 (a) PA (b) AC (c) F&P (d) None of these

**Sol. (c);** By observation, we can see F & P declined for 2 times between two consecutive years.

Instructions for Questions 56-60: Refer to the Table below. It provides quarterly output data of a company for four years (1998-2001) and its trend calculated through 4-quarter Moving Average Method.

Quarter wise Value of Output and its Trend				
Value of Output				
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1998	65	58	56	61
1999	68	63	63	67
2000	70	59	56	52
2001	60	55	51	58
4 Quarter Moving Average (Trend)				
1998			60.38	61.38
1999	62.88	64.5	65.5	65.25
2000	63.88	61.12	58.00	56.25
2001	55.12	55.25		

56. In which year and which quarter the output has second highest positive deviation from its trend?  
 (a) 1999, Quarter 2      (b) 1999, Quarter 1      (c) 2001, Quarter 4      (d) None of the above

**Sol.** (b); Positive deviation are for following quarters and year  
 1999 Q<sub>1</sub> ⇒ 5.12  
 1999 Q<sub>4</sub> ⇒ 1.75  
 2000 Q<sub>1</sub> ⇒ 6.12  
 2001 Q<sub>1</sub> ⇒ 4.88  
 ∴ 2<sup>nd</sup> highest is for 1999, Q<sub>1</sub>

57. In which quarter, on an average there is maximum negative deviation of the output from the average value of trend of that quarter?  
 (a) Quarter 3      (b) Quarter 1      (c) Quarter 4      (d) Quarter 2

**Sol.** (a); Q<sub>1</sub> ⇒ 65.75 – 60.62 = 5.12  
 Q<sub>2</sub> ⇒ 58.75 – 60.29 = -1.54  
 Q<sub>3</sub> ⇒ 56.5 – 61.29 = -4.79  
 Q<sub>4</sub> ⇒ 59.5 – 60.96 = -1.46  
 Maximum is for Q<sub>3</sub>.

58. In which year the quarterly compound average growth rate (CAGR) is the second lowest?  
 (a) 2011      (b) 1999      (c) 2000      (d) 1998

**Sol.** (d); 1998 →  $\left(\frac{61}{65}\right)^{\frac{1}{4}} - 1 = -.015$

1999 →  $\left(\frac{67}{68}\right)^{\frac{1}{4}} - 1 = -.003$

2000 →  $\left(\frac{52}{70}\right)^{\frac{1}{4}} - 1 = -.071$

2001 →  $\left(\frac{58}{60}\right)^{\frac{1}{4}} - 1 = -.008$

∴ Second lowest is for year 1998.

