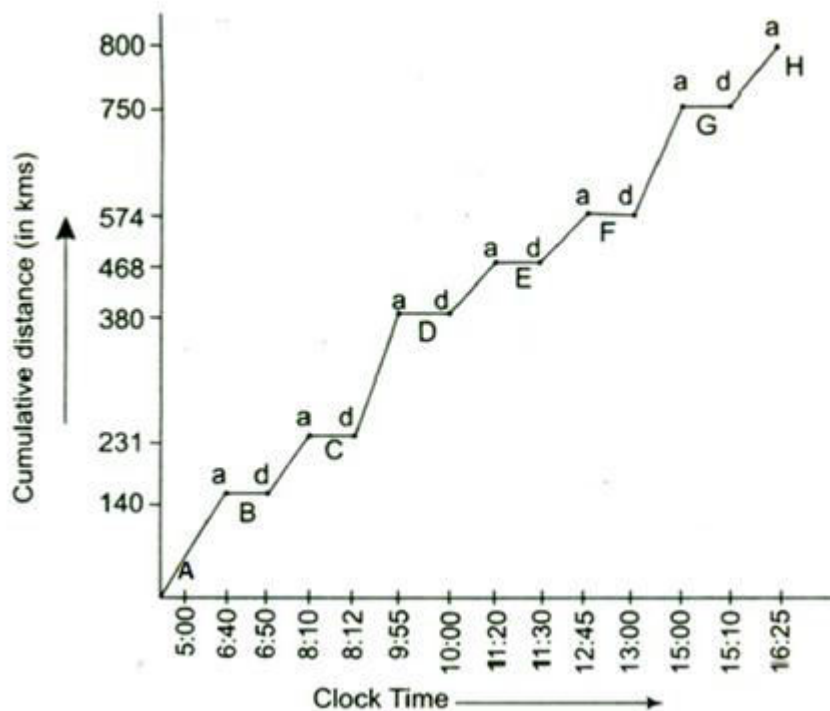**2017**

DATA INTERPRETAION

By : Prof. Dumbledore

SET 1

Railway Time Schedule of an Express Train X Running Between City A and City H
a → Arrival of train
d→ Departure of train
A, B, C, D, E, F, G and H are cities through which the train runs.
a-d→ Indicates stoppage/halting of the train at the city station.

Question 1: The average speed of the train maintained between two successive stations was maximum between
(a) E-F
(b) F-G
(c) G-H
(d) Both G -H and F-G

Question 2: Between how many pairs of consecutive stations does the speed run below the overall average speed of the entire trip?
(a) 4
(b) 1
(c) 3
(d) 2

Question 3: If the train stops at each city for 30% more time, then at what time will it reach the city H after departing from City A as per schedule?

(a) Data insufficient
(b) 17 : 03
(c) 16 : 41
(d) 16 : 58

Question 4: The train begins its onward journey from City A and it is extended to beyond City H to a City M due to some unavoidable reason. The train starts its return journey immediately after it reached City M. The train returns with a speed of 90 km/h without any stoppages in between and reaches City A at 2 : 25 am. Find the distance between City H and City M.
(a) 40 km
(b) 90 km
(c) 70 km
(d) None of these

SET 2
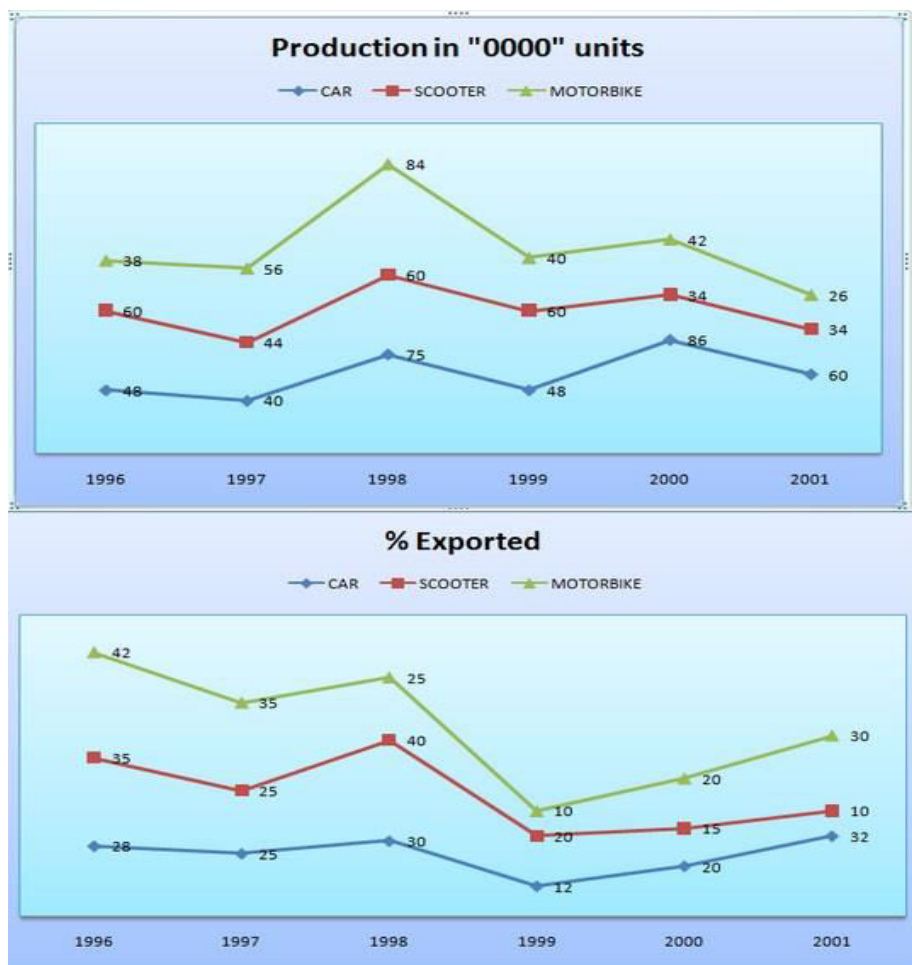
Question 1: In which of the following years was the production of cars more than 50% of the total production?
(a) 2000
(b) 2001
(c) 1998
(d) 1996

Question 2. Find the total number of automobiles exported in the year 1999.
(a) 227600
(b) 207600
(c) 217600
(d) 220000

Question 3. Find the ratio of cars, scooters and motorbikes exported in 1996.
(a) 25 : 16 : 19
(b) 16 : 25 : 19
(c) 19 : 16 : 25
(d) 6 : 5 : 1

Question 4. If the ratio of export prices of a cars, scooter and motorbike was 2 : 1 : 1.5 in 1998, what was the proportion of their export earnings?
(a) 4 : 2 : 3
(b) 6 : 1 : 21
(c) 30: 16: 21
(d) Cannot be determined

Question 5. In which of the following years was the production of motorbikes exactly 40% of the total production of automobiles in that years?
(a) 1997
(b) 2000
(c) 1999
(d) 1996

SET 3

A survey was conducted in five cities viz. Pune, Kanpur, Raisen, Surat and Trivandrum, for the percentage of people using T (trains), B (buses), C (cars) as modes of transport.Number of persons surveyed in the cities Pune, Kanpur, Raisen, Surat and Trivandrum are 2000, 4000, 6000, 3000 and 8000 respectively. Refer to the data in the triangular bar diagram to answer the questions that follow.
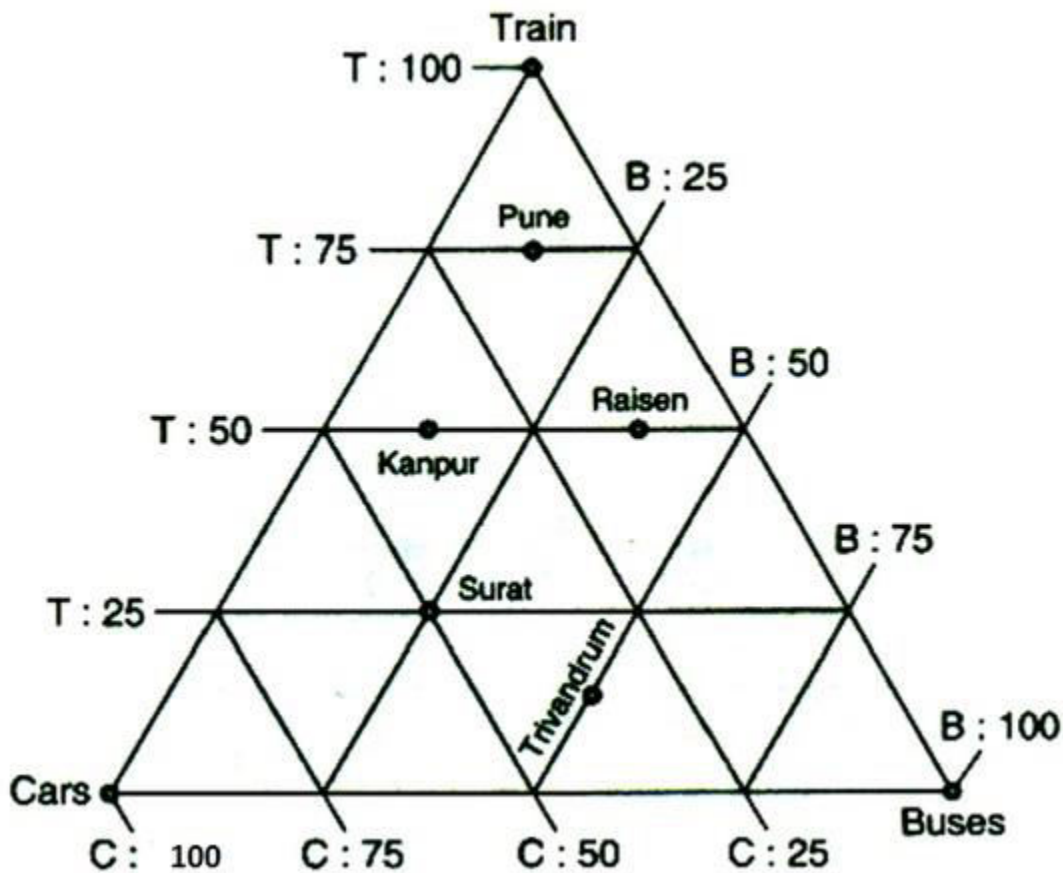
Question 1: The city where the least number of persons uses buses is
(a) Surat
(b) Raisen
(e) Kanpur
(d) Pune

Question 2: The average number of persons using trains for transportation in Pune, Kanpur, Raisen and Trivandrum is
(a) 1880
(b) 1750
(c) 1950
(d) None of the above

Question 3: The mode of transport used by the least number of persons in all the given cities.
(a) trains
(b) buses
(c) cars
(d) cars and buses

Question 4: Among the given five cities, the cities where less than 30% of the people use cars as transport are
(a) Kanpur and Trivandrum
(b) Pune, Kanpur and Raisen
(c) Pune and Raisen
(d) Pune, Kanpur and Surat

Question 5: Which of the following statements is not true?
(a) 50% of the people use trains for transport in Kanpur and Raisen
(b) In Trivandrum, more than 50% of the people use cars for transport
(c) More percentage of people use buses for transport in the city Surat than in the city Pune.
(d) In city Raisen, there are more percentage of people using trains for transport than buses.

SET 4

The scatter diagram shows the number of students passing in the high school' examination in the given years from the four houses of a public School.

	1997	1998	1999	2000
Reby		40	35	35
Topaz		70	55	65
Pearl		45	75	68
Sapphire		60	80	90

Question 1: The average number of students for each house who have passed in the given years nearest to
(a) 59
(b) 52
(c) 63
(d) 56

Question 2: The performance for which of the following houses is the best?
(a) Pearl
(b) Ruby
(c) Topaz
(d) Sapphire

Question 3: For which of the following houses is the percentage change in the results maximum for any year over the previous year?
(a) Topaz
(b) Pearl
(c) Sapphire
(d) Ruby

Question 4: The number of students keeps on increasing by 50 every years. In 1998, there were 250 students. For which of the following years is the performance best in the school?
(a) 1998
(b) 2000
(c) 1999
(d) Cannot be determined

SET 5

Refer to the graph given below which gives the circulation growth of GRAMSEWA magazine from July to December 2003.

Series1	July	August	September	October	November	December
	173182	175395	189277	200189	204933	211885

Question 1: During October and December, there was an even growth rate, the average of which is
(a) 2.36%
(b) 2%
(c) 2.88%
(d) 3.36%

**Question 2:** The circulation in October is ... times than that of July.
(a) 1.5
(b) 2
(c) 1
(d) 1.15

Question 3: The growth rate is very marginal during the month of
(a) August
(b) October
(c) November
(d) December

SET 6

Use the graph given below to answer these questions. Given graph is the profile of values of a college student marked as personal profile. The normative profiles are given as average male profile and average female profile.
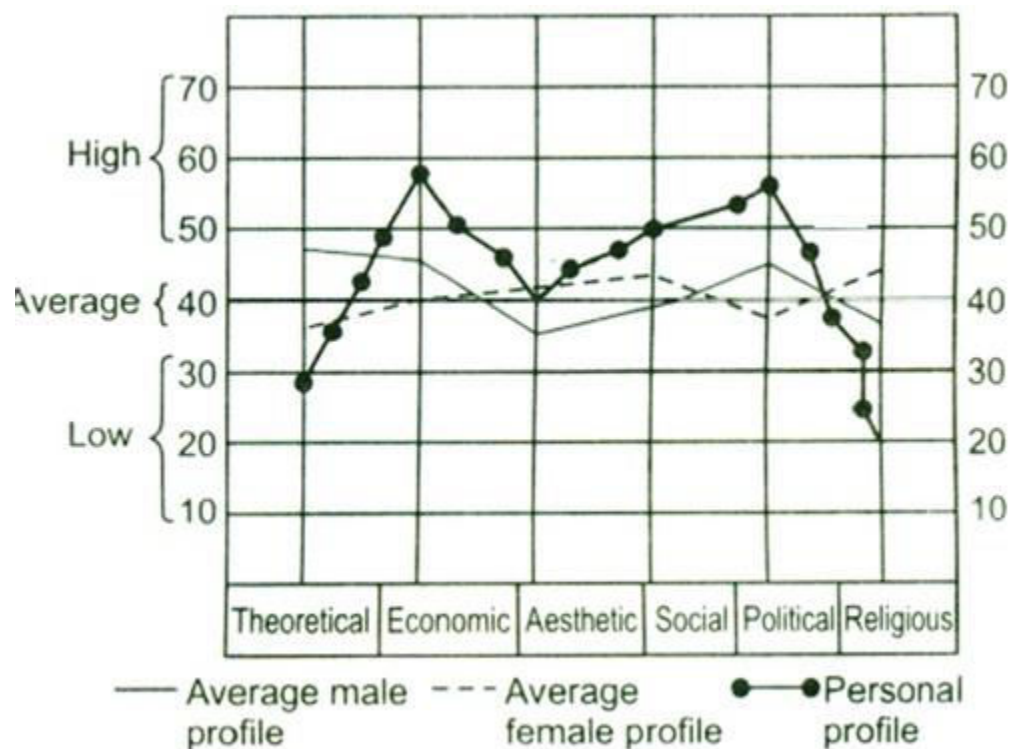
Question 1: Compare the three and state which of the given values is the highest in the personal profile of the student?
(a) Theoretical
(b) Religious
(c) Social
(d) Economic

Question 2: In the given personal profile, which is the value with the lowest score?
(a) Theoretical
(b) Religious
(c) Social
(d) Aesthetic

Question 3: In which value score, there exists maximum difference between average female profiles and personal profile?
(a) Theoretical
(b) Religious
(c) Economic
(d) Political

Question 4: In which value score, there exists convergence between personal profile and average female profile?
(a) Theoretical
(b) Social
(c) Aesthetic
(d) Both (a) and (c)

Question 5: In which value score, there exists a no difference state between the personal profile and average male profile?
(a) Economic
(b) Social
(c) Aesthetic
(d) None of these

SET 7

Refer the given diagram to answer the questions:

Quarterly Profit Departmental Store

	1997	1998	1999	2000
Quarter 1	135	65	120	150
Quarter 2	115	75	160	180
Quarter 3	90	100	170	210
Quarter 4	70	120	190	230

Question 1: Approximately, what was the actual profit made by the department store in the second quarter of 1999?
(a) Rs. 160 lakh
(b) Rs. 170 lakh
(c) Rs. 180 lakh
(d) Rs. 210 lakh

Question 2: In which of the following quarters, did the departmental store make the least amount of profits?
(a) Third quarter of 2000
(b) Second quarter of 1999
(c) First quarter of 1999
(d) Third quarter of 1998

Question 3: During the period 1998-2000, how many quarters exceeded the profit of Rs. 150 lakh?
(a) 6
(b) 5
(c) 4
(d) 3

Question 4: In the year 2000, total profit made by the departmental store was approximately
(a) Rs. 540 lakh
(b) Rs. 630 lakh
(c) Rs. 720 lakh
(d) Rs. 770 lakh

Question 5: The total annual profit made by the departmental store increased by approximately what per cent from 1997 to 2000?
(a) 40%
(b) 50%
(c) 88%
(d) 120%

SET 8

Direction for the question : Study the following graph which shows the demand forecast for the next ten weeks.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Series1	350	50	475	335	400	275	300	350	325

Question 1: If the foretasted demand is met by having uniform production during the weeks at an average level, then the number of weeks during which demand will not be met is:
(a) 2
(b) 3
(c) 6
(d) None of these

Question 2: If the production is uniform, then what should be the minimum capacity of the storage space to store the units in excess of demand?
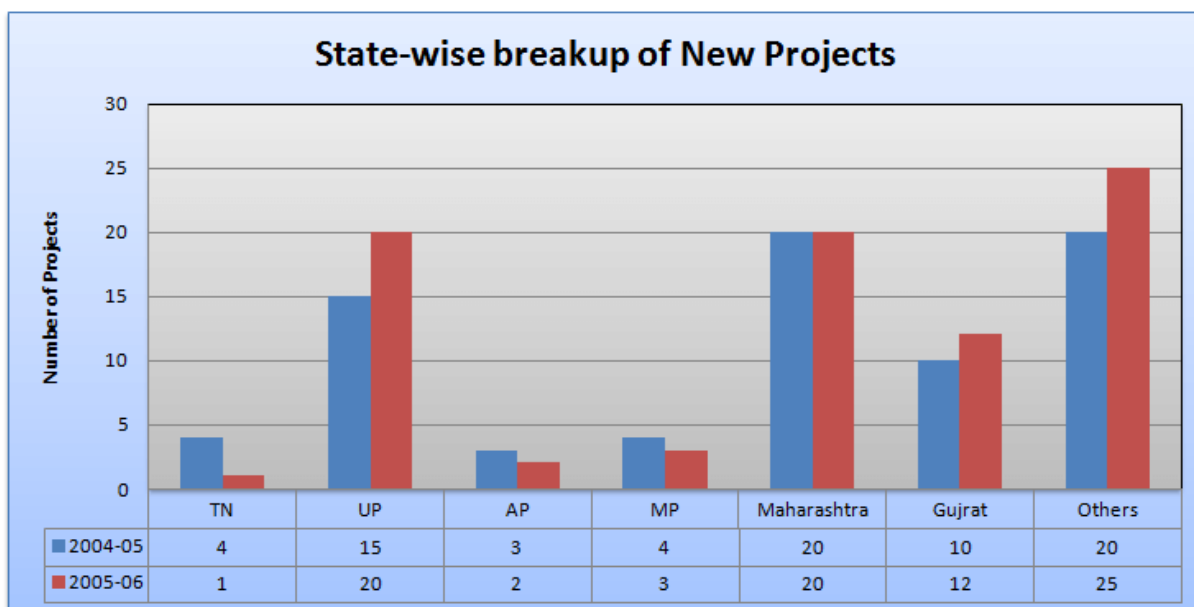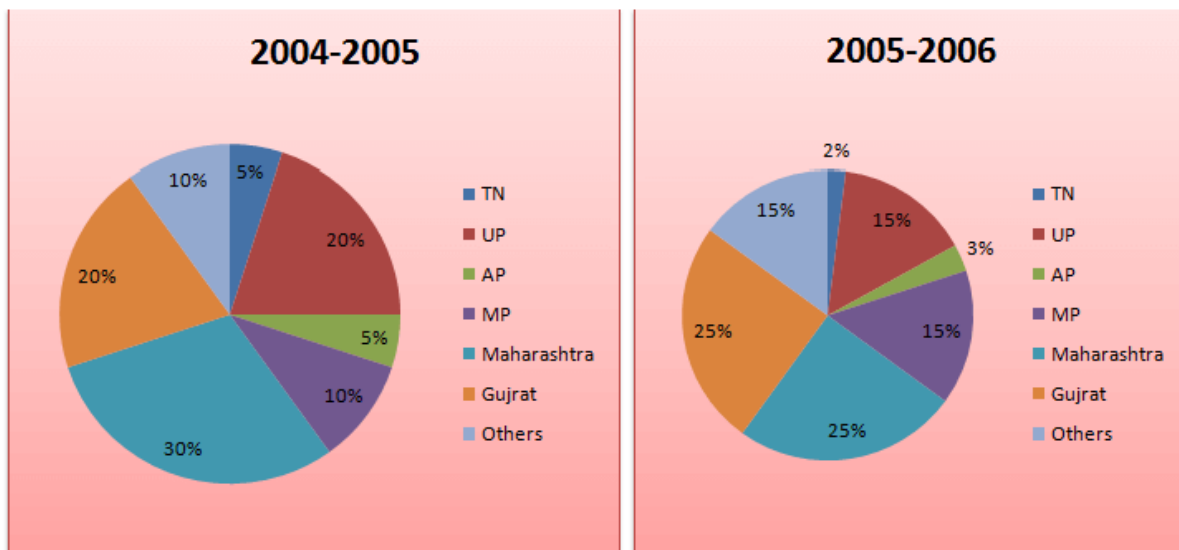(a) 25
(b) 50
(c) 100
(d) 180

Question 3: If the maximum production capacity is 300 units, then the unmet demand in week 4 will be:
(a) 225
(b) 275

(c) 175
(d) All the demand will be met

SET 9

Direction for the question: Refer the given diagram to answer the questions:

Question 1: If in 2005-06, the total project outlay increased by 20%, find the percentage increase in MP's outlay.
(a) 50%

(b) 25%
(c) 20%
(d) 80%

Question 2: If in 2005-06, the total project outlay increased by Rs.200 crore and that of UP remained unchanged, find the total project outlay in 2005-2006, in Rs crore.
(a) 350
(b) 800
(c) 600
(d) 420

Question 3: If in 2005-06, the total project outlay of Gujarat increased by 'x' per cent, find the per cent increase in the total outlay.
(a) (100-4x)/5
(b) (5x-100)/4
(c) (100 – 5x)/4
(d) (4x -100)/5

SET 10

Direction for the questions: Study the following graph and pie chart carefully to answer the questions given below:

Percentage breakup of Employees in five different Organisations (N=35000)
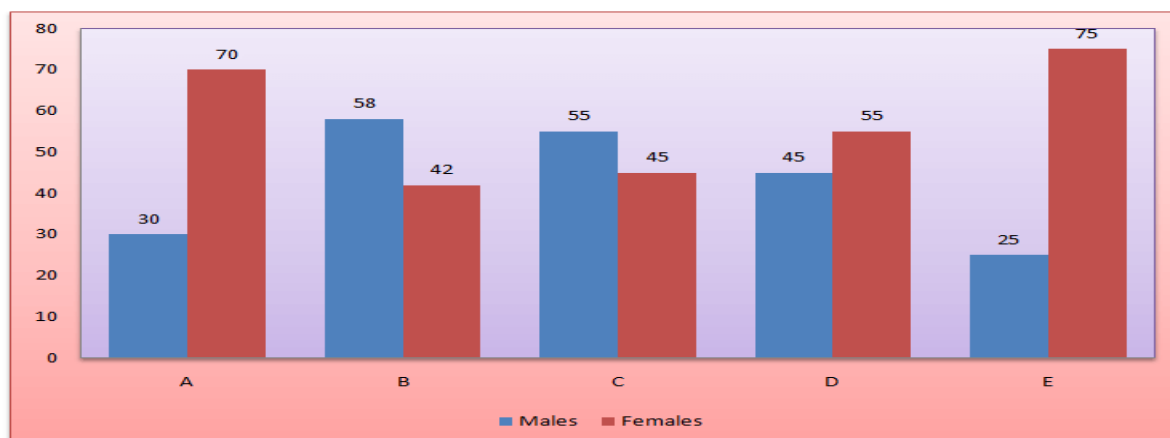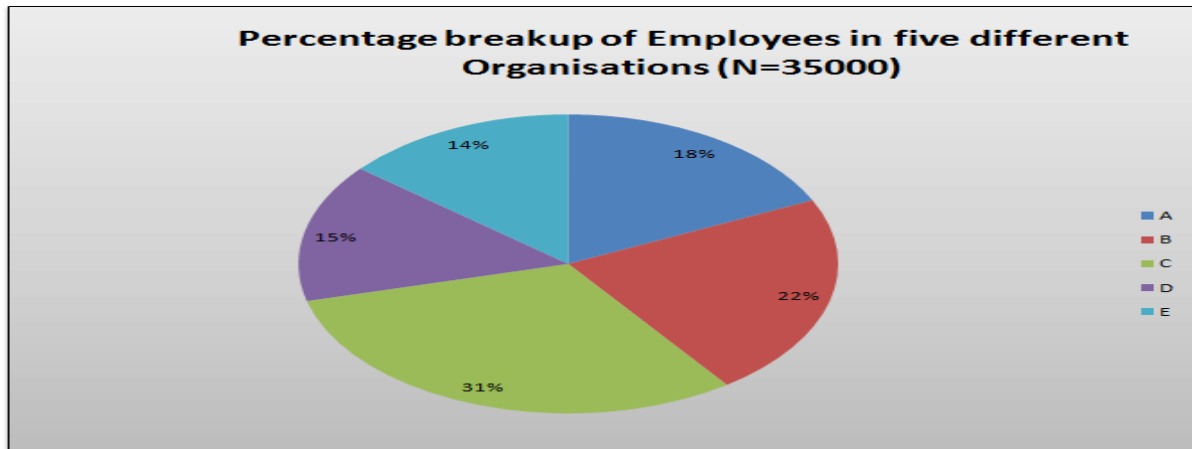
Question 1: Total number of employees in Organization C is approximately what per cent of total number of employees in Organization D?
(a) 147%
(b) 279%
(c) 312%
(d) 207%

Question 2: What is the total number of males in all the Organizations together?
(a) 13350
(b) 14700
(c) 15960
(d) 16280

Question 3: What is the total number of males in Organizations A and C together?
(a) 6125
(b) 8400
(c) 8025
(d) 7400

Question 4: What is the difference between the number of females in Organization B and the number of females in Organization E?
(a) 210
(b) 350
(c) 170
(d) 300

SET 11

Direction for the question: Seven companies A, B, C, D, E, F, and G are engaged in production of companies two items I and II. The comparative data about production of these items by the seven companies is given in the following graph and table. Study the information carefully to answer these questions.

Percentage of the Total Production by Seven Companies
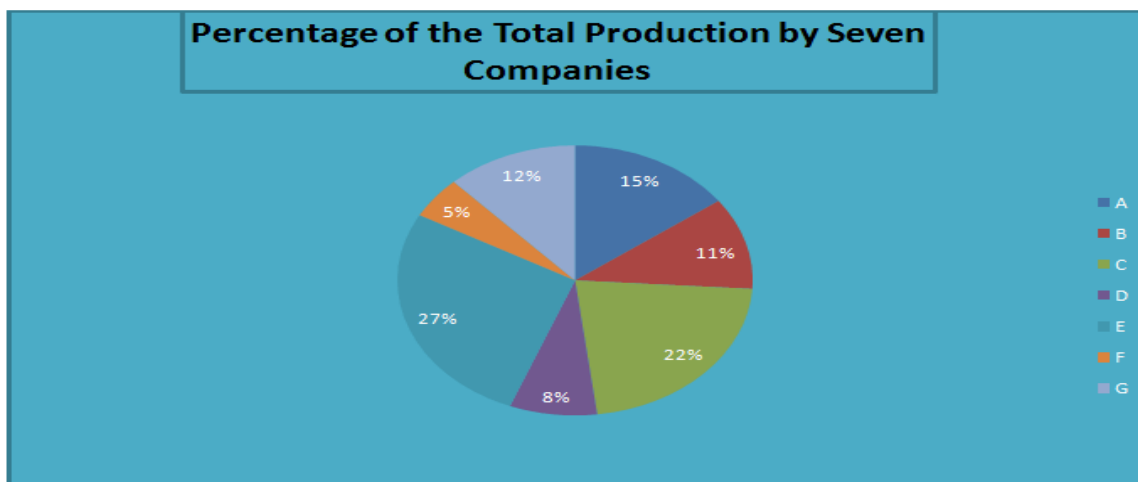
Cost of the total production (both items together) by seven companies = Rs.25 crores

The above pie chart represents the total production cost (Rs. 25 crores) for these companies combined.

Ratio of production between items I and II and the per cent profit earned for the two Items. These are the only two items produced by these companies.

Companies	Ratio of production		Percentage profit earned	
	Item 1	Item 2	Item 1	Item 2
A	2	3	25	20
B	3	2	32	35
C	4	1	20	22
D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

Question 1: What is the total profit earned by Company G for items I and II together?
(a) Rs.78 lakh
(b) Rs.1.62 crore
(c) Rs.16.2 lakh
(d) None of these

Question 2: What is the total of the profit earned by company B on production of item I and the profit earned by Company A on production of item II?
(a) Rs.9.78 crore
(b) Rs.97.8 lakh
(c) Rs.52.8 lakh
(d) Rs.30.65 lakh

Question 3: What is the total cost of the production of item I by Companies A and C together in Rs.crore?
(a) 9.25
(b) 5.9
(c) 4.1625
(d) None of these

Question 4: Cost of production of item I by Companies F is what per cent of the cost of production of item II by company D?
(a) 16%
(b) 33.33%
(c) 20%
(d) 12.5%

SET 12

Directions (Q. Nos. 1-4): Study the following table and bar graph to answer these questions.

	April	May	June	July
2004	7.46	7.48	7.93	8.31
2005	8.73	8.91	9.07	10
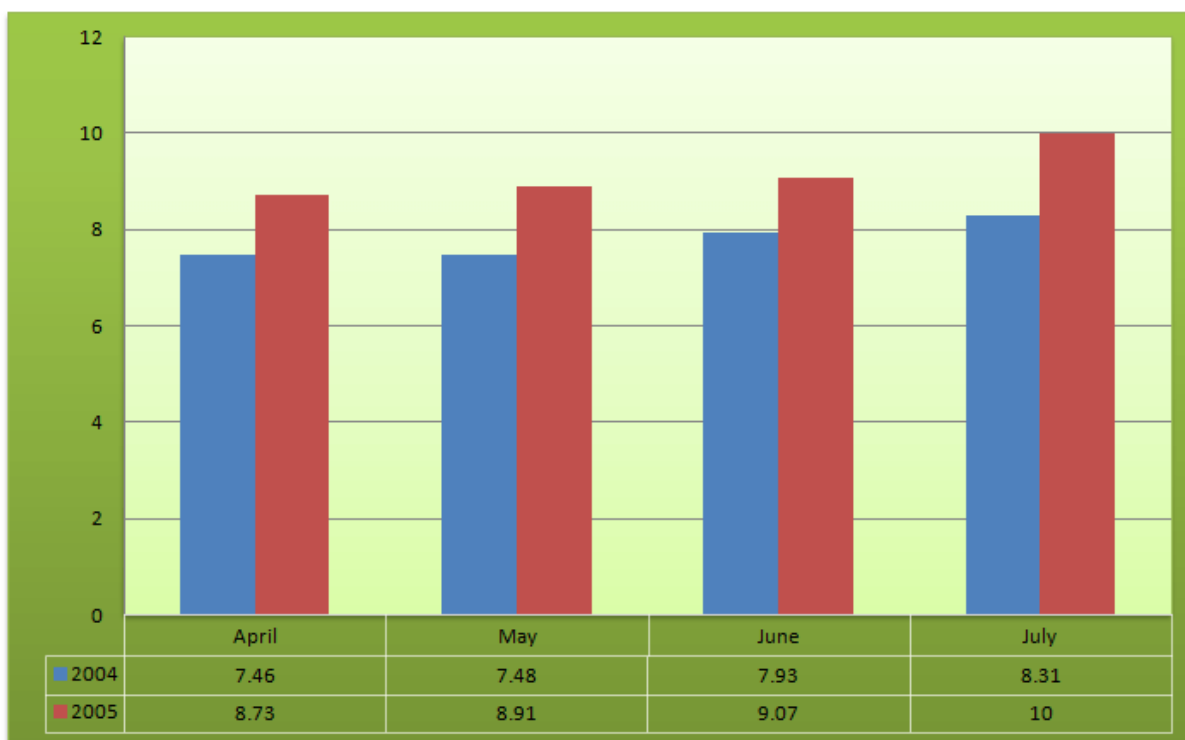
	Air India'sPerformance Indicators			
	2001-02	*2002-03*	*2003-04*	*2004-05*
Total Revenue (in crores)	Rs. 893.88	Rs.925.46.46	Rs.1023.46	Rs.1205.11
Net profit/loss	Rs. 66.00	Rs. 30.16	Rs. 43.41	Rs. 3.41
Available Tonnekms(millions)	2842.565	2919.512	3180.207	3176
Capacity Utilization (millions)	2109.959	2206.287	2386.111	2372.3
Overall Load Factor (%)	74.20%	75.60%	75.00%	74.70%
Passenger Load Factor	56.00%	68.60%	69.30%	66.40%

Question 1: Between 2004 and 2005, the increase in yield per tonne km in April as a ratio to the increase in yield per tonne km in July is closest to which of the following?
(a) 4 : 7
(b) 5 : 7
(c) 3 : 8
(d) 7 : 4

Question 2: Air India's average profit from 2001-02 to 2004-05 was
(a) Rs.24015 lakh
(b) Rs.3576 lakh
(c) Rs.3404 lakh
(d) None of these

Question 3: Air India's yield per tonne km from April to May 2004 increased by
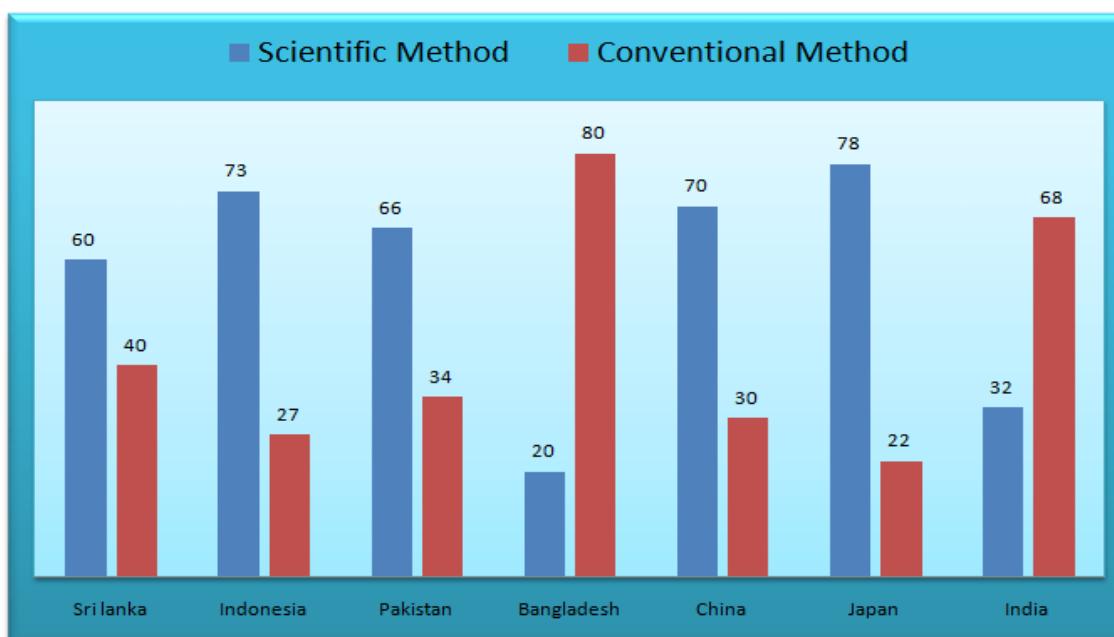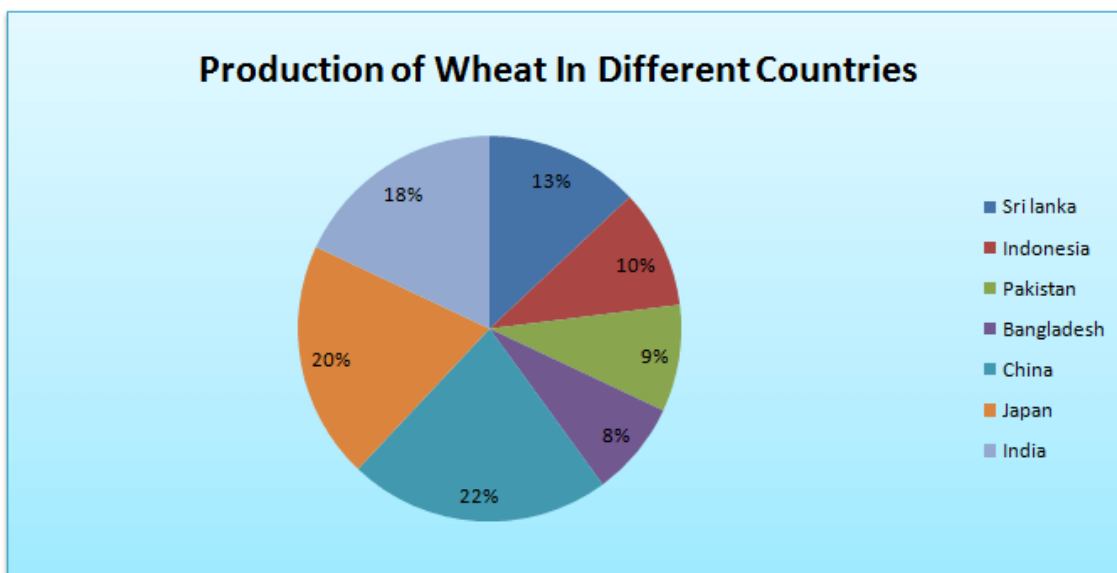(a) 0.29%
(b) 0.26%
(c) 0.36%
(d) 0.31%

Question 4: The annual average increase in the passenger load factor over the four years was
(a) 3.466%
(b) 2.6%
(c) 1.2%
(d) None of thes

SET 13

Study the given graphs to answer these questions.
The total production is 50 lakh tonnes.

Production of Wheat In Different Countries

Sri lanka 13%
Indonesia 10%
Pakistan 9%
Bangladesh 8%
China 22%
Japan 20%
India 18%

■ Scientific Method ■ Conventional Method

	Sri lanka	Indonesia	Pakistan	Bangladesh	China	Japan	India
Scientific Method	60	73	66	20	70	78	32
Conventional Method	40	27	34	80	30	22	68

Question 1: What is the difference between the production by scientific method and conventional method in Indonesia?
(a) 2.3 lakh tonnes
(b) 2.8 lakh tonnes
(c) 2.5 lakh tonnes
(d) 3 lakh tonnes

Question 2: What is the average production of wheat by scientific method for all the countries?
(a) 3.1 lakh tonnes

(b) 4.24 lakh tonnes
(c) 2.6 lakh tonnes
(d) 3.07 lakh tonnes

Question 3: What is the ratio of production by conventional method in Pakistan to that by scientific method in Japan?
(a) 9/40
(b) 99/260
(c) 51/260
(d) 48/77

Question 4: The production of wheat in Sri Lanka by conventional method is approximately how many times the production in India by scientific method?
(a) 1.2
(b) 1.5
(c) 0.9
(d) None of these
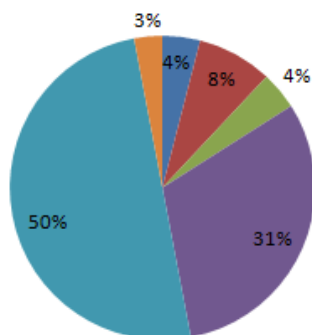
SET 14

Directions: These questions are based on the table and pie charts. The table gives the demand for gas in Million Metric Standard Cubic Metres Per Day (MMSCMPD).
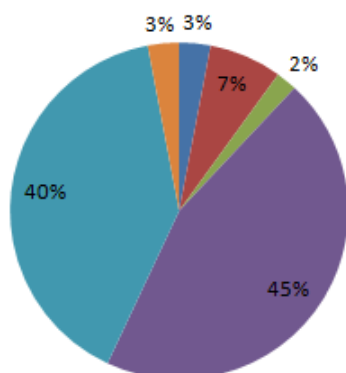
Region	Year 1999-2000	Year 2004-2005
North	49.48	64.81
West	37.00	78.13
South	39.90	88.31
East	20.16	52.65
Total	146.54	283.90

Sectorwise Share: 1999-2000

■ Domestic ■ Fertilizer ■ Sponge ■ Power ■ Industry ■ Shrinkage

Sectorwise Share: 2004-2005

■ Domestic ■ Fertilizer ■ Sponge ■ Power ■ Industry ■ Shrinkage

Question 1: What is the approximate percentage growth in the all India demand for Industry sector between 1999-2000 and 2004-05?
(a) 53%
(b) 55%
(c) 56%
(d) 52%

Question 2: Had the all-India fertilizer sector demand shown the same growth rate as the total all-India demand between 1999 and 2004, what would be the share fertilizer sector in total demand in 2004-05?
(a) 22.74
(b) 24.21
(c) 23.81
(d) 21.91

Question 3: By what percentage did the Southern demand grow between 1999 and 2004?
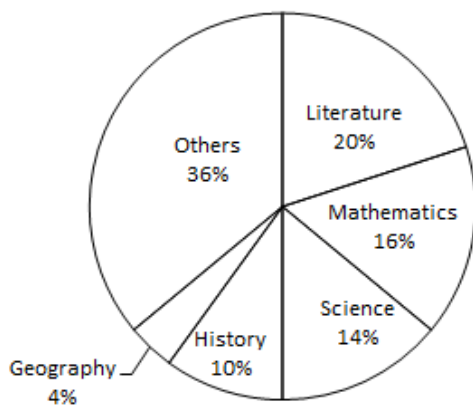(a) 120.21%
(b) 121.32%
(c) 125.61%
(d) 134.1%

Question 4: If the all India sector wise demand distribution is exactly the same in South, what is the industry sector demand from north, east and west combined in 2004-05?
(a) 71.56
(b) 77.456
(c) 78.236
(d) 81.236

SET 15

Directions (Q. Nos. 1- 4) **Study the following pie chart in respect of a library to answer these questions.**

Book Section (Total value Rs. 146 lakh)

Magazine Section (Total value Rs. 28 lakh)

Literature 20%
Others 36%
Mathematics 16%
Science 14%
History 10%
Geography 4%

Others 22%
Sports 24%
Science fiction 11%
Business 16%
Culture 13%
Film 14%
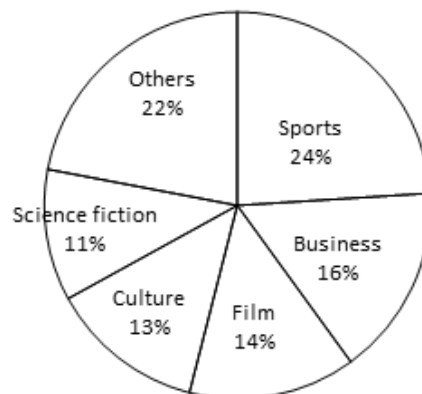
Question 1: By how much percentage is the value of history books higher than that of film magazines?
(a) 172%
(b) 27.2%
(c) 272%
(d) 72%

Question 2: Which of the following statement is true?
(a) Literature, mathematics and science books comprise nearly 50% of the book section in numbers
(b) Sports, business and film books account for more than half of the magazines
(c) The value of sports magazines is higher than that of geography books
(d) None of the above

Question 3: What is the invested amount for literature as a percentage of the total investment of the library in books and magazine section?
(a) 16.8%
(b) 15.5%
(c) 13.6%
(d) 4%

Question 4: What is the amount invested in reading material available related to science group in both sections put together as a percentage of total value invested in library?
(a) 16.5%
(b) 13.52%
(c) 15.5%
(d) 18.4%

SET 16

There are seven different types of tyres manufactured by a factory. The pie charts show the percentage of sales of the tyres in a city in two consecutive months of September and October. The total number of type B tyres sold in September and October were 1560 and 2250 respectively.
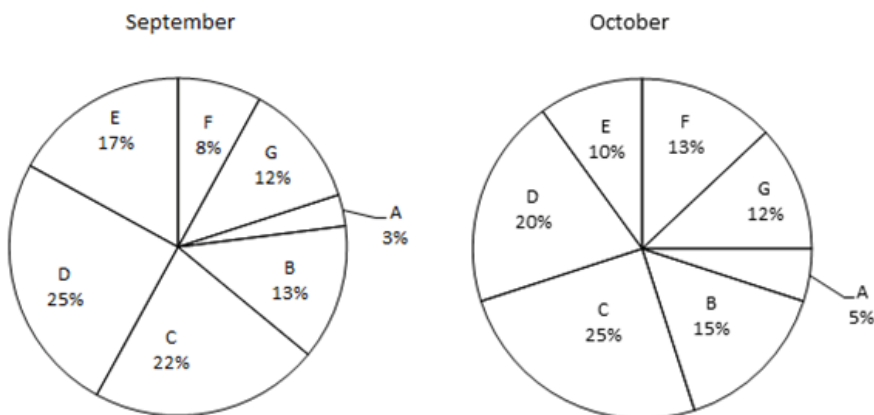
Question 1: What is the maximum difference between the number of tyres of any two types sold taken together for September and that of other two types sold for October?
(a) 3390
(b) 5430
(c) 4523
(d) 4230

Question 2: For how many types of tyres, there is an absolute decrease in the number sold in October over September?
(a) 0
(b) 1

(c) 2
(d) 3

Question 3: The total sales of which of the following pairs of types of tyres in September was approximately equal to F type of tyres in October?
(a) A & C
(b) C & E
(c) B & D
(d) A & B

Question 4: What is the difference in total sales between September and October in respect to only those types where there was an increase in sale?
(a) 6520
(b) 3540
(c) 4530
(d) None of these

Question 5: The number of tyres of type D and E sold in September is approximately what percent of the number of tyres sold for these types in October?
(a) 85%
(b) 67%
(c) 145%
(d) 112%

SET 17

Study the following pie-charts to answer these questions.

% distribution of workforce category - wise (Total = 68700)
Supervisors 12%
Officers 9%
Un Skilled Labourers 17%
Technicians 19%
Skilled Labourers 43%
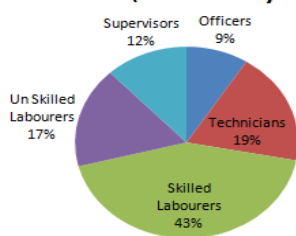
% distribution of workforce Region- wise (Total = 68700)
Chennai 19%
Calcutta 15%
Delhi 16%
Hyderabad 28%
Mumbai 22%

% distribution of workforce department-wise (Total = 68700)
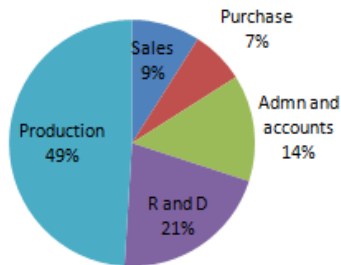
Question 1: If 22% of the Production department persons are posted at Hyderabad region, then what % of Hyderabad workforce are in Production department?
(a) 38.5%
(b) 78%
(c) 68 %
(d) 22%

Question 2: How many supervisors are posted in Calcutta region?
(a) 1237
(b) 985
(c) 1144
(d) Data insufficient

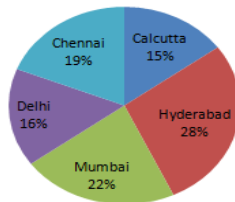**Question 3:** If 11% officers of the company are in Administration and Accounts department of which 75% are posted at Calcutta, then what percent of total officers of the company are posted at Administration and Accounts, Calcutta?
(a) 11.14%
(b) 8.25%
(c) 3.75%
(d) Data insufficient

Question 4: If under expansion programme, the company recruits 12% of workforce of Hyderabad and Mumbai regions, but 6% of workforce of Calcutta region retires, and workforce at other regions remains the same, then what will be the total workforce of the company?
(a) 65196
(b) 68238
(c) 72204
(d) 69430

SET 18

These questions are based on the pie charts which represent the shift in water usage between 2006 and 2009; based on a survey conducted by Central Water Commission.

Water Usage in 2006 (In Trillion Litters)
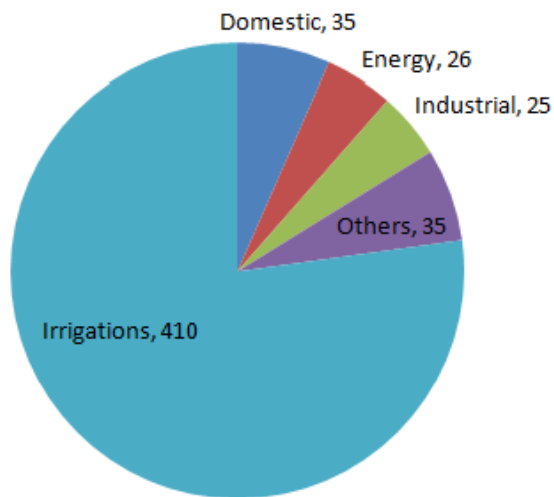
Water Usage in 2009 (In Trillion Litters)
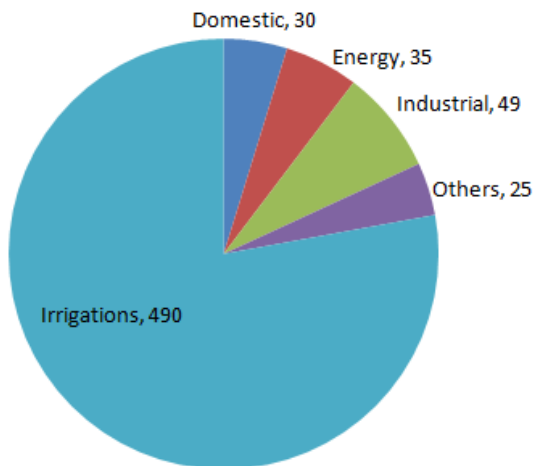
Question 1: If the ratio of processing cost for water for industrial, energy and domestic usage is 3 : 5 : 2, what is the ratio of processing cost for above mentioned usage in 2006 to that in 2009?
(a) 0.68
(b) 0.72
(c) 0.60
(d) 0.77

Question 2: What is the percentage increase in usage in energy related sector from 2006 to 2009?
(a) 34.6%
(b) 23.3%
(c) 15.4%
(d) 17%

Question 3: What is the irrigation usage as percentage of total usage in 2009?
(a) 65.18%
(b) 83.45%
(c) 77.9%
(d) 69.6%

Question 4: What is the difference in domestic usage as percentage of total usage between 2006 and 2009?
(a) 3.16
(b) 2.08
(c) 2.26
(d) 1.91

Question 5: Which one out of the four shows the highest percentage increase in usage from 2006 to 2009?
(a) Domestic
(b) Industrial
(c) Others
(d) Energy

SET 19

Study the pie-chart carefully to answer the questions that follow.

Total number of students are 8000
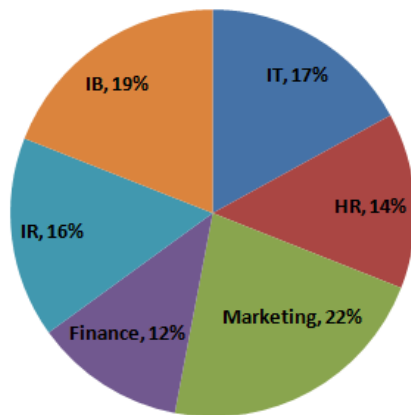
Data Provided: Percentage Wise Break up of Students in terms of Specialization in MBA

Question 1: What is the total number of students having specialization in IR, Marketing and IT?

(a) 4640
(b) 4080
(c) 4260
(d) 4400

Question 2: Students having IB as specialization forms approximately what percent of students having Marketing as specialization?

(a) 116%
(b) 86%
(c) 124%
(d) 74%

Question 3: What is the total number of students having IB as specialization?

(a) 1520
(b) 1280
(c) 1360
(d) 1120

Question 4: What is the respective ratio of the students having Finance as specialization to that of students having HR as specialization?

(a) 11 : 19
(b) 18 : 13
(c) 6 : 7
(d) 12 : 21

SET 20

In the table below data related to five items A,B,C,D and E are given. Cost Price(in Rupees), Marked Price(in Rupees), Selling Price(in Rupees) , Discount percentage and Profit percentage of some items are given. Some values are missing in the table. Find the values on the basis of given information and answer accordingly.

Item	Cost Price (in Rs.)	Marked Price (in Rs.)	% discount	% Profit	Selling Price (in Rs.)
A	–	–	10%	–	180
B	–	–	10%	–	–
C	110	–	5%	29(6/11)%	–
D	300	400	–	–	340
E	–	500	–	–	–

⬜ If the marked price of item B is Rs 100 more than the marked price of item A. Then find the Selling price of item B.
A) Rs 250
B) Rs 270
C) RS 300
D) Rs 280
E) Cannot be determined

⬜ The cost price of item A is how much less than its marked price(in Rupees) if the profit % after selling item A is double the % discount offered on Item A.
A) Rs 60
B) Rs 55
C) Rs 45
D) Rs 40
E) Rs 50

⬜ Find the difference between Marked Price and Selling Price of item C.
A) Rs 7.5
B) Rs 8
C) Rs 10
D) Rs 50
E) Rs 5

⬜ Find the profit % of item E if the % discount od item E = % discount of item C and the Cost Price of E is 1.5 times the cost price of Item D.
A) 5%
B) 6%
C) 5(5/9)%
D) 6(1/3) %
E) None of these

⬜ Find the % discount and % profit of item D.
A) Discount= 10% ; Profit= 13(2/3)%

B) Discount= 25% ; Profit= 15%

C) Discount= 10% ; Profit= 18%

D) Discount= 15% ; Profit= 13(1/3)%

E) None of these

SET 21

There are five friends Mr. A, Mr. B, Mr. C, Mr. D and Mr. E. There are three investment schemes in which these five friends can invest their money. The details of these schemes are given below.

Scheme	Minimum Investment Amount	Maximum Investment Limit	Interest Rate (Simple Interest) p.a	Maturity Period
Scheme A	Rs 5 lakh	Rs 10 lakh	6%	10 years
Scheme B	Rs 2 lakh	Rs 5 lakh	7%	6 years
Scheme C	Rs 1 lakh	Rs 3 lakh	5%	5 years

Note:

(i) Amount cannot be withdrawn before maturity period.

(ii) No reinvestment after maturity period is allowed in any scheme.

(iii) Total Amount(including interest) is payable at the end of the maturity period.

1. Mr. E has Rs 12 lakh. How should he invest this money so as to get maximum amount?
   A) Rs 5 lakh in scheme B and remaining in Scheme A
   B) Rs 10 lakh in scheme A and remaining in Scheme B
   C) Rs 8 lakh in scheme A and remaining in Scheme B
   D) Rs 3 lakh in Scheme C and remaining in Scheme A
   E) Any one of the above as they pay equal amount.

2. Mr. B has to invest Rs 9 lakh wants to invest for a period of not more than 6 years. What is the maximum possible interest that he can receive by investing in these schemes? (he can invest in more than one scehme)
   A) Rs 3,10,000
   B) Rs 3,00,000
   C) Rs 2,50,000
   D) Rs 2,85,000
   E) Rs 3,25,000

3. Due to the intervention of government, the banks providing scheme A had to reduce the maturity period of Scheme A from 10 years to 6 years and the percent rate interest to 6 %. All other data remains same for scheme A and all other schemes. Mr. C has Rs 15 lakh and has to invest minimum Rs 1 lakh in each of the three schemes. What amount should he

invest in the three schemes to get the maximum interest. The options are given in the order A,B,C

A) Rs 8 lakh, Rs 5 lakh, Rs 2 lakh
B) Rs 10 lakh, Rs 4 lakh, Rs 1 lakh
C) Rs 9 lakh, Rs 5 lakh, Rs 1 lakh
D) Rs 7 lakh, Rs 5 lakh, Rs 3 lakh
E) Rs 9 lakh, Rs 4 lakh, Rs 2 lakh

4. Mr. E invested some amount in Scheme C. But after 3 years from the date of investment he passed away. His Wife Mrs. E was allowed premature withdrawal as an exceptional case by the bank at the end of 3 years but with a deduction of 1% from the total amount payable. If Mrs. E receives Rs 2,27,700 at the end of 3 years, what amount did Mr. E inversted?
A) Rs 1,75,000
B) Rs 1,50,000
C) Rs 2,00,000
D) Rs 2,10,000
E) None of these

5. Mr. D invests Rs 3 lakh in Scheme C and some amount in Scheme A. He receives a total interest of Rs 4,65,000 from both these scheme together. What amount did he invest in Scheme C?
A) Rs 7,50,000
B) Rs 7,00,000
C) Rs 6,50,000
D) Rs 6,75,000
E) None of these

SET 22

Number of students appeared and qualified in an examination from five states over the years 2011 to 2016.

Years	P		Q		R		S		T	
	App.	Qual.	App.	Qual.	App.	Qual.	App.	Qual.	App.	Qual.
2011	950	230	880	200	1075	315	975	260	1120	325
2012	1090	320	960	250	1125	290	990	305	1208	308
2013	860	240	1100	330	950	275	1400	375	1375	380
2014	1200	350	1250	290	1240	325	1175	310	1060	265
2015	1150	300	1300	325	1220	340	1080	295	995	235
2016	6230	1720	6570	1731	6750	1850	6770	1825	6833	1803

Total number of disqualified students from state R all over the years is approximately what percent of the total disqualified students in year 2011 ?
(a) 244% (b) 254% (c) 248%
(d) 236% (e) 240%

What is the difference in the average number of qualified students from state Q, taken all years together and average number of qualified students from state S taken all years together except 2011 ?
(a) 111 (b) 108 (c) 201

(d) 103 (e) None of these

The ratio of general, OBC and SC candidates in those who disqualified in year 2012 was 6 : 4 : 3. If total number of SC girls who appeared for exam from all states together in that year was 355, then find the total number of SC boys who write the exam that year ?
(a) 538 (b) 535 (c) 545
(d) 542 (e) None of these

By approximately what percent the difference in number of disqualified students from states P and S in 2016 more or less than the difference between disqualified students from states Q and T in year 2012 ?
(a) 138% (b) 120% (c) 122%
(d) 130% (e) 135%
What is the difference between 40% of total disqualified students in year 2014 and 40% of total disqualified students in 2012 ?
(a) 191 (b) 194 (c) 184 (d) 197 (e) 195

SET 23

Directions (86-90): Study the following line graph and table carefully to answer the questions given below.

Number of cars manufactured (in thousands) by three companies over the years.
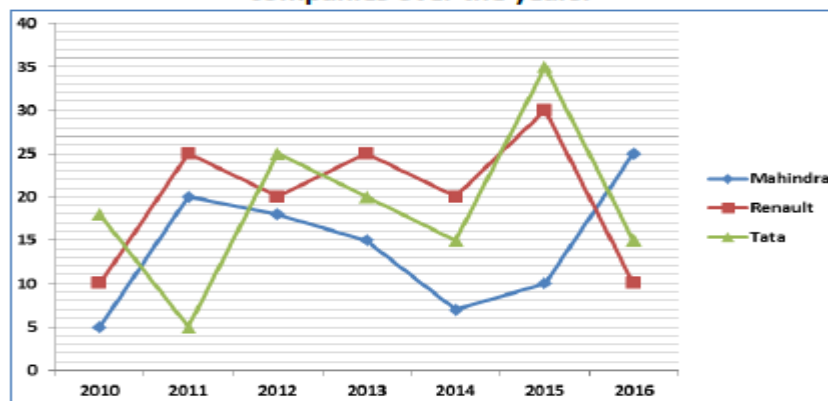
Ratio of five seater to seven seater cars among those manufactured

Years	Mahindra 5 seater : 7 seater	Renault 5 seater : 7 seater	Tata 5 seater : 7 seater
2010	3:2	4:1	5:4
2011	5:3	3:5	3:2
2012	5:4	3:1	2:3
2013	1:2	3:2	1:3
2014	4:3	3:5	5:1
2015	2:3	1:2	3:4
2016	1:3	2:3	2:3

By what percent the number of 7-seater Mahindra Cars manufactured in year 2014 is more or less than that of 5-seater Tata cars manufactured in year 2015 ?
(a) 78% (b) 75% (c) 80%
(d) 82% (e) None of these

What is the percentage decrease in manufactured Renault 5-seater cars from 2015 to 2016 ?
(a) 65% (b) 60% (c) 72%
(d) 50% (e) None of these

Total 5-seater cars of Mahindra that were manufactured in year 2011 were either red or white. If red cars were 256 more in number than white cars, find the number of white cars.
(a) 6132 (b) 6123 (c) 6221
(d) 6121 (e) None of these

What is the approximate average number of Renault 7-seater cars manufactured all over the years ?
(a) 10160 (b) 12446 (c) 11456
(d) 12456 (e) 11448

What is the difference between total number of manufactured 7-seater cars of Mahindra in 2012, Renault in 2011 and Tata in 2015 together and that of 5-seater cars of Mahindra in 2014, Tata in 2010 and Renault in 2016 ?
(a) 25525 (b) 26625 (c) 25632
(d) 25624 (e) None of these

SET 24

Direction (1-5): Study the following table carefully and answer the questions that follow.
Chart showing schedule of train from Anant Vihar to Mughal Sarai and number of passengers boarding at each station.

Station Name	Arrival Time	Departure Time	Halt Time(in minutes)	Distance travelled from origin (in Km)	No. of passengers boarding the train at each station
Anant Vihar	Start	07:30	–	0	400
Aligarh	09:19	09:21	2 min	125	251
Kanpur	13:45	13:55	10 min	434	339
Allahabad	16:45	16:55	10 min	628	203
Mughal Sarai	19:45	End	–	782	None

⬚ Distance between which two station is third lowest?
A) Anant Vihar – Aligarh
B) Aligarh – Kanpur
C) Kanpur – Allahabad
D) Allahabad – Mughal Sarai
E) None of these

⬚ What is the approximate average speed of train between Kanpur and Allahabad?
A) 63 kmph
B) 65 kmph
C) 68 kmph
D) 70 kmph
E) None of these

⬚ How much time does the train takes to reach Kanpur after departing from Aligarh?
A) 4 hour 26 minutes
B) 4 hour 24 minutes
C) 4 hour 36 minutes
D) 4 hour 34 minutes
E) None of these

⬚ If out of 400 passengers who boarded the train from Anant Vihar, 200 passengers got down at Aligarh. Then find the ratio between the number of passengers who travelled between Aligarh-Kanpur and the number of passengers who boarded the train from Allahabad.
A) 400:203
B) 251:203
C) 651:203
D) 451:203
E) None of these

⬚ If the halt time of the train at Aligarh is increased by 28 minutes and the halt time at Kanpur is decreased by 5 minutes. At what time will the train reach Mughal Sarai?
A) 20:00
B) 20:08
C) 20:13
D) 19:53
E) None of these

SET 25

Study the following graph and table and answer the questions given below

TIME TAKEN TO TRAVEL (in hours) BY FIVE VEHICLES ON TWO DIFFERENT DAYS
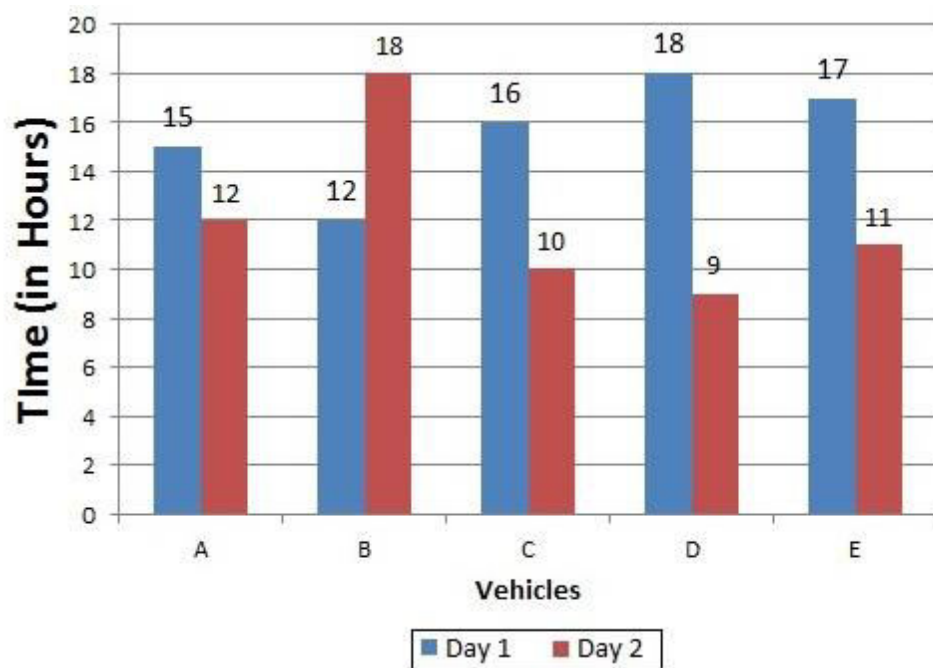
DISTANCE COVERED (IN KILOMETERES) BY FIVE VEHICLES

Vehicle	Day 1	Day 2
A	180	156
B	180	324
C	256	160
D	306	135
E	221	121

6. Which vehicle travelled at the same speed on both the days?
    A) A
    B) B
    C) C
    D) D
    E) E
7. What is the difference between the speed of Vehicle D on day 1 and speed of Vehicle E on day 2?
    A) 3 kmph
    B) 4 kmph
    C) 5 kmph
    D) 6 kmph
    E) None of these
8. The distance travelled by Vehicle E(both days included) is what percent less (approx..) than the distance travelled by vehicle B (both days included)?
    A) 47%
    B) 45%
    C) 32%
    D) 38%
    E) None of these
9. What is the ratio between the speed of vehicle B on day 1 to the speed of vehicle E on day 2?
    A) 18:13
    B) 13:18
    C) 15:11
    D) 11:15
    E) None of these
10. What is the speed of vehicle B on day 2 in meter per second?
    A) 1 m/s
    B) 2 m/s
    C) 3 m/s
    D) 4 m/s
    E) 5 m/s

SOLUTION & EXPLANATION

SET 1

Answer 1: (b)

	A-B	B-C	C-D	D-E	E-F	F-G	G-H
Distance	140	91	149	88	106	176	50
Travel Time in mins	100	80	103	80	75	120	75
Stoppage in mins							
Speed in Km/min	1.4	1.14	1.44	1.1	1.41	1.46	0.66

Therefore, the correct option is (b)

Answer 2: (c)

	A-B	B-C	C-D	D-E	E-F	F-G	G-H
Distance	140	91	149	88	106	176	50
Travel Time in mins	100	80	103	80	75	120	75
Stoppage in mins							
Speed in Km/min	1.4	1.14	1.44	1.1	1.41	1.46	0.66

Overall average speed = 800/633 = 1.264 km/min
Hence, between stations B-C, D-E and G-H the speed of the train was less than the average speed of the entire journey. Correct option is (c)

Answer 3: (c)

City	B	C	D	E	F	G	Total
Stoppage Time in mins.	10	2	5	10	15	10	52

Now Increased stoppage time= 0.3 × 52 =15.6 min approximately 16 min

New arrival time = 16:25 + 16 = 16:41 min
Correct option is (c).

Answer 4: (d) Assuming the train starts its journey from M towards A at 16:25
Time taken to reach A from M= 24+2:25 – 16:25 = 10 hours.
Average speed = 90 Km/hr.
Total distance M-A = 90 × 10 = 900 Km.
Total distance A-H = 800 Km.
Therefore, Distance between H and M is 900-800 = 100 Km.
Correct option is (d)

SET 2

Answer 1: (a) We have to check for those years where total value of production of scooter and bikes < value of car. By observation we can see that in the year 2000, the total production of cars was 860000 and the total production of scooters and bikes was 760000. Hence in 2000, the production of cars was more than 50% of the total production. Correct option is (a)

Answer 2: (c) We have

	Car	Car % Exported	Car Exported	Scooter	Scooter % Exported	Scooter Exported	Motorbike	Motorbike % Exported	MotorbikeExp
1999	480000	12	57600	600000	20	120000	400000	10	

Total= 57600 + 120000 + 40000 = 217600
Correct option is (c)

Answer 3: (b) We have

	Car	Car % Exported	Car Exported	Scooter	Scooter % Exported	Scooter Exported	Motorbike	Motorbike % Exported	MotorbikeExpor
1996	480000	28	134400	600000	35	210000	380000	42	159

Ratio: 134400 : 210000 : 159600 or 16: 25: 19.
Correct option is (b)

Answer 4: (c) We have

	Car	Car % Exported	Car Exported	Scooter	Scooter % Exported	Scooter Exported	Motorbike	Motorbike % Exported	Motorbike Exported
1998	750000	30	225000	600000	40	240000	840000	25	210000

We have The ratio of cars: scooters: motorbikes = 225000 :240000 : 210000 = 225:240:210 = 45:48:42 or 15: 16: 14
The ratio of export prices of cars: scooters: motorbikes = 2:1:1.5
The ratio of export earnings of cars: scooters: motorbikes = 15 × 2: 16 × 1: 14 × 1.5 = 30: 16: 21

Option (c) is correct.
Answer 5: (a)

	Car (in '0000)	Scooter (in '0000)	Motorbike (in '0000)	Total Automobiles (in '0000)
1996	48	60	38	146
1997	40	44	56	140
1998	75	60	84	219
1999	48	60	40	148
2000	86	34	42	162
2001	60	34	26	120

Keep in mind: You don't need to calculate for all the years. Calculations should be done for the years which are given in the options, since, ultimately one of them is the answer. The years which are marked as bold in the column are only to be calculated.
It can be clearly observed that in 1997 the motorbike production is 560000 which is 40% of the total production. Therefore, (a) is the correct option.

SET 3

		Bus (%age)	Total of Bus	Train (%age)	Total of train	Cars (%age)	Total of car
Trivandrum	8000	50	4000	12.5	1000	37.5	3000
Surat	3000	25	750	25	750	50	1500
Kanpur	4000	12.5	500	50	2000	37.5	1500
Raisen	6000	37.5	2250	50	3000	12.5	750
Pune	2000	12.5	250	75	1500	12.5	250
Total	23000		7750		8250		7000

Answer 1: (d) It can be easily observed from table that the required city is Pune. Correct option is (d)

Answer 2: (d) The total number of persons using trains for transportation in Pune, Kanpur, Raisen and Trivandrum
= 1500 + 2000 + 3000 + 1000 = 7500
The average = 7500/4 = 1875.
Correct option is (d)

Answer 3: (c) From the table, cars are used by 7000 people which is least.
Hence correct option is (c)

Answer 4: (c) It is clear from the graph as well as table that in both Raisen and Pune, 12.5% of the total people use car as their mode of transport. Hence answer is option (c)

SET 4

From above diagram we can make the following table :

	Reby	Topaz	Pearl	Sapphire	Total
1998	40	70	45	60	215
1999	35	55	75	80	245
2000	35	65	68	90	258
Total	110	190	188	230	718

Answer 1: (a) The total number of students = 718 in all years. Average = 718/12 = 59.8 (approx)
Therefore, closest option is (a)

Answer 2: (d) By the total we can see Sapphire has more students passed in 3 years as compared to others. Correct option is (d)
Answer 3: (b) In Pearl house, students passing the exam in 1999 is 75 whereas in 1998 is 45.
Hence the percentage change = [Math Processing Error]
which is highest. Correct option (b)

Answer 4: (a)

	Total passing	Total	%age of students passed
1998	215	250	86
1999	245	300	81.6
2000	258	350	73.7

From the data, we can see that the percentage of students passing the exam is highest in 1998. Hence, the best performance is in 1998. Correct option is (a)

SET 5

Answer 1: (c) Growth from November to December$211885−204933/204933×100≈3.4\%$ Growth from October to November $=204933−200189/200189×100≈2.4\%$ Hence Average $=3.4+2.42=2.9$ % Correct option is (c)

Answer 2: (d) The circulation of October is 200189 and of July is 173182. So the Octobercirculation is 200189/173182 or 1.15 times of July circulation. Correct option is (d)

Answer 3: (a) The slope is least for the month of July to August. Therefore, (a) is the option.

SET 6

Answer 1: (d) Clearly the graph for Personal profile has highest values in the economics zone. Correct option is (d)

Answer: 2 (b) Clearly the graph for Personal profile has lowest values in the religious zone. Correct option is (b)

Answer 3: (b) The graph clearly shows that the gap between average female profiles and personal profiles is maximum in Religious zone. Correct option is (b)

Answer 4: (d) From the graph it can be clearly seen that the personal profile and average female profile almost meet in the Aesthetic zone and the Theoretical zone. So (d) is correct option.

Answer 5: (d) a, b and c are not true. Theoretical and political are the two states. Correct option is (d)

SET 7

Answer 1: (a) In the second quarter the profit is above 150 but below 170 lakhs, which means the answer should be approximately = 160 lakhs. Correct option is (a)

Answer 2: (d) From the table it can be inferred that among the options 3rd quarter of 1998 is lowest.

Answer 3: (a) It can be easily counted from the table (refer to arrow marks.) Correct option is (a)

Answer 4: (d) The 4 quarters data are: 150lakh, 180lakh, 210lakh, 230lakh. Total profit = 150 + 180 + 210 + 230 = 770 lakh Correct option is (d)

Answer 5: (c) In 1997 the total was = 135+115+ 90+70 = 410lakh. In 2000 the total was = 150 + 180 + 210 + 230 = 770 lakh Percentage increase $= 770−410/410×100=360/410×100=87.8$

Correct option is (c)

SET 8

Answer 1: (c) The average demand = (350+50+475+335+400+275+300+350+325)/9 =320 to 322 approximately Any week for which demand is more than this number, the production will not able to meet the demand. There 6 such weeks. The correct option is (c).

Answer 2: (d) The required capacity for units in excess demand > 475-320=150 The correct option is (d)

Answer 3: (d) The unmet demand will be 475-300=175 The correct option is (c).

Set 9

Answer 1: (d)

If the total outlay in 2004-05 is Rs 100 then the share of MP is Rs 10.

In 2005-06 the outlay increased by 20%, so the new outlay is Rs 120 and the share of MP is 15% i.e. Rs 18.

Hence, the share of MP is increased from Rs 10 to Rs 18.

Hence, the required percentage increases = $\frac{8}{10} \times 100 = 80\%$.

The correct option is (d).

Answer 2: (b)

Let the cost in 2004-05 is Rs x and in 2005-06 is Rs x + 200.

Hence $\frac{20x}{100} = \frac{15}{100} \times (x+200)$

=> 20x = 15x + 3000

=> 5x = 3000 => x = Rs 600 crore

Hence the project outlay in 2005 - 06 = 600 + 200 = Rs 800 crore.

Correct option is (b).

Answer: (d)

The required percentage increase =

Let the total outlay in 2004-05 is Rs 'y' and that of Gujarat is 0.2y. Now in 2005-06, the share of Gujarat increased by 'x' percent. Hence the share of Gujarat in 2005-06 is $\frac{0.2y \times (100+x)}{100}$ which is 25% of the

total outlay of 2005-06. So the total outlay in 2005 - 06 = $4 \times \frac{0.2y \times (100+x)}{100} = \frac{0.8y(100+x)}{100}$

Hence increase in total outlay of 2005-06 = $\frac{0.8y(100+x)}{100} - y = \frac{80y + 0.8xy - 100y}{100} = \frac{y(0.8x - 20)}{100}$

Hence, the percentage increase = $\frac{y(0.8x - 20)}{100 \times y} \times 100 = (0.8x - 20) = \left(\frac{8x}{10} - 20\right) = \left(\frac{4x - 100}{5}\right)\%$

Hence, the correct option is (d)

SET 10

	Employees	Males	Females
A	6300	1890	4410
B	7700	4235	3465
C	10850	6510	4340
D	5250	2100	3150
E	4900	1225	3675
	35000		

Answer 1: (d) The required percentage = (10850/5250)x100 = 207% Correct option is (d)

Answer 2: (c) Total number of males in all the Organizations together = 1890 + 4235 + 6510 + 2100 + 1225 = 15960. Correct option is (c).

Answer 3: (b) The total number of males in A and C together is 1890+6510=8400. Correct option is (b).

Answer 4: (a) The difference between the number of females in Organization B and the number of females in Organization E =3675-3465 =210. Correct option is (a).

SET 11

Answer 1: (a)

Cost of total production = Rs.25 crore

Percentage of G = 12%

Then, $G = 25 \times \dfrac{12}{100} = Rs.3\ crore$

Ratio of production of item I and II is Company G = 1: 2

Then, cost of item I produced = Rs.1 crore

Cost of item II produced = Rs.2 crore

Percentage of profit earned by G on item I and II are 30% and 24%.

Hence, total profit earned

$= \left(10000000 \times \dfrac{30}{100}\right) + \left(20000000 \times \dfrac{24}{100}\right)$

$= 3000000 + 4800000$

$= Rs.78\ lakh$

Answer 2: (b)

Profit earned by company B on production of item I + Profit earned by Company A on production of item II = ?

Production by Company B= $5 \times \dfrac{11}{100} = Rs.2.75\ crore$

And share of production of item I

$= 2.75 \times \dfrac{3}{5} = 1.65\ crore$

And profit = $1.65 \times \dfrac{32}{100} = 52.8\ lakh$

Production by company

$= 25 \times \dfrac{15}{100} = Rs.3.75\ crore$

Are share of production of item II

$= 3.75 \times \dfrac{3}{3+2} = Rs.2.25$

And profit = $2.25 \times \dfrac{20}{100} = 45\ lakh$

Hence, total = 52.8 lakh + 45 lakh

= 97.8 lakh

Answer 3: (b)

Percentage of the total production by company A= 15%

Cost of production by company A = $25 \times \dfrac{15}{100} = Rs.\,3.75\ crore$

Cost of production by A on item 1 is: (3.75crore*2)/5=1.5

Percentage of the total production by company C= 22%

Cost of production by Company C= $25 \times \dfrac{22}{100} = 5.5\ crore$

Cost of production by C on item 1 is: (5.5crore*4)/5=4.4

Thus total=4.4+1.5=5.9

Answer 4: (c)

Cost of production of item 1 by company

$$F = 25 \times \frac{5}{100} \times \frac{1}{1+4} = 0.25\ crore$$

Cost of production of items II by company

$$D = 25 \times \frac{8}{100} \times \frac{5}{3+5} = 1.25\ crore$$

Required percentage = $\dfrac{0.25}{1.25} \times 100 = 20\%$

SET 12

Answer 1: (b)

The increase in yield per tonne km in April is 8.73 - 7.46 = 1.27
And the increase in yield per tonne km in July = 10 - 8.31 = 1.69
So the required ratio is 1.27: 1.69 or 0.75 which is closest to 5: 7.
Correct option is (b).

Answer 2: (d)

Average profit $= \dfrac{66+30.16+43.41+3.41}{4} = 35.745\,crores = 3574.5\,lacs$

Correct option is (d)

Answer 3: (b)

The required increase $= \dfrac{7.48 - 7.46}{7.46} \times 100 = \dfrac{0.02}{7.46} \times 100 = 0.26\%.$

Correct option is (b)

Answer 4: (d)

Total increase in the passenger load factor over four years = $\dfrac{66.4-56}{56} = 18.57\%$

Hence the annual average increases = $\dfrac{18.57}{4} = 4.64\%$

Correct option is (d)

SET 13

Common Solution: We have tabulated the values in the given question and we arrive at the following table:

Country	Production in lakh tonnes	Scientific	Conventional
China	11	7.7	3.3
Japan	10	7.8	2.2
India	9	2.88	6.12
Sri Lanka	6.5	3.9	2.6
Indonesia	5	3.65	1.35
Pakistan	4.5	2.97	1.53
Bangladesh	4	0.8	3.2
Total	50	29.7	20.3

Answer 1: The production by scientific method = 3.65 lakh tonne and by conventional method is 1.35 lakh tonne.
So the required difference = 3.65 - 1.35 = 2.3 lakh tonne
Thus correct option is (a)

Answer 2: The total by scientific method is 29.7 lakh tonne

Hence the average = $\dfrac{29.7}{7}$ = 4.24 $lakh\ tonne$

Hence answer is option (b)

Answer 3: The production by conventional method in Pakistan = 1.53 lakh tonne

The production by scientific method in Japan = 7.8 lakh tonne

Hence the required ratio = $\dfrac{1.53}{7.8} = \dfrac{153}{780} = \dfrac{51}{260}$.

Hence answer is option (c)

Answer 4: Production of wheat in Sri Lanka by conventional method = 2.6 lakh tonne.
Production of wheat in India by scientific method = 2.88 lakh tonne

Hence the required ratio = $\dfrac{2.6}{2.88} = 0.9$.

Hence answer is option (c)

SET 14

Answer 1:(b)
Demand of industry in 1999-2000= 50 % of 146.54 = 73.27
Demand of industry in 2004-05 = 40% of 283.9 = 113.56
Increase = 113.56 -73.27 = 40.29.
The percentage increase = (40.29/73.27) x 100 = 54.98%
The correct option is (b)

Answer 2: (a)
The demand of fertilizer sector in 1999-00 = 8% of 146.54 = 11.72 units
Total all India demand in 1999-00 = 146.54 units and in 2004-05 is 283.9 units.
So the percentage increase ={(283.9 – 146.54)/(146.54)} x 100 = 93.73%
Now if the growth of the fertilizer sector is 94%, then the share of fertilizer sector in
2004-05 is 11.72 × 1.94 = 22.74 units. The correct option is (a)

Answer 3: (b)
The demand in 1999 was 39.90 units and the demand in 2004 was 88.31 units.
Required increase = {(88.31 – 39.9)/39.9}x100= 121.32%
The correct option is (b)

Answer 4: (c)
Industry sector = 40 % of (64.81+78.13+52.65) = 78.23.
NOTE: The sector wise distribution for North+East+West will be same as that of South.
Correct option is (c)

Another approach:
They have said that "all India sector wise demand distribution is exactly the same in South" which means south
region follows the exact pie chart for sector wise distribution.
Thus total demamd for industry in all sectors is 40% of 283.90=113.56
Also, in South, it follows same pie chart. Thus, the industry demand in South is 40% 88.31=35.324
Thus industry sector demand from North, East and West combined in 2004-05= 113.56-35.324=78.2

SET15

Common Solution for the set:

From the given pie chart we can make the following table:

Category	Value of Books (in lakhs)	Value of Magazine (in lakhs)
Literature	29.2	
Maths	23.36	
Science	20.44	
History	14.6	
Geography	5.84	
Others	52.56	6.16
Sports		6.72
Business		4.48
Films		3.92
Culture		3.64
Science Fiction		3.08

Answer 1: (c)
The value of history books = Rs 14.6 lakh
The value of film magazines = Rs 3.92 lakh
Hence the required percentage = {(14.6 – 3.92)/3.92}x100 = 272.4%
The correct answer is option(c)
Answer 2: (c)
As the data is given about the value of the books and not about their numbers, so the statements (a) and (b) need not to be true. But the value of sports magazines is higher than that of geography books as can be seen from the table. Thus, (c) is the correct option.
Answer 3: (a)
The Value of the literature books = Rs29.2 lakh and the total investment in books and magazine section = 146 + 28 = Rs174 lakh
So the required percentage = (29.2/174) x 100 = 16.78%
The correct option is (a)
Answer 4: (b)
The total investment in books and magazine section = 146 + 28 = Rs 174 lakh
The total value of science material = 20.44 + 3.08 = Rs 23.52 lakh
The required percentage = (23.52/174)x 100 = 13.52%
The correct option is (b)

SET 16

Common Solution for the questions:
From the given information, we can make the following table:

	September	October
	Total Sales $= \dfrac{1560}{13} \times 100 = 12000$	Total Sales $= \dfrac{2250}{15} \times 100 = 15000$
A	$12000 \times \dfrac{3}{100} = 360$	$15000 \times \dfrac{5}{100} = 750$
B	$12000 \times \dfrac{13}{100} = 1560$	$15000 \times \dfrac{15}{100} = 2250$
C	$12000 \times \dfrac{22}{100} = 2640$	$15000 \times \dfrac{25}{100} = 3750$
D	$12000 \times \dfrac{25}{100} = 3000$	$15000 \times \dfrac{20}{100} = 3000$
E	$12000 \times \dfrac{17}{100} = 2040$	$15000 \times \dfrac{10}{100} = 1500$
F	$12000 \times \dfrac{8}{100} = 960$	$15000 \times \dfrac{13}{100} = 1950$
G	$12000 \times \dfrac{12}{100} = 1440$	$15000 \times \dfrac{12}{100} = 1800$

Answer 1: (b)
To find the maximum difference let us take the minimum values from September and the maximum values from October.
From September = 960+360 = 1320.

From October = 3750 +3000 = 6750.
The difference = 6750-1320 = 5430.
The correct option is (b)
Answer 2: (b)
There is only one absolute decrease i.e. for E.
The correct option is (b)
Answer 3: (d)
Sale of F type tyres in October = 1950.
In September
Sale of A and C = 360 + 2640 = 3000
Sale of C and E= 2640 + 2040 = 4680
Sale of B and D= 1560 + 3000 = 4560
Sale of A and B=360 + 1560 = 1920
The correct option is (d)
Answer 4: (b)
For E, there is a decrease in sales and for D, the sales for the two years are equal.
The total sale of all tyres except D and E in September = 12000 – 3000 – 2040 = 6960
The total sale of all tyres except D and E in October = 15000 – 3000 – 1500 = 10500
The required difference = 10500 – 6960 = 3540.
The correct option is (b)
Answer 5: (d)
Number of tyres of type D and E sold in September = 3000 + 2040 = 5040
Number of tyres of type D and E sold in October = 3000 + 1500 = 4500
Hence the required percentage = {(5040/4500)} x 100 = 112%
The only correct answer possible is (d)

SET 17

Answer 1: (a)
Let the total Workforce = 100.
Workforce in Production = 49.
22% of Production = 22% of 49 = 10.78
So 10.78 workers in Hyderabad are in production department.
Total workforce in Hyderabad = 28
Therefore the percentage = (10.78/28) x 100 = 38.5%
The correct option is (a)
Answer 2: (d)
As percentage of supervisors posted in Calcutta region is not given so data is insufficient. The correct option is (d)
Answer 3: (b)
The number of employees in the Administration and Accounts department = 11% of 68700 = 7557
The number of employees in Administration and Accounts department posted in Calcutta = 75% of 7557 = 5668
So the required percentage = (5668/68700) x 100 = 8.25%
The correct option is (b)
Answer 4: (c)
The total workforce at Hyderabad = 28% of 68700 = 19236
The total workforce at Mumbai = 22% of 68700 = 15114

The total workforce at Calcutta = 15% of 68700 = 10305
So the new recruitment = 12% of (19236 + 15114) = 12% of 34350 = 4122
The total retirement = 6% of 10305 = 618.3
Hence the total workforce = 68700 + 4122 – 618.3 = 72203.7 = 72204
The correct option is (c)

SET 18

Answer 1: (b)
Ratio of cost

$$= \frac{25 \times 3 + 26 \times 5 + 35 \times 2}{49 \times 3 + 35 \times 5 + 30 \times 2} = \frac{275}{382} = 0.72$$

The correct option is (b)
Answer 2: (a)
Required percentage

$$\frac{35 - 26}{26} \times 100 = \frac{9}{26} \times 100 = 34.6 \%$$

The correct option is (a)
Answer 3: (c)
Required percentage

$$\frac{490}{490 + 25 + 30 + 35 + 49} \times 100 = \frac{490}{629} \times 100 = 77.9\%$$

The correct option is (c)
Answer 4: (d)
Required difference

$$= \left(\frac{35}{410 + 35 + 35 + 26 + 25} - \frac{30}{490 + 25 + 30 + 35 + 49} \right) \times 100$$

$$= \left(\frac{35}{531} - \frac{30}{629} \right) \times 100$$

$$= (0.066 - 0.047) \times 100 = 0.019 \times 100 = 1.9\%$$

The correct option is (d)
Answer 5: (b)
We can see from the graph that for industrial sector, the usage is increased from 25 to 49 which is
96%. Hence, this is the maximum increase. For no other sector the usage became almost double.

SET 19

Answer 1: (d) The number of students having specialization in IR, Marketing and IT is 55% of the
total students.

Hence, the required percentage = (55/100) x 8000 = 4400
The correct option is (d)
Answer 2:
Answer 2: (b)
There are 19% students who have specialization in IB and 22% students have specialization in Marketing.
So, the required percentage =(19/22) x 100 = 86.36%
The correct option is (b)
Answer 3: (a)
Total number of students with IB as specialization = 19% of 8000 = 1520.
The correct option is (a)
Answer 4: (c)
There are 12% students who have Finance as specialization and 14% have HR as specialization.
The required ratio is 12:14 = 6:7
The correct option is (c)

SET 20

1. **Option B**
   Solution:
   For B) A = 10 lakh(1+10*6/100) + 2lakh(1+7*6/100) = Rs 1600000 + Rs 284000 = Rs 1884000.
   This Is more than any other option
2. **Option D**
   Solution:
   As he has to invest for a period of not more than 6 years. So he can invest in either scheme B or C.
   For maximum interest he should invest more money in Scheme B (as it has higher R*T ratio than that of scheme C.)
   So he invests Rs 5 lakh i.e the upper limit in scheme 5 and remaining amount in scheme C. But the limit in scheme C is Rs 3 lakh. So he can only invest Rs 8 lakh out of the total amount he has. Total interest on this Rs 8 lakh = 5L *7*6/100 + 3L*5*5/100 = Rs 210000 + Rs 75000 = Rs 285000
3. **Option C**
   Solution:
   As the R*T is greatest for Scheme B, i.e 7*6=42 , followed by Scheme A = 6*6 = 36 and then Scheme A = 5*5 =25 , As we have to invest atleast Rs 1 lakh in all scheme. So invest Rs 1 lakh(i.e minimum amount) in Scheme C. Now we are left with Rs 14 lakh. Scheme B will give us highest interest. But there is maximum limit of Rs 5 lakh. So invest Rs 5 lakh in Scheme B. And the remaining amount of Rs 9 lakh in Shcme A
4. **Option C**
   Solution:
   This amount is 99% of the total amount that was receivable.
   So total amount = 100/99 *227700 = Rs 230000
   Find principle for this amount at 5% for 3 years at SI.
5. **Option C**
   Solution:
   Total interest = Rs 4,65,000

Interest from scheme C = 3Lac*5*5/100 = Rs 75,000
Remaining interest is from scheme A = Rs 4,65,000 – Rs 75,000 = Rs 3,90,000
Find P.

SET 21

1. **Option B**
   Solution:
   MP of A = 180*100/90= 200
   MP of B= 200+100=300
   SP of B= 300*90/100=Rs 270

2. **Option E**
   Solution:
   %P=20% =>CP=Rs 150
   MP=180*100/90=Rs 200
   diff=200-150=Rs 50

3. **Option A**
   Solution:
   SP=110*([100+ 29(6)/11)/100]= Rs 142.5
   MP=142.5*100/95= Rs 150
   Difference = 150-142.5= Rs 7.5

4. **Option C**
   Solution:
   CP(E)= 1.5*300=Rs 450;
   SP = 500*95/100 =Rs 475
   %P=(475-450)/450 *100=50/9%= 5(5/9)%

5. **Option D**
   Solution:
   %d= (MP-Sp)/MP*100
   %p= (SP-CP)/CP*100

SET 22

66. (a); Required percentage $= \frac{8965}{3670} \times 100 \approx 244\%$

67. (e); Average of qualified students from Q $= \frac{3126}{6} = 521$

   Average of qualified students from S $= \frac{3110}{5} = 622$

   $\therefore$ Required difference = 101

68. (c); Total disqualified students in 2012 = 3900

   $\therefore$ Required number of SC boys $= \frac{3}{13} \times 3900 - 355 = 545$

69. (d); Difference in 2016 = 435

   Difference in 2012 = 190

   $\therefore$ Required percentage $= \frac{435-190}{190} \times 100 \approx 130\%$

70. (b); Required Difference $= \frac{40}{100}(4385 - 3900) = 194$

SET 23

86. (c); 7 seater Mahindra cars in 2014 $= \frac{3}{7} \times 7000 = 3000$

   5 seater Tata cars in 2015 $= \frac{3}{7} \times 35000 = 15000$

   $\therefore$ Required percentage $= \frac{15000-3000}{15000} \times 100 = 80\%$

87. (b); Required percentage $= \frac{\frac{1}{8} \times 30 - \frac{2}{5} \times 10}{\frac{1}{8} \times 30} \times 100 = 60\%$

88. (e); Total 5 seater cars of Mahindra in 2011 $= \frac{5}{8} \times 20000 = 12500$

   Number of white cars $= \frac{12500-256}{2} = 6122.$

89. (a); Required average $= \frac{1}{7}\left(\frac{1}{5} \times 10 + \frac{5}{8} \times 25 + \frac{1}{4} \times 20 + \frac{2}{5} \times 25 + \frac{5}{8} \times 20 + \frac{2}{3} \times 30 + \frac{3}{5} \times 10\right) \times 1000$

   ≈ 10160

90. (e); Total said 7 seater cars $= \left(\frac{4}{9} \times 18 + \frac{5}{8} \times 25 + \frac{4}{7} \times 35\right) \times 1000 = 43625$

   Total said 5 seater cars $= \left(\frac{4}{7} \times 7 + \frac{5}{9} \times 18 + \frac{2}{5} \times 10\right) \times 1000 = 18000$

   $\therefore$ Requried difference = 25625

SET 24

1. **Option C**
   Solution: Anant Vihar – Aligarh = 125 km

Aligarh – Kanpur = 434-125 = 309 km
Kanpur – Allahabad =628-434 =194 km
Allahabad – Mughal Sarai = 782-628 = 154 km

2. **Option C**
3. **Option B**
   Solution:
   Departs from Aligarh at 9:21 , arrives at Kanpur at 13:45. Difference = 4 hour 24 minutes
4. **Option D**
   Solution:
   Total passengers travelling from Aligarh-Kanpur = 400-200+251 = 451
   Hence ratio = 451 : 203
5. **Option B**
   Solution:
   New Time=19:45 +28 -5 = 20:08

SET 25

6. Option C
Solution:
We get the following data by using the two charts

	Day 1			Day 2		
Vehicle	Distance	Time	Speed	Distance	Time	Speed
A	180	15	12	156	12	13
B	180	12	15	324	18	18
C	256	16	16	160	10	16
D	306	18	17	135	9	15
E	221	17	13	121	11	11

7. Option D
Solution:
17-11 = 6 kmph

8. Option C
Solution:

Total Distance by E= 342; Total distance by B=504
%=(504-342)/504 *100=32.14%

9. Option C
Solution:
180/12 : 121/11 =15:11

10. Option E
Solution:
Speed in kmph = 18 kmph; in m/s = 18*5/18 =5 m/s

KEEP LEARNING, KEEP SHINING