

Solutions of IIFT2017 held on 03.12.2017 (Booklet Code: D)

SECTION – 1

1. Swarn a SME enterprise borrowed a sum of money from a nationalized bank at 10% simple interest per annum and the same amount at 8% simple interest per annum from a microfinance firm for the same period. It cleared the first loan 6 months before the scheduled date of repayment and repaid the second loan just at the end of the scheduled period. If in each case it had to pay Rs.62100 as amount then how much money and for what time period did it borrow?

- (A) Rs.55750, 2 years
(B) Rs.52500, 2 years
(C) Rs.51750, 2.5 years
(D) Rs.55750, 2.5 years

Solution:

Let the money borrowed from either the bank or the firm be ₹P.

Let the time period for which Swarn borrowed be t years.

$$\text{Amount repaid to the bank} = P \left(1 + \frac{\left(t - \frac{1}{2} \right) (10)}{100} \right)$$

$$\text{Amount repaid to the firm} = P \left(1 + \frac{t(8)}{100} \right)$$

In either case, amount repaid was ₹62100

$$P \left(1 + \frac{\left(t - \frac{1}{2} \right) (10)}{100} \right) = P \left(1 + \frac{t(8)}{100} \right) = 62100$$

Solving, $t = 2.5$ and $P = 51750$

Alternate Solution:

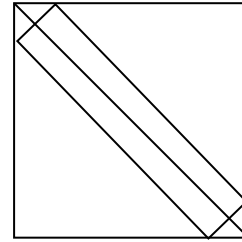
One amount (say the first) was borrowed from the bank, the other from the firm. In the two cases, the principals are equal. The amounts repaid are also equal. Therefore, the interests are equal. (i.e., rt is constant). As the rates are in the ratio 5 : 4, the time periods are in the ratio 4 : 5. The difference of 1 unit of time is 6 months. Therefore, the first period is 2 years, the second is 2.5 years.

$$P + \frac{P(2)(10)}{100} = 62100$$

$$\Rightarrow P = \frac{5}{6} (62100) = 51,750.$$

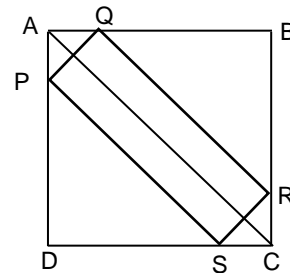
Choice (C)

2. A rectangular plank $\sqrt{10}$ metre wide, is placed symmetrically along the diagonal of a square of side 10 metres as shown in the figure. The area of the plank is:



- (A) $10(\sqrt{20} - 1)$ sq.mt.
(B) $10(\sqrt{5} - 1)$ sq.mt.
(C) $10\sqrt{20} - 1$ sq.mt.
(D) None

Solution:



The plank is placed symmetrically along the diagonal of the square.

The top left and the bottom right angled triangles (APQ, CRS) are isosceles. Each of these has the width of the plank as the hypotenuse.

Each of the right angled triangles has each of its perpendicular sides equal to $\frac{\sqrt{10}}{\sqrt{2}}$ i.e. $\sqrt{5}$

The other two right angled triangles (PDS, QBR) have each of their perpendicular sides equal to $10 - \sqrt{5}$

Length of the plank is the hypotenuse of either of these triangles, and hence is $\sqrt{2} (10 - \sqrt{5})$

$$\begin{aligned} \text{Area of the plank} &= \sqrt{2} (10 - \sqrt{5}) (\sqrt{10}) \\ &= \sqrt{20} (10 - \sqrt{5}) = 10\sqrt{20} - 10 \end{aligned}$$

Choice (A)

3. Somesh, Tarun and Nikhil can complete a work separately in 45, 60 and 75 days. They started the work together but Nikhil left after 5 days of start and Somesh left 2 days before the completion of the work. In how many days will the work be completed?

- (A) $25\frac{1}{7}$ (B) $50\frac{1}{7}$
(C) $35\frac{5}{7}$ (D) $40\frac{5}{7}$

Solution:

Nikhil worked for 5 days and completed $\frac{1}{15}$ of the work.

Let the number of days in which the work will be completed be t .

$$(t-2) \left(\frac{1}{45} \right) + t \left(\frac{1}{60} \right) + \frac{1}{15} = 1$$

$$\Rightarrow \frac{4(t-2) + 3t}{180} = \frac{14}{15} \Rightarrow t = 25 \frac{1}{7}$$

Choice (A)

4. $(1+5) \log_e 3 + \frac{(1+5^2)}{2!} (\log_e 3)^2 + \frac{(1+5^3)}{3!} (\log_e 3)^3 + \dots$

(A) 12 (B) 244 (C) 243 (D) 245

Solution:

$$(1+5) \log_e 3 + \frac{(1+5^2)}{2!} (\log_e 3)^2 + \frac{(1+5^3)}{3!} (\log_e 3)^3 + \dots = E(\text{say})$$

$$\text{Let } E_1 = 1 \log_e 3 + \frac{1}{2!} (\log_e 3)^2 + \frac{1}{3!} (\log_e 3)^3 + \dots$$

$$E_2 = 5 \log_e 3 + \frac{5^2}{2!} (\log_e 3)^2 + \frac{5^3}{3!} (\log_e 3)^3 + \dots$$

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots$$

$$E_1 = y + \frac{y^2}{2!} + \frac{y^3}{3!} + \dots \text{ where } y = \log_e 3$$

$$= \left(1 + y + \frac{y^2}{2!} + \frac{y^3}{3!} + \dots \right) - 1$$

$$= e^y - 1 = 3 - 1 = 2$$

$$E_2 = z + \frac{z^2}{2!} + \frac{z^3}{3!} + \dots \text{ where } z = \log_e 3^5$$

$$\therefore E_2 = 242 \text{ and } E_1 + E_2 = 244 \quad \text{Choice (B)}$$

5. If $f(x) = \frac{1}{(1+x)}$, then find the value of $f[f(f(x))]$, at $x = 5$

(A) $\frac{7}{9}$ (B) $\frac{7}{13}$ (C) $\frac{5}{13}$ (D) $\frac{5}{9}$

Solution:

$$f(x) = \frac{1}{1+x}$$

$$f(5) = \frac{1}{1+5} = \frac{1}{6}$$

$$f(f(5)) = f\left(\frac{1}{6}\right) = \frac{1}{1+\frac{1}{6}} = \frac{6}{7}$$

$$f(f(f(5))) = f\left(\frac{6}{7}\right) = \frac{1}{1+\frac{6}{7}} = \frac{7}{13} \quad \text{Choice (B)}$$

6. A pharmaceutical company produces two chemicals X and Y, such that X consists of 5% salt A and 10% salt B and Y consists of 10% salt A and 6% salt B. For producing the chemicals X and Y, the company requires at least 7 gm of salt A and at least 7 gm of salt B. If chemical X costs Rs. 10.50 per gm and chemical Y costs Rs. 7.80 per gm, what is the minimum cost at which the company can meet the requirement by using a combination of both types of chemicals?
- (A) Rs.810 (B) Rs.850
(C) Rs.537 (D) None

Solution:

The question states that X, Y are end products, (the word produce therefore is used in both the first and second sentences) and therefore A, B can be viewed as raw material. The 'costs' of X, Y are given (what is expected in the intended selling price). The quantity of A and B that is 'required' is given.

The intended question has to be guessed. We have to guess that X, Y are the raw materials and A, B are the end products. We need the minimum cost for obtaining the required quantity of A and B.

Let the quantities of X and Y to be used be x and y respectively (in gms).

Quantity of A in x gms of X and y gms of Y

$$= \frac{5}{100}x + \frac{10}{100}y$$

Quantity of B in x gms of X and y gms of Y together

$$= \frac{10}{100}x + \frac{6}{100}y$$

At least 7 gms of each of A and B is required
We have to find the minimum cost.

The minimum cost will occur when the quantities of salts A and B produced are minimum i.e. 7 gms each.

$$\frac{5}{100}x + \frac{10}{100}y = 7 \text{ and } \frac{10}{100}x + \frac{6}{100}y = 7$$

$$x = 40 \text{ and } y = 50$$

$$\text{Minimum cost} = 10.50x + 7.80y = 810$$

Choice (A)

7. Suntex Company plans to manufacture a new product line of Razor next year and sell it at a price of Rs. 12 per unit. The variable costs per unit in each production run is estimated to be 50% of the selling price, and the fixed costs for each production run is estimated to be Rs.50,400. Based on their estimated costs how many units of the new product will company Suntex need to manufacture and sell in order for their revenue to be equal to their total costs for each production run?
- (A) 5400 (B) 4200
(C) 8400 (D) 2100

Solution:

Let the number of units of the new product that Sunitex needs to manufacture and sell be u .

Revenue in selling u units = $12u$

Total costs in manufacturing u units =

Fixed cost + Variable cost =

$$50400 + \frac{50}{100}(12u) = 50400 + 6u$$

Revenue = Total costs

$$12u = 50400 + 6u$$

$$6u = 50400$$

$$u = 8400$$

Choice (C)

8. In a certain sequence the term x_n is given by formula $x_n = 5x_{n-1} - \frac{3}{4}x_{n-2}$ for $n \geq 2$. What is the value of x_3 , if $x_0 = 4$ and $x_1 = 2$?
- (A) $\frac{67}{2}$ (B) $\frac{37}{2}$ (C) $\frac{123}{4}$ (D) None

Solution:

$$x_n = 5x_{n-1} - \frac{3}{4}x_{n-2} \text{ for } n \geq 2, x_0 = 4, x_1 = 2$$

$$\therefore x_2 = 5x_1 - \frac{3}{4}x_0 = 5(2) - \frac{3}{4}(4) = 7$$

$$x_3 = 5x_2 - \frac{3}{4}x_1 = 5(7) - \frac{3}{4}(2) = \frac{67}{2}$$

Choice (A)

9. A mobile company that sells two models ACN-I and ACN-II of mobile, reported that revenues from ACN-I in 2016 were down 12% from 2015 and revenue from ACN-II sales in 2016 were up by 9% from 2015. If the total revenues from sales of both the mobile models ACN-I and ACN-II in 2016 were up by 3% from 2015, what is the ratio of revenue from ACN-I sales in 2015 to revenue from ACN-II sales in 2015?
- (A) 5 : 2 (B) 2 : 5
(C) 3 : 4 (D) None

Solution:

Let the revenues from CAN-I sales and CAN-II sales in 2015 be x and y respectively. From 2015 to 2016, revenue from CAN-I sales went down by

$$\frac{12}{100}x \text{ and that from CAN-II sales when up by}$$

$$\frac{9}{100}y.$$

The total revenue from sales of CAN-I and CAN-II

$$\text{from 2015 to 2016 went up by } \frac{3}{100}(x + y)$$

$$\frac{-12}{100}x + \frac{9}{100}y = \frac{3}{100}(x + y)$$

$$\Rightarrow \frac{6}{100}y = \frac{15}{100}x$$

$$\Rightarrow \frac{2}{5} = \frac{x}{y}$$

Choice (B)

10. If $10^{67} - 87$ is written as an integer in base 10 notation, what is the sum of digits in that integer?
- (A) 683 (B) 489 (C) 583 (D) 589

Solution:

$$10^{67} - 87 = 999 \dots 913 \text{ (There are 65 nines)}$$

$$\text{Sum of the digits} = 9(65) + 1 + 3 = 589$$

Choice (D)

11. A flag pole on the top of a mall building is 75 m high. The height of the mall building is 325 m. To an observer at a height of 400 m, the mall building and the pole subtend equal angle θ . If the horizontal distance of the observer from the pole is ' x ', then what is the value of x ?
- (A) $20\sqrt{10}$ m (B) $30\sqrt{10}$ m
(C) $25\sqrt{5}$ m (D) None

Solution:

The building and the pole subtend equal angles, say θ

The angle of depression of the foot of the building from the observer's eye is 2θ .

$$\tan 2\theta = \frac{400}{x}$$

$$\tan 2\theta = \frac{2\tan\theta}{1-\tan^2\theta}$$

$$\frac{400}{x} = \frac{2\left(\frac{75}{x}\right)}{1-\left(\frac{75}{x}\right)^2}$$

$$= \frac{\frac{150}{x}}{\frac{x^2-75^2}{x^2}} = \frac{150x}{x^2-75^2}$$

$$\Rightarrow 400(x^2 - 75^2) = 150x^2$$

$$\Rightarrow 250x^2 = 400(75^2)$$

$$\Rightarrow x^2 = \frac{8}{5}(75^2) = 9000$$

$$\Rightarrow x = 30\sqrt{10}$$

Choice (B)

12. Witrex Brown, an E-commerce company gives home delivery of its valuable products after receiving final order on their website by different modes of transportation like bike, scooter, tempo and truck. The probabilities of using bike, scooter, tempo and truck are respectively $\frac{2}{9}$, $\frac{1}{9}$, $\frac{4}{9}$ and $\frac{2}{9}$. The probabilities of his delivering the product late to the destination by using these modes of transport are $\frac{3}{5}$, $\frac{2}{5}$, $\frac{1}{5}$ and $\frac{4}{5}$. If the product reach to the destination in time, find the probability that he has used scooter to reach the office.

$$(A) \frac{1}{10}$$

$$(B) \frac{4}{25}$$

$$(C) \frac{3}{25}$$

$$(D) \text{ None}$$

Solution:

Let the events of using a bike, scooter, tempo, truck be B, S, T, R respectively. The event of reaching late is X and in time is Y. The data is tabulated below.

	B	S	T	R
P(i)	2/9	1/9	4/9	2/9
P(X/i)	3/5	2/5	1/5	4/5
P(Y/i)	2/5	3/5	4/5	1/5

$$P(S/Y) = \frac{P(S)P(Y/S)}{P(Y)}$$

$$= \frac{(1/9)(3/5)}{(2/9)(2/5) + (1/9)(3/5) + (4/9)(4/5) + (2/9)(1/5)}$$

$$\frac{1(3)}{2(2) + 1(3) + 4(4) + 2(1)} = \frac{3}{25} \quad \text{Choice (C)}$$

13. A pest control person uses a particular machine for his job, it moves along the circumference of a circular hall of radius 49 metres in 148 minutes to finish the pest control. How many minutes more will it take him to move along the perimeter of a hexagon of side 54 metres?
- (A) 7.69 minutes (B) 14.36 minutes
(C) 14.00 minutes (D) 4.28 minutes

Solution:

$$\text{Circumference of the circular hall} = 2\left(\frac{22}{7}\right) 49 \text{ m}$$

$$= 308 \text{ m}$$

The machine moves along the circumference of the hall in 148 min to finish the job.

$$\text{The machine moves at a rate of } \frac{308}{148} \text{ m/min.}$$

For the person to move with the machine along the perimeter of the hexagon, he has to move 324m (i.e., 6 (side))

Time taken to move along the perimeter

$$= \frac{\text{Distance to be moved}}{\text{Rate}} = \frac{324}{308/148} \text{ min}$$

$$\approx 155.69 \text{ min}$$

To move along the perimeter, it will take him 7.69 min more. Choice (A)

14. A premier B-school, which is in process of getting an AACSB accreditation, has 360 second year students. To incorporate sustainability into their curriculum, it has offered 3 new elective subjects in the second year namely Green Supply Chain, Global Climate Change & Business and Corporate Governance. Twelve students have taken all the three electives, and 120 students have taken Green Supply Chain. There are twice as many students who study Green Supply Chain and Corporate Governance but not Global Climate Change & Business, as those who study both Green Supply Chain and Global Climate Change & Business but not the Corporate

Governance, and 4 times as many who study all the three. 124 students study Corporate Governance. There are 72 students who could not muster up the courage to take up any of these subjects. The group of students who study both Green Supply Chain and Corporate Governance but not Global Climate Change & Business is exactly the same as the group made up of the students who study both Global Climate Change & Business and Corporate governance. How many students study Global Climate Change & Business only?

- (A) 176 (B) 104 (C) 152 (D) 188

Solution:

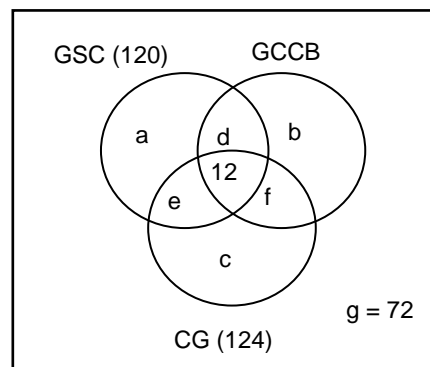
Comment1, There is a language issue in the question. Let the number of A's, B's, C's be a, b, c. Consider the statements P and Q.

P: There are twice as many A's as B's and 4 times as many C's. This actually means $a = 2b$, $c = 4b$.

Q: The number of A's is twice the number of B's and 4 times the number of C's. This would mean $a = 2b = 4c$.

The statement in the question is of the form P, But the intended statement should be expressed as Q.

$$\text{Total} = 360$$



There are 5 given statements.

- (1) $GSC = 120$
- (2) $e = 2d$
- (3) $e = 4(12)$ (See comment 1 above)
- (4) $CG = 124$
- (5) $g = 72$
- (6) $e = 12 + f$ (See comment 2 below)

Comment 2. One group is stated to be exactly the same as a different group. The intention is to state that the number of students in the two groups are equal.

We need the value of b. We need only (1), (3), (4), (5) above i.e., (2) and (6) are not even required to obtain the value of b.

$$GSC + CG - (e + 12) + b + 72 = 360$$

$$120 + 124 - (e + 12) + b + 72 = 360 \text{ -----(1)}$$

$$\text{Given: } e = 4(12) = 48$$

$$\text{From (1), } b = 104$$

Choice (B)

15. Ramesh and Sohan start walking away from each other from a point P at an angle of 120° . Ramesh walks at a speed of 3 km/hour while Sohan walks at a speed of 4 km/hour. What is the distance between them after 90 minutes?

(A) 9.89 km (B) 10.56 km
(C) 9.12 km (D) 12.42 km

Solution:

After 90 min, Ramesh and Sohan would have covered, 4.5 km and 6 km respectively.

Let the distance between the two then be d km.

The two started walking away from each other at an angle of 120° from the point P.

d is the side of a triangle whose opposite angle is 120° and the sides including this angle are 4.5 and 6

$$d^2 = 4.5^2 + 6^2 - 2(4.5)(6) \cos 120$$

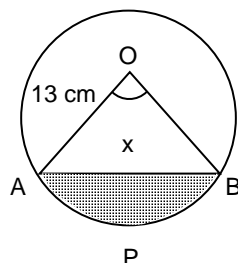
$$= 20.25 + 36 - 54 \left(-\frac{1}{2}\right)$$

$$d = \sqrt{83.25}$$

$$81 < 83.25 < 90.25 \text{ i.e., } 9^2 < d^2 < 9.5^2$$

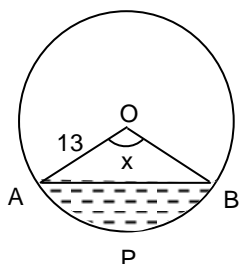
$$9 < d < 9.5 \text{ Choice C follows} \quad \text{Choice (C)}$$

16. A chord AB of length 24 cm is drawn in a circle of radius 13 cm. Find the area of the shaded portion APB.



- (A) $13\pi x \text{ cm}^2$ (B) $\frac{13\pi x}{180} \text{ cm}^2$
(C) $\frac{169\pi x}{360} - 60 \text{ cm}^2$ (D) $\frac{169\pi x}{180} - 60 \text{ cm}^2$

Solution:



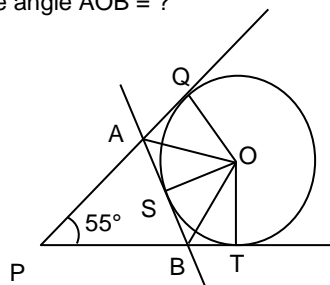
Area of the shaded portion APB = Area of the sector OAPB – Area of the triangle OAB

$$= \frac{x}{360} (\pi (13)^2) - \frac{1}{2} (AB) (\text{Length of the altitude from } O \text{ to } AB)$$

$$\text{from } (O \text{ to } AB) = \frac{169\pi x}{360} - \frac{1}{2} (24) \sqrt{13^2 - \left(\frac{24}{2}\right)^2}$$

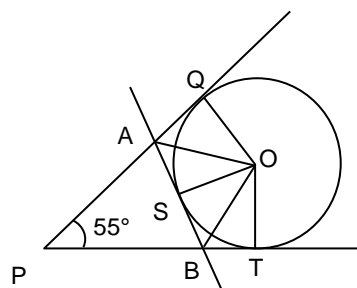
$$= \frac{169\pi x}{360} - 60 \quad \text{Choice (C)}$$

17. Two tangents are drawn from a point P on the circle with centre at O, touching the circle at point Q and T respectively. Another tangent AB touches the circle at point S. If angle QPT = 55° , find the angle AOB = ?



- (A) 125° (B) 62.5°
(C) 97.5° (D) 95°

Solution:



PQ and PT are tangents to the circle at Q and T respectively.

$$\angle OQP = \angle OTP = 90^\circ$$

In quadrilateral QPTO,

$$\angle QOT = 360^\circ - (\angle QPT + \angle OQP + \angle OTP)$$

$$= 360^\circ - (55^\circ + 90^\circ + 90^\circ) = 125^\circ$$

Tangent AB touches the circle at S

We can show that OA bisects $\angle QOS$

and OB bisects $\angle TOS$

$$\therefore \angle AOB = \frac{\angle QOT}{2} = \frac{125^\circ}{2} = 62.5^\circ$$

Choice (B)

18. The coordinates of a triangle ABC are A(1, 5), B(-2, 3) and C(0, -4); find the equation of the median AD?

- (A) $7x - 3y + 8 = 0$ (B) $5x - 4y + 15 = 0$
(C) $x + 3y - 16 = 0$ (D) $11x - 4y + 9 = 0$

Solution:

AD is a median to BC.

D is the midpoint of BC

$$D = \left(\frac{-2+0}{2}, \frac{3+(-4)}{2} \right) = \left(-1, -\frac{1}{2} \right)$$

$$\text{Slope of AD} = \frac{-\frac{1}{2} - 5}{-1 - 1} = \frac{11}{4}$$

$$\text{Equation of AD is } \frac{11}{4} = \frac{y-5}{x-1} \text{ i.e., } 11x = 4y - 9$$

Choice (D)

19. The Drizzle Pvt. Ltd., a squash company has 2 cans of juice. The first contains 25% water and the rest is fruit pulp. The second contains 50% water and rest is fruit pulp. How much juice should be mixed from each of the containers so as to get 12 litres of juice such that the ratio of water to fruit pulp is 3 : 5?
- (A) 6 litres, 6 litres (B) 4 litres, 8 litres
(C) 5 litres, 7 litres (D) 9 litres, 3 litres

Solution:

Let the quantities of juice taken from the first and second cans be x and y respectively.

Total quantity of water in the resulting 12 litres of

$$\text{juice} = \frac{25}{100}x + \frac{50}{100}y$$

The resulting 12 litres of juice has water to fruit pulp in the ratio 3 : 5 and hence $\frac{3}{8}$ th water

$$\frac{25}{100}x + \frac{50}{100}y = \frac{3}{8}(x + y)$$

$$x = y. \text{ Also } x + y = 12$$

$$x = y = 6$$

6 litres must be taken from each of the containers. Choice (A)

20. An overhead tank, which supplies water to a settlement, is filled by three bore wells. First two bore wells operating together fill the tank in the same time as taken by third bore well to fill it. The second bore well fills the tank 10 hours faster than the first one and 8 hours slower than the third one. The time required by the third bore well to fill the tank alone is:
- (A) 9 hours (B) 12 hours
(C) 18 hours (D) 20 hours

Solution:

Let the time taken by the first, second and third borewells to fill the tank be x, y and z hours respectively.

The second borewell fills the tank 10 hours faster than the first one and 8 hours slower than the third one.

$$y = x - 10 = z + 8$$

The first two borewells operating together fill the tank in the same time as taken by the third borewell to fill it.

Combined rate of the first two borewells = Rate of third.

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{z}$$

$$y = z + 8 \text{ and } x - 10 = z + 8 \text{ i.e., } x = z + 18$$

$$\frac{1}{z+18} + \frac{1}{z+8} = \frac{1}{z}$$

$$\frac{2z+26}{z^2+26z+144} = \frac{1}{z}$$

$$2z^2 + 26z = z^2 + 26z + 144$$

$$z^2 = 144$$

$$z > 0$$

$$z = 12$$

The time required by the third borewell to fill the tank alone is 12 hours Choice (B)

SECTION – 2

Directions for Question 21-25: 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:

- Trade Balance = Import Minus Exports
- Trade Deficit = If Imports are more than Exports
- 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)

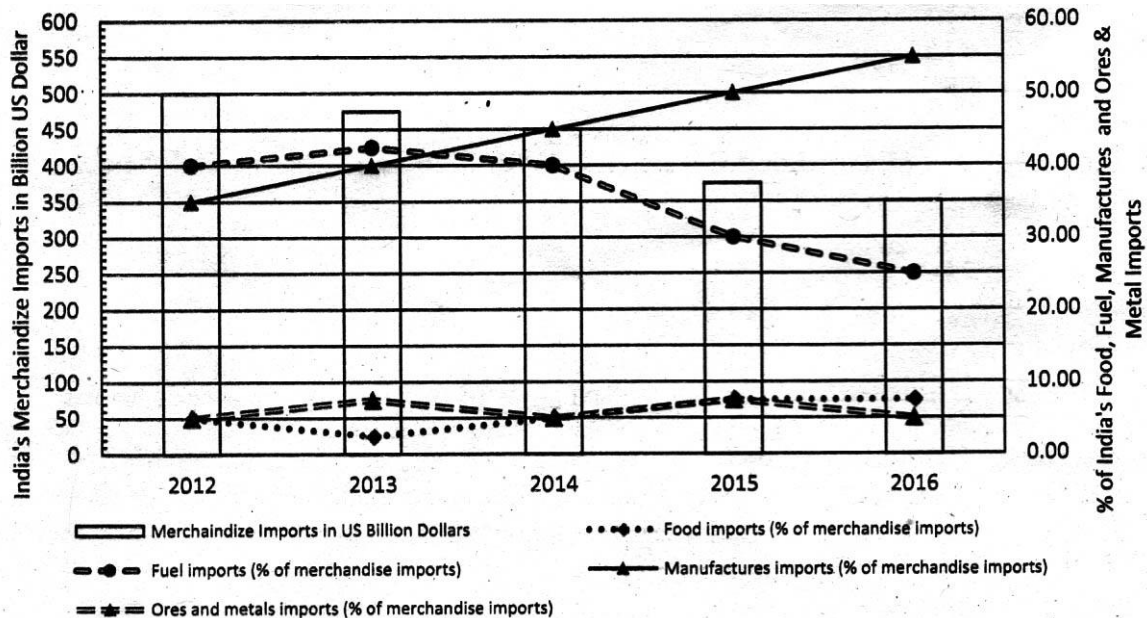
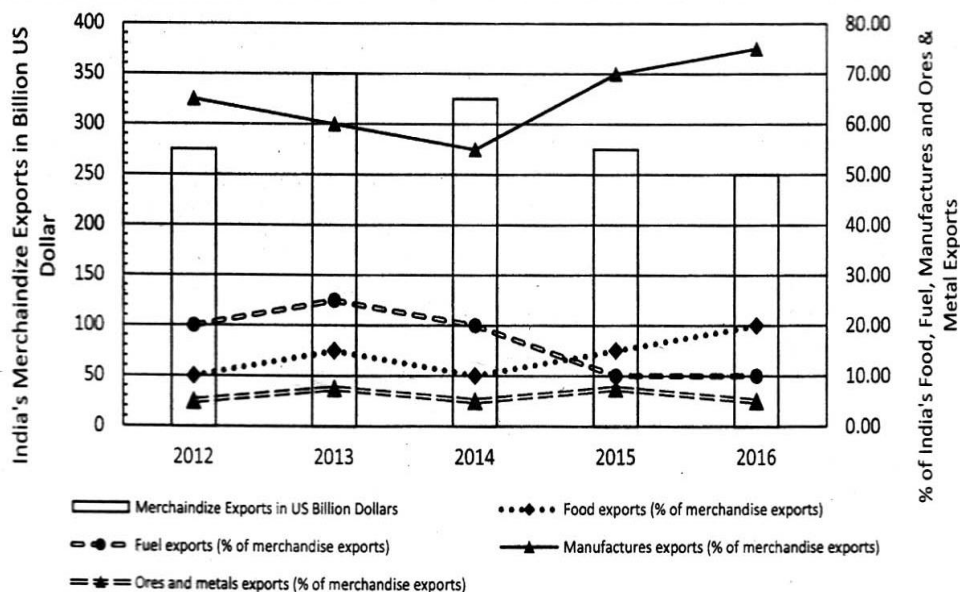


Exhibit 2: India's Total Merchandize Exports (US Dollar in Billion) and Percentage Exports of Food, Fuel, Manufactures and Ores & Metals (2012-2016)



21. 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

Solution:

$$\text{Average exports for 2012-16} = \frac{275 + 350 + 325 + 275 + 250}{5}$$

$$= \frac{1475}{5}$$

$$= 295$$

% Manufacture exports

$$= 75\%$$

$$= \frac{3}{4} \times 295 = \frac{885}{4} = 221.25$$

Choice (A)

22. 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

Solution:

	Mfg (I)	Mfg (E)
2012	175	178.75
2013	190	210
2014	202.5	178.75
2015	187.5	192.5
2016	192.5	187.5

There are 2 positive trade balances and 3 negative trade balances. Choice (B)

23. In which year, trade deficit of fuel has been the second lowest?

(A) 2015
(B) 2014
(C) 2013
(D) 2016

Solution:

Fuel trade deficit for different years

2012	145
2013	114.375
2014	115
2015	85
2016	62.5

Second lowest has been for year 2015

Choice (A)

24. Assuming India's imports and exports grow by 10% in 2017 and sectorial 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

Solution:

$$\text{Imports (2016)} = 350$$

$$\text{Imports (2017)} = 350 + 35 = 385$$

$$\text{Similarly, Exports (2017)} = \text{Exports (2016)} \times 1.1 = 275$$

$$\text{In 2017, fuel imports} = \frac{30}{100} \times 385$$

$$\text{In 2017, fuel exports} = \frac{15}{100} \times 275$$

$$\text{Fuel trade deficit}$$

$$= 115.5 - 41.25$$

$$= 74.25$$

Choice (B)

25. 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 sectorial 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

Solution:

For year 2017,

$$\text{Exports} = 324$$

$$\text{Imports} = 324 + (350 - 250) + 54 = 478$$

Food imports (2017)

$$= \frac{7.5}{100} \times 478$$

$$= 35.85$$

Fuel imports (2017)

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

Choice (A)

Directions for Question 26-27: 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
Set-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
Ap-17	139	138	156	143
May-17	142	146	159	144
Jun-17	141	157	158	167

26. 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

Solution:

For wheat, by observation maximum % growth took place in Jan – 17. Next two close cases are Feb and June 2017.

For June 2017,

$$\% \text{ growth} = \frac{11}{146} \times 100$$

For Feb 2017

$$\% \text{ growth} = \frac{10}{137} \times 100$$

$$\frac{11}{146} > \frac{10}{137}$$

So, 2nd highest growth rate took place in June 2017 and third highest in Feb 2017. Choice (B)

27. 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 the above

Solution:

Double digit growth took place in a total of 4 instances.

Instances are Jan – 17(wheat), Feb – 17(wheat), June – 17(wheat) and June – 17 for sorghum.

Choice (D)

Directions for Questions 28-30: India has 13 major ports, out of which 6 ports are located in Eastern Coast and 6 ports are in Western Coast of India. 13th 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 question:

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	20776
10. Mumbai	56186	58038	59184	61660	61110
11. J.N.P.T	65730	64488	62333	63801	64027
12. Kandla	82501	93619	87005	92497	100051

28. In which year, the average growth of all ports is the highest?

(A) 2014-15 (B) 2015-16
(C) 2013-14 (D) 2012-13

Solution:

Here the total Traffic for

Year	Total
2011-12	560187
2017-13	545831
2013-14	555489
2014-15	581344
2015-16	606372

Average growth is the highest for year 2014–15
Choice (A)

29. 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

Solution:

Maximum growth took place for Paradip.
Kamarajar and Kandla are next two close cases.
Increase for Kamarajar = 17450
Increase for Kandla = 17550
Third highest growth happens for Kamarajar.
Choice (D)

30. 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 10% per annum in each of these ports?

(A) 156500 (B) 142300
(C) 129500 (D) 161775

Solution:

Total Traffic in 2015-16 (for 3 ports)
= 50195 + 57033 + 22099
= 129327
For 2017 -18
Total = 1.21×129327
= 156485
Choice (A)

Instructions for Questions 31-35: 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 question:

TABLE:WHOLESALE PRICE INDEX – ANNUAL AVERAGE						
Year	Index (Average of weeks)					
1	of which				F & P	MP
	AC	PA	FA	NF		
	2	3	4	5	6	7
(Base : 1993-94 = 100)						
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
(Base : 2004-05 = 100)						
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	212.0	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.						

31. 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

Solution:

Percentage change

$$= \left(\frac{179.8 \times 2.802}{226.7} - 1 \right) (100)$$

$$= 122.2\%$$

Choice (B)

32. Between 2001-02 and 2015-16, which of the following components – PA, AC, F & P and MP- have shown the second highest percentage increase in WPI?
 (A) PA
 (B) AC
 (C) F & P
 (D) MP

Solution:

Component final/initial

PA	$\frac{249.6 \times 1.88}{168.4} = 2.786$
AC	$\frac{176.7 \times 1.87}{161} = 2.052$
F&P	$\frac{179.8 \times 2.8}{226.7} = 2.220$
MP	$\frac{153.4 \times 1.66}{144.3} = 1.764$

Second highest % increase happens for F&P.

Choice (C)

33. 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 the above

Solution:

By observation alone, for 2003-04 Choice (A)

34. If PA has a 40 percent weightage 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 45

Solution:

Weightage of F & P = x

Weightage of MP = 60 – x

$$104.5 = \frac{40}{100} \times 104.3 + 1.136x + (60 - x) (1.024)$$

$$104.5 = 41.72 + 1.136x + 61.44 - 1.024x$$

$$0.112x = 1.34$$

$$\text{Or } x = 11.96 \approx 12\%$$

$$60 - x = 48\%$$

Choice (A)

35. 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 the above

Solution:

By observation, for F&P, the decline happened more than once between two consecutive years.

→ 2009-10, 2014-15 and 2015-16.

Choice (C)

Instruction for Questions 36-40: 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		

36. 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

Solution:

	Output	Moving Trend	Deviation of Output from Moving Trend	Annual Output
1998 Q1	65	-	-	240
1998 Q2	58	-	-	
1998 Q3	56	60.38	- 4.38	
1998 Q4	61	61.38	- 0.38	
1999 Q1	68	62.88	5.12 (2 nd highest +ve deviation)	261
1999 Q2	63	64.5	- 1.5	
1999 Q3	63	65.5	-2.5	
1999 Q4	67	65.25	1.75	
2000 Q1	70	63.88	6.12 (highest +ve deviation)	237
2000 Q2	59	61.12	-2.12	
2000 Q3	56	58	-2	
2000 Q4	52	56.25	-4.25	
2001 Q1	60	55.12	4.88	224
2001 Q2	55	55.25	-0.25	
2001 Q3	51	-	-	
2001 Q4	58	-	-	

From the table, we can see that in 1999 Quarter 1, the positive deviation is second highest. Choice (B)

37. 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

Solution:

In Q₃, the sum of the deviations is -8.88, in Q₄, Q₁ and Q₂ its -2.88, 16.12 and -3.87 respectively.
 ∴ In Q₃ the negative deviation is maximum.

Choice (A)

38. In which year the quarterly compound average growth rate (CAGR) is the second lowest?

(A) 2001 (B) 1999 (C) 2000 (D) 1998

Solution:

	Initial	Final	Compounded average growth rate
1998	65	61	$\left[\left(\frac{61}{65} \right)^{\frac{1}{3}} - 1 \right] [100]$
1999	68	67	$\left[\left(\frac{67}{68} \right)^{\frac{1}{3}} - 1 \right] [100]$
2000	70	52	$\left[\left(\frac{52}{70} \right)^{\frac{1}{3}} - 1 \right] [100]$
2001	60	58	$\left[\left(\frac{58}{60} \right)^{\frac{1}{3}} - 1 \right] [100]$

NOTE: $\frac{67}{68} > \frac{58}{60} > \frac{61}{65} > \frac{52}{70}$

$(CAGR)_{1999} > (CAGR)_{2001} > (CAGR)_{1998} > (CAGR)_{2000}$

Clearly, Second lowest happens for year 1998

Choice (D)

39. In which year the annual output growth has been the lowest and what is the value?
 (A) 2001, 8.75% (B) 1999, -6.23%
 (C) 2000, -9.20% (D) 2000, -5.49%

Solution:

<u>Year</u>	<u>Growth rate</u>
1999	Increase
2000	$\frac{-24}{261} \times 100 = -9.19\%$
2001	$\frac{-13}{237} \times 100 = -5.48\%$

Clearly, the lowest happens in year 2000.

Choice (C)

40. Plot the quarterly output and its trend values. Identify the number of times the trend curve intersects the output curve
 (A) 5 times
 (B) 6 times
 (C) 3 times
 (D) Cannot be determined, more information required

Solution:

If all the moving trend values and output values are plotted starting from 1998 Q₃ to 2001 Q₂, we can see that the line graphs intersect at 6 points. i.e., every time the output overtakes the trend or vice - versa.

Choice (B)

SECTION – 3

Directions for Questions 41-42: Read the paragraphs carefully and identify the factual mistakes.

41. News Items dated 22 Jan 2017: Saina Nehwal's Triumph at Malaysia Masters Final

Days after recovering from knee injury during Rio Olympics, Saina Nehwal is back with a bang as this Indian badminton ace thrashes Pornpawee Chochuwong of Thailand by 22-20 and 22-20, thereby claiming the Malaysia Masters Grand title.

Quashing the air about her ability to win titles, the world No 10 Nehwal clinched her first Masters within five months since knee injury. Nehwal had to undergo surgery after an early exit from the Rio Olympics where her fellow citizen PV Sindhu created history by claiming the first silver medal for Indian badminton.

Silencing the critiques, Saina returned to action within a quarter of her surgery setback. Once the absolute queen of Indian badminton, she faced early exits and missed the qualification mark for Sharjah World Super Series Finals. Also, she lost to Sindhu in the premier Badminton League. However, Malaysia Masters Grand title has been her winning start to 2017.

- (A) Saina received a knee injury during Rio Olympics
- (B) Pornpawee Chochuwong is from Thailand
- (C) Saina missed her qualification mark for Sharjah World Super Series Finals
- (D) None of the above

Choice (C)

42. News Item dated, April 2017: West Bengal Won the Santosh Trophy

West Bengal won the Santosh Trophy for the 32nd time after a 1-0 win over Goa, extending their domination in the premier domestic football tournament. Playing in front of a vociferous home crowds, five-time winners Goa tried their best and controlled the match, but ran out of steam in the extra time. The hosts had their chances to score but the rival keeper pulled off some great saves. West Bengal, thus, ended a six-year wait having last won the title in 2011. Goa last won it in 2010. Goa, who had hosted the tournament thrice, lost to West Bengal in the semi-final in 1972 and the final in 1996, while winning against Kerala in 1990.

- (A) West Bengal won the Santosh Trophy for the 32nd time after a 1-0 win over Goa

- (B) Goa tried their best and controlled the match, but ran-out of steam in the extra time.
- (C) West Bengal, thus, ended a six-year wait having last won the title in 2011
- (D) Goa last won it in 2010

Choice (D)

43. "Soulmate" is a famous Indian music band. Identify the genre of music for which they are famous. Also, name the place from where the music band comes from.

- (A) Blues Rock, Shillong
- (B) Hard Rock, Goa
- (C) Punk Rock, Puducherry
- (D) Psychedelic, Mumbai

Choice (A)

44. XYZ is an Indian English-language broadsheet daily Newspaper founded in 1875 and published simultaneously in various cities of India. It is a direct descendant of two newspapers, The Englishman (1821) and The Friend of India (1818) which later merged with XYZ. It was managed by a British corporate group until it transferred ownership to the Tata Group, with J.R.D. Tata as Chairman in the mid-1960s. It is currently owned by Nachiketa Publications, Kolkata. Identify XYZ out of the following:

- (A) Time of India
- (B) Business Standard
- (C) The Statesman
- (D) Tribune

Choice (C)

45. Which London-based Group founded in mid-1910, started out as a moneylender before expanding the business to include imports of dried fruit, jute, textiles and tea. The business grew steadily under the late Shah of Iran as they were having large presence in Iran and continued to flourish even after Islamic Revolution forced it to move to Europe. It is now a multibillion-dollar energy, transport, media and agriculture conglomerate. The company had been in a bidding war to acquire the Express Newspapers group, and was one of several bidders for Go Fly, British Airways' low-cost airline. This famous conglomerate has a large presence in India also. Identify the Group.

- (A) Ruia Group
- (B) Mittal Group
- (C) Oswal Group
- (D) Hinduja Group

Choice (D)

46. Match the companies with their CEOs of Indian origin (either in the past or present).

(a)	Adobe	(i)	Geoge Kurian
(b)	Cognizant	(ii)	Sanjay Mehrotra
(c)	Micron	(iii)	Rajeev Suri
(d)	NetApp	(iv)	Francisco D'souza
(e)	Nokia	(v)	Sanjay Kumar Jha
(f)	Global Foundries	(vi)	Shantanu Narayen

- (A) a-iii, b-i, c-ii, d-vi, e-iv, f-v
 (B) a-i, b-iv, c-v, d-ii, e-vi, f-iii
 (C) a-vi, b-iv, c-ii, d-i, e-iii, f-v
 (D) a-vi, b-iii, c-iv, d-v, e-i, f-ii

Choice (C)

47. Choose the odd match from the following Fortune 500 Companies with their respective sector/industry and headquarters:

Name of the company		Sector/Industry		Headquarter	
(a)	Berkshire Hathway	(i)	Financial	(1)	New York, NY
(b)	Walgreens Boots Alliance	(ii)	Wholesales: Health Care	(2)	Deerfield, IL
(c)	Verizon	(iii)	Telecommunications	(3)	New York, NY
(d)	Amazon.com	(iv)	Technology	(4)	Seattle, WA

- (A) (a) – (i) – 1
 (B) (b) – (ii) – 2
 (C) (c) – (iii) – 3
 (D) (d) – (iv) – 4

Choice (A)

48. Match the name of the famous conglomerate/company with its particular tagline:

Tagline		Name of Conglomerate/Company	
(a)	Growth is Life	(i)	General Electric
(b)	Imagination at Work	(ii)	Reliance Industries Limited
(c)	High Performance, Delivered	(iii)	Accenture
(d)	Because You're Worth It	(iv)	L'Oreal

- (A) (a) – (i), (b) – (iii), (c) – (iv), (d) – (ii)
 (B) (a) – (i), (b) – (ii), (c) – (iii), (d) – (iv)
 (C) (a) – (i), (b) – (ii), (c) – (iv), (d) – (iii)
 (D) (a) – (ii), (b) – (i), (c) – (iii), (d) – (iv)

Choice (D)

49. Method to safeguard against losses due to currency fluctuations is popularly known as:

- (A) Risk Premium
 (B) Hedging
 (C) Round Tripping
 (D) Bond Indexation

Choice (B)

(C) RCEP potentially includes more than 3 billion people or 45% of the world's population.

(D) Combined GDP of negotiating member states is about \$21.3 trillion, accounting for about 40 percent of world trade. Choice (A)

50. Which of the following is not correct about Regional Comprehensive Economic Partnership (RCEP)?

- (A) It is a Free Trade Agreement of 16 countries of Asia Pacific Region including India.
 (B) Member states account for a population of 3.4 billion people with a total Gross Domestic Product (GDP) of \$49.5 trillion (at PPP).

51. Which of the following is not correct for Government of India's initiative "Make in India"?

- (A) It is launched by Prime Minister of India in 2014
 (B) It aims to attract Foreign Investment for faster industrial development of India
 (C) It aims to substitute the imports of India
 (D) It focuses on the twenty-five sectors of the economy for faster economic growth, export promotion and employment generation

Choice (C)






52. The 'Ease of Doing Business Index' is an index created by the World Bank Group. Which of the following is not correct about 'Ease of Doing Business Index'?

- (A) Economies are ranked on their ease of doing business, from 1-190.
- (B) A high Ease of Doing Business ranking means the regulatory environment is more conducive to the starting and operation of a local firm.

- (C) Regulations covering financial markets, levels of employment and intellectual property are an important parameter in determining the country rankings.
- (D) The rankings are determined by sorting the aggregate distance to frontier scores on 10 topics, each consisting of several indicators, giving equal weight to each topic.

Choice (C)

53. Given as under, are part logo of different Organizations. Match the part logo of each with their type of Organization:

Type of Organization		Part Logo	
(i)	Multilateral Organization	(a)	
(ii)	International Airlines	(b)	
(iii)	Spots Goods Manufactures	(c)	
(iv)	Media Production House	(d)	
(v)	Japanese Conglomerate	(e)	

- (A) i-a, ii-e, iii-b, iv-d, v-c
- (B) i-d, ii-c, iii-a, iv-b, v-e
- (C) i-d, ii-c, iii-b, iv-e, v-a
- (D) i-e, ii-a, iii-c, iv-b, v-d

Choice (C)

54. Who among the following cricketers has highest individual score in Women's One Day International Cricket?

- (A) Belinda Clark
- (B) Harmanpreet Kaur
- (C) Chamari Atapattu
- (D) Charlotte Edward

Choice (A)

55. India is building which of the following port in Iran in order to improve the trade connectivity with Iran, Afghanistan and Central Asian countries.

- (A) Chabahar Port
- (B) Bandar Khomeini
- (C) Bandar Abbas
- (D) Bandar Mahshahr

Choice (A)

56. Which of the following stock market index is not correctly matched with the country?

- (A) Japan-Nikkei
- (B) South Korea-KOSPI
- (C) France-CAC
- (D) United Kingdom-MTSE

Choice (D)

57. Which of the following pair of country – present currency is not correctly matched?

- (A) Tunisia-Dinar
- (B) Israel-Israeli Libra
- (C) Syria-Syrian Pound
- (D) Qatar-Riyal

Choice (B)

58. Megastar Amitabh Bachchan is one of the most popular actors of Bollywood. It is said that the advertisers line up to rope him in as their brand ambassador. Which of the following brands has not been endorsed by Amitabh Bachchan till date?

- (A) Everest Masala
- (B) TATA SKY
- (C) ICICI Bank
- (D) Rasna

Choice (D)

SECTION – 4

Directions for Questions 59-63: Read the sentences below carefully and identify the nature of phrase/clause used in the underlined section of the sentences.

59. He failed in spite of his best efforts

(A) Adjective phrase
(B) Adverb phrase
(C) Noun phrase
(D) Adverb clause

Solution:

The underlined portion does not contain a verb, so it is a phrase. The underlined portion in the sentence, per se, provides more information on how the person 'failed' (a verb), so the answer is essentially an adverb phrase.

Choice (B)

60. How to find the way to the ruins is the question.

(A) Adjective phrase
(B) Adverb phrase
(C) Noun phrase
(D) Adverb clause

Solution:

Note that the underlined portion contains no subject, hence it is a phrase. Moreover, the entire underlined portion forms the subject portion or the noun part of the sentence in question, so the answer is very obviously a noun phrase.

Choice (C)

61. Since you have already decided, why do you ask my opinion?

(A) Adjective phrase
(B) Adverb phrase
(C) Noun phrase
(D) Adverb clause

Solution:

The underlined portion contains both a subject and a verb, hence it is a clause. Moreover, the underlined portion qualifies the verb 'ask', hence the answer is adverb clause.

Choice (D)

62. The poor debtor intended to pay back every penny of the money.

(A) Adjective phrase
(B) Adverb phrase
(C) Noun phrase
(D) Adverb clause

Solution:

First, the underlined portion contains no subject, hence it is a phrase. Second, the underlined portion qualifies an act of doing *something*, hence the answer is noun phrase.

Choice (C)

63. The plan has the virtue of committing us to nothing.

(A) Adjective phrase
(B) Adverb phrase
(C) Noun phrase
(D) Adverb clause

Solution:

The underlined portion has no subject, so it is a phrase. Moreover, it qualifies a noun 'virtue', hence the answer is adjective phrase.

Choice (A)

Directions for Questions 64-66: Insert commas wherever necessary in the following sentences and identify the words sequentially after which commas will be inserted

64. In the old Persian stories Turan the land of darkness is opposed to Iran in the land of light.

(A) Turan, darkness, Iran
(B) stories, Turan, darkness, opposed, Iran
(C) stories, Turan, darkness, Iran
(D) stories darkness, opposed

Solution:

Here, Turan and Iran are two cities which have been labeled as 'the land of darkness' and 'the land of light'. Hence, we would have commas after 'stories', the cities in question, and the labels.

Choice (C)

65. A letter from a young lady written in most passionate terms wherein she laments the misfortune of a gentleman her lover who was lately wounded in a duel has turned my thoughts to that subject and inclined me to examine into the causes which precipitate men into so fatal a folly.

(A) terms, lover, wounded, subject,
(B) lady, terms, gentleman, lover, duel
(C) lady, terms, gentleman, lover, causes
(D) lady, terms lover, duel, men

Solution:

Remember that all additional information in the sentence has to be within commas – in this case 'written in most passionate terms', 'wherein she laments the misfortune of a gentleman', 'her lover' and 'who was wounded in a duel'.

Choice (B)

66. When he was a boy Franklin who afterward became a distinguished statesman and philosopher learned his trade in the printing office of his brother who published a paper in Boston.

(A) boy, Franklin, philosopher, brother
(B) boy, Franklin, afterward, philosopher, brother
(C) boy, Franklin, afterward. office, paper
(D) boy, Franklin, philosopher, paper

Solution:

The additional information in the sentence would, of course, feature within commas – 'who afterward became a distinguished statesman and philosopher'. 'Franklin', as the name, would feature within commas. More information is given about the brother too, so there would be a comma after 'brother' as well. Choice (A)

67. Match the prefix and suffix with its meaning

Prefix/Suffix	Meaning
(a) ation	(i) state or process of
(b) trans	(ii) position held
(c) ship	(iii) across
(d) ambi	(iv) full of
(e) ose	(v) both

- (A) (a) – (i), (b) – (iii), (c) – (ii), (d) – (v), (e) – (iv)
 (B) (a) – (i), (b) – (ii), (c) – (iii), (d) – (v), (e) – (iv)
 (C) (a) – (iv), (b) – (v), (c) – (iii), (d) – (ii), (e) – (i)
 (D) None of the above

Solution:

'Trans' stands for 'across', as in trans-Atlantic flight from London to New York. 'ambi' again means using 'both', for example, ambidextrous and ambivalent. 'ose' means 'full of', for example, 'grandiose'. 'Ship' is position held, for example, stewardship. And finally 'ation' stands for 'state' or 'process', for example, degeneration.

Choice (A)

Direction for Question 68-70: Follow the analogy between the give pair of words in the questions (in Capital) and identify the most suitable pair which can represent almost similar relationship

68. FRET: DISQUIETUDE

- (A) Indulge: Vacillation
 (B) Inspirit: Confidence
 (C) Avian: Fish
 (D) Corporeal: Heaven

Solution:

'Fret' and 'Disquietude' are synonymous, meaning 'restless'. Similarly, 'inspirit' and 'confidence' mean encouraging circumstances. Other pairs don't appear to be related.

Choice (B)

69. COFFER: VALUABLES

- (A) Mountain: A valanche
 (B) Book: Paper
 (C) Sea: Waves
 (D) Sanctuary: Refuge

Solution:

A coffer is a place where valuables are kept safely, just as a sanctuary provides refuge from danger. Other pairs don't appear to be related.

Choice (D)

70. APOCRYPHAL: CORROBORATION

- (A) Sacrilegious: Piety
 (B) Tyrannical: Poise
 (C) Esoteric: Communal
 (D) Fraudulent: Forgery

Solution:

Something 'apocryphal' cannot be corroborated or substantiated. Similarly, something 'esoteric' lacks commonality. Other pairs don't appear to be related as such.

Choice (C)

Directions for Questions 71-73: Create a word using all the given letters from the jumbled letters and identify its appropriate meaning

71.

E	T	E
I	H	R
M	C	

- (A) Embarrassing Situation
 (B) An official license
 (C) Charming, pleasant
 (D) Completely sealed, isolated

Solution:

The decrypted word is 'hermetic', meaning 'airtight'.

Choice (D)

72.

L	I	T
U	C	E
D	A	E

- (A) Denounce
 (B) Sincere
 (C) Enlighten
 (D) Confound

Solution:

The decrypted word is 'elucidate', meaning 'to throw light on something'.

Choice (C)

73.

A	I	
	T	Q
P	U	N

- (A) Doubtful
 (B) Interesting
 (C) Haughty
 (D) Foremost

Solution:

The decrypted word is 'piquant', meaning 'exciting'.

Choice (B)

Directions for Questions 74-78: Passage below is accompanied by a number of questions. For some questions, consider how the passage might be revised to improve the expression of ideas. For other questions, consider how the passage might be edited to correct errors in sentence structure, usage or punctuation.

After reading the passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage confirm to the conventions of standard written English.

The underlined areas in the passage along with the [number] direct you to the question concerned. If you've ever been to an art museum, you know the basic layout: long hallways and large rooms with paintings hung a few feet apart. You know how the paintings are [74] by certain means are marked, and you know that the paintings have been arranged chronologically or thematically.

There's one thing, however, which you've definitely noticed even if you can't quite articulate it. Particularly when looking at old paintings, [75] paintings all have that vividly new look, whether they were painted in 1950 or 1450. Even where the subject matter is older, the colours are vibrant, and you're never forced to wonder exactly what the painting must have looked like in its original state.

[76] The history of painting is nearly as long as the history of mankind. The incredible feat is the work of a highly specialised group: art restorers. Despite this specialization, the profession has exploded in recent years. Art restoration has been growing steadily since 1930. While the job of an art restorer may seem fairly straightforward [77] when looking, the job is in fact quite complicated. Sometimes, as in the case of Michelangelo's famous sculpture David, the cleaning and restoration of artworks is a simple matter: applying chemicals, washing away grime and scrubbing of the dirt.

[78] With most paintings, however, the process is a good deal more involved because it is no necessarily just a matter of 'cleaning' the older paintings. One cannot merely take a scrub brush to centuries-old great work. Because of the wide range of restoration techniques, art restoration itself can be controversial business.

74. Identify the best possible change in the underlined area

- (A) marked
- (B) being marked in a way
- (C) by so means of marking
- (D) no change

Solution:

The pertinent part of the sentence in question refers to chronological or thematic arrangement, so it is in order that the paintings are 'marked' as such. Choice (A)

75. Identify the best possible change in the underlined area

- (A) No change
- (B) you've surely noticed how new all the paintings look,
- (C) noticing the new look of all the paintings something you can do,
- (D) the painting always strike you as very new looking,

Solution:

Most of the sentences refer to the reader's impression – 'you've definitely noticed' etc., so it is in order that the perception of 'you' should figure in the underlined part of the sentence. Besides, of course, the grammatical rules regarding modifiers mandate that the subject which does the 'looking' should feature in the sentence, immediately after the comma.

Choice (B)

76. The writer is considering deleting the underlined sentence. Should the sentence be kept or deleted?

- (A) Kept, because it is useful introduction to the topic of this paragraph
- (B) Deleted, because it restates a historical detail that is provided in a later paragraph.
- (C) Deleted, because it strays from the paragraph's major focus by introducing an irrelevant fact
- (D) Kept, because it provides a humorous anecdote regarding the work of art restorers

Solution:

The underlined sentence is completely irrelevant. The writer has helpfully warmed up to the subject of art restoration in the preceding paragraph, and hence, what follows in the third paragraph is in order. To abruptly discuss the history of painting or mankind now would seem awkward.

Choice (C)

77. Identify the best possible change in the underlined area

- (A) at first glance,
- (B) beholden,
- (C) under your gaze,
- (D) No Change

Solution:

We have to bear in mind that the sentence introduces conflicting perspectives to art restoration – 'straightforward' and 'complicated'. Hence, we need a suitable expression to act as a foil for 'in fact'. 'When looking' is not compelling enough. But 'at first glance' introduces this dramatic element.

Choice (A)

78. Identify the best possible change in the underlined area

- (A) Anyway,
- (B) In this sense,
- (C) Alongside cleaning,
- (D) No change

Solution:

The word 'however' in D shows the contrast between how simple the cleaning is in some cases (as mentioned in the previous sentence), and how it is an involved process with most others.

Choice (D)

SECTION – 5

Directions for Questions 79-94: Read the following passages carefully and identify most appropriate answer to the questions given at the end of each passage.

PASSAGE – 1

Groupon is one of the fastest – growing companies of all time. Its name comes from “group coupons,” an ingenious idea that has spawned an entire industry of social commerce imitators. However, it didn’t start out successful. When customers took Groupon up on its first deal, a whopping twenty people bought two-for-one pizza in a restaurant on the first floor of the company’s Chicago offices – hardly a world – changing event. In fact, Groupon wasn’t originally meant to be about commerce at all. The founder, Andrew Mason, intended his company to become a “collective activism platform” called The Point. Its goal was to bring people together to solve problems they couldn’t solve on their own, such as fund – raising for a cause or boycotting a certain retailer. The Point’s early results were disappointing, however, and at the end of 2008 the founders decided to try something new. Although they still had grand ambitions, they were determined to keep the new product simple. They built a minimum viable product. Does this sound like a billion – dollar company to you? Mason tells the story: “We took a Word Press Blog and we skinned it to say Groupon and then every day we would do a new post. It was totally ghetto. We would sell T – shirts on the first version of Groupon. We’d say in the write – up, “This T – shirts will come in the colour red, size large. If you want a different colour or size, e- mail that to us.” We didn’t have a form to add that stuff. It was just so cobbled together. It was enough to prove the concept and show that it was something that people really liked. The actual coupon generation that we were doing was all File Maker. We would run a script that would e-mail the coupon PDF to people. It got to the point where we’d sell 500 sushi coupons in a day, and we’d send 500 PDFs to people with Apple Mail at the same time. Really until July of the first year it was just a scrambling to grab the tiger by the tail. It was trying to catch up and reasonably piece together a product.” Handmade PDFs, a pizza coupon, and a simple blog were enough to launch Groupon into record-breaking success; it is on pace to become the fastest company in history to achieve \$ 1 billion in sales. It is revolutionizing the way local businesses find new customers, offering special deals to consumers in more than 375 cities worldwide. A minimum viable product (MVP) helps entrepreneurs start the process of learning as quickly as possible. “It is not necessarily the smallest product imaginable, thought; it is simply the fastest way to get through the Build – Measure -Learn feedback loop with the minimum amount of effort. Contrary to traditional product development, which usually involves a long, thoughtful incubation period and strives for product perfection, the goal of the MVP is to begin the process of learning, not end it. Unlike a prototype or concept test, an MVP is designed not just to answer product design or technical questions. Its goal is to test fundamental business hypotheses.

Early adopters use their imagination to fill in what a product is missing. They prefer that state of affairs, because what they care about above all is being the first to use or adopt a new product or technology. In consumer products, it’s often the thrill of being the first one on the block to show off a new basketball shoe, music player, or cool phone. In enterprise products, it’s often about gaining a competitive advantage by taking a risk with something new that competitors don’t have yet. Early adopters are suspicious of something that is too polished if it’s ready for everyone to adopt, how much advantage can one get by being early? As a result, additional features or polish beyond what early adopters demand is a form of wasted resources and time. This is a hard truth for many entrepreneurs to accept. After all, the vision entrepreneurs keep in their heads is of a high-quality mainstream product that will change the world, not one used by a small niche of people who are willing to give it a shot before it’s ready. That world - changing product is polished, slick, and ready for prime time. It wins awards at trade shows and, most of all, is something you can proudly show Mom and Dad. An early, buggy, incomplete product feels like an unacceptable compromise. How many of us were raised with the expectation that we would put our best work forward? As one manager put it to me recently, “I know for me, the MVP feels a little dangerous in a good way -since I have always been such a perfectionist. “Minimum viable products range in complexity from extremely simple smoke tests (little more than an advertisement) to actual early prototypes complete with problems and missing features. Deciding exactly how complex an MVP needs to be cannot be done formulaically. It requires judgment. Luckily, this judgment is not difficult to develop: most entrepreneurs and product development people dramatically over estimate how many features are needed in an MVP. When in doubt simplify. For example, consider a service sold with a one – month free trial. Before a customer can use the service, he or she has to sign up for the trial. One obvious assumption, then, of the business model is that customers will sign up for a trial once they have a certain amount of information about the service. A critical question to consider is whether customers will in fact sign up for the free trial given a certain number of promised features (the value hypothesis). Somewhere in the business model, probably buried in a single cell in a spreadsheet, it specifies the “percentage of customers who see the free trial offer who then sign up.” Maybe in our projections we say that this number should be 10 percent. If you think about it, this is a leap-of-faith questions. It really should be represented in giant letters in a bold red font: WE ASSUME 10 PERCENT OF CUSTOMERS WILL SIGN UP.

Most entrepreneurs approach a question like this by building the product and then checking to see how customers react to it. I consider this to be exactly backward because it can lead to a lot of waste. First, if it turns out that we're building something nobody wants, the whole exercise will be an avoided expense of time and money. If customers won't sign up for the free trial, they'll never get to experience the amazing features that await them. Even if they do sign up, there are many other opportunities for waste. For example, how many features do we really need to include to appeal to early adopters? Every extra feature is a form of waste, and if we delay the test for these extra features, it comes with a tremendous potential cost in terms of learning and cycle time. The lesson of MVP is that any additional work beyond what was required to start learning in waste, no matter how important it might have seemed at the time.

79. What is the central idea of the passage?

- (A) Entrepreneurs should strive to make complete polished products ready for everyone to adopt
- (B) Entrepreneurs should start with a simple idea or product to avoid wastage, learn from user experience and build on it
- (C) Entrepreneurs should concentrate on saving cost and not spend time and energy on quality
- (D) Entrepreneurs should make world changing products that users want and which have many features

Solution:

The sentences "Although they.. Simple, "They built ... product ", "We did not have a form to add that stuff ". It was just so cobbled together" and " It was enough ... really liked " in the first paragraph point to option B as the correct answer. Choice (B)

80. According to the Author, what do early adopters want?

- (A) Early adopters want products that are readily available at low cost and high visibility
- (B) Early adopters want high quality, polished product that are ready to use
- (C) Early adopters want products with free trials with certain number of promised features
- (D) Early adopters want products that are new, incomplete and offer competitive advantage

Solution:

The first six sentences of the second paragraph point to D being the answer. Note the key words / phrases "first to use or adopt" and "too polished". Choice (D)

81. What does the author seek to imply by quoting "I know for me, the MVP feels a little dangerous-in a good way-since I have always been such a perfectionist."?

- (A) It implies more value for people as the entrepreneur works towards perfecting the quality of product which reduces the danger for the consumer
- (B) It implies that there is a risk associated with the product which enables entrepreneurs to achieve perfection in the product
- (C) It implies that the incomplete nature is associated with a certain amount of risk drawing entrepreneurs out of their comfort zone
- (D) It implies that if entrepreneurs make products that are less than perfect it is dangerous for the consumer

Solution:

The sentence "How many of us were raised with the expectation that we would put our best effort forward?" read along with the next five sentences, points to C being the answer. There is no "danger" to the consumer, as some of the other options seem to suggest. Choice (C)

82. What is the function of MVP?

- (A) To enable entrepreneurs to reach out to as many consumers as possible in the fastest possible time with their product
- (B) To enable entrepreneurs to continuously improve their product in the fastest time with least amount of time and cost
- (C) To enable entrepreneurs to develop products that are of high quality and have many features
- (D) To enable entrepreneurs to create world changing products that can win awards in trade shows

Solution:

A good reading of the passage suggests that the very idea of an MVP is to continuously upgrade the product in a cost-effective manner by initially offering something that is rudimentary and has not cost too much to develop. Choice (B)

PASSAGE – 2

I wear a variety of professional hats---university professor, literacy consultant to districts, author of several books related to comprehension. To keep myself honest (and humble), I spend a lot of time in classrooms watching kids and teachers at work. During the past decade, I've observed a transformation in the teaching of reading from an approach that measured readers' successful understanding of text through lengthy packets of comprehension questions to one that requires students to think about their thinking, activating their "good reader" strategies. Close reading is deep analysis of how a literary text works; it is both a reading process and something you include in a literary analysis paper, though in a refined form. Fiction writers and poets build texts out of many central components, including subject, form, and specific word choices. Essentially, close reading means reading to uncover layers of meaning that lead to deep comprehension. "Close analytic reading stresses engaging with a text of sufficient complexity directly and examining meaning thoroughly and methodically, encouraging students to read and reread deliberately. Directing student attention on the text itself empowers students to understand the central ideas and keys supporting details. It also enables students to reflect on the meanings of individual words and sentences; the order in which sentences unfold; and the development of ideas over the course of the text, which ultimately leads students to arrive at an understanding of the text as a whole. "Reread the definition of close reading --- closely---to extract key concepts. You might identify these ideas: examining meaning thoroughly and analytically; directing attention to the text, central ideas, and supporting details; reflecting on meanings of individual words and sentences; and developing ideas over the course of the text. Notice that reader reflection is still integral to the process. But close reading goes beyond that: The best thinkers do monitor and assess their thinking, but in the context of processing the thinking of others (Paul & Elder, 2008)

When you close read, you observe facts and details about the text. You may focus on a particular passage, or on the text as whole. Your aim may be to notice all striking features of the text, including rhetorical features, structural elements and cultural references; or, your aim may be to notice only *selected* features of the text---for instance, oppositions and correspondence, or particular historical references. Either way, making these observations constitutes the first step in the process of close reading. The second step is interpreting you observations. What we're basically talking about here is inductive reasoning: moving from the observation of particular facts and details to a conclusion, or interpretation based on those observations. And, as with inductive reasoning, close reading requires careful gathering of data (your observations) and careful thinking about what these data add up to. Literary analysis involves examining these components, which allows us to find in small parts of text clues to help us understand the whole. For example, if an author writes a novel in the form of a personal journal about a character's daily life, but that journal reads like a series of lab reports, what do we learn about that character? What is the effect of picking a word like "tome" instead of "book"? In effect, you are putting the author's choices under a microscope. The process of close reading should produce a lot of questions. It is when you begin to answer these questions that you are ready to participate thoughtfully in class discussion or write a literary analysis paper that makes the most of your close reading work. Close reading sometimes feels like over-analyzing, but don't worry. Close reading is a process finding as much information as you can in order to form as many questions as you can. When it is time to write your paper, and formalize your close reading, you will sort through your work to figure out what is most convincing and helpful to the argument you hope to make and, conversely, what seems like a stretch. It's our responsibility as educators to build students' capacity for independently comprehending a text through close reading. Teaching is about transfer. The goal is for students to take what they learn from the study of one text and apply it to the next text they read. How can we ensure that students both reap the requisite knowledge from each text they read and acquire skills to pursue the meaning of other texts independently? I suggest we coach students to ask themselves four basic questions as they reflect on a specific portion of any text, even the shortest: What is the author telling me here? Are there any hard or important words? What does the author want me to understand? How does the author play with language to add to meaning? If students take time to ask themselves these questions while reading and become skillful at answering them, there'll be less need for the teacher to do all the asking. For this to happen, we must develop students' capacity to observe and analyze. First things first: See whether students have noticed the details of passage and can recount those details in their own words. Note that the challenge here isn't to be brief (as in a summary); it's to be accurate, precise, and clear.

The recent focus on finding evidence in a text has sent students (even in primary grades) scurrying back to their books to retrieve a quote that validates their opinion. But to paraphrase what that quote means in a student's own language, rather than the author's, is more difficult than you might think. Try it with any paragraph. Expressing the same meaning with different words often requires going back to that text a few times to get the details just right. Paraphrasing is pretty low on Bloom's continuum of lower-to-high-order thinking, yet many students stumble even here. This is the first stop along the journey to closer reading. If students can't paraphrase the basic content of passage, how can they dig for its deeper meaning? The second basic question about hard or important words encourages students to zoom in on precise meaning. When students are satisfied that they have a basic grasp of what the author is telling them, they're ready to move on to analyzing the fine points of content. If students begin their analysis by asking themselves the third question---What does the author want me to understand in this passage? --- they'll be on their way to making appropriate inferences, determining what the author is trying to show without stating it directly.

We can also teach students to read carefully with the eye of a writer, which means helping them analyze craft. How a text is written is as important as the content itself in getting the author's message across. Just as a movie director focuses the camera on a particular detail to get you to view the scene the way he or she wants you to, authors play with words to get you to see a text their way. Introducing students to some of the tricks authors use opens student's minds to an entirely new realm in close reading.

- 83.** In the above passage the author has used the term 'Rhetoric features'. What does it mean?
- (A) Any characteristics of a text that are repetitive in nature and is interesting
 - (B) Any characteristics of a text that improves the grammar of the literary text
 - (C) Any characteristics of a text that helps convince reader of a certain point of view
 - (D) Any characteristics of a text that provides solutions to questions for the readers

Solution:

Through rhetoric, the author's goal is to persuade the reader towards considering a topic from a different perspective, using sentences designed to encourage or provoke an emotional response in him / her. Thus, C is the answer. Choice (C)

- 84.** According to the author what is inductive reasoning with regard to Close Reading?
- (A) Observing the characteristics and features of the text and moving to conclusions
 - (B) Understanding the overall theme and gathering evidence from the text to support it
 - (C) Understanding the text the preparing lot of questions
 - (D) Observing the nuances of the text and preparing a suitable analysis for class discussion

Solution:

The second paragraph, particularly the portion "The second step based on those observations", leads us to option A being the apt choice. Choice (A)

- 85.** According to the passage, what is the importance of 'paraphrasing' for students?
- (A) It is part of higher order learning and improves the speed of reading of students
 - (B) It leads to a deeper understanding of the text by improving the accuracy and clarity

- (C) It accelerates the understanding of the text and enables students to be brief
- (D) It enables students to reproduce the text exactly as it is without confusion

Solution:

The penultimate paragraph, particularly the portion "If students can't paraphrase the basic content of the passage, fine points of content", points to option B as the answer.

Choice (B)

- 86.** With reference to the above passage, what responsibility according to the author, do educators have?
- (A) To build skills of close reading so that students can independently improve their knowledge of English grammar and translate the meaning from one English text to another
 - (B) To build skills of close reading so that students can by themselves apply the knowledge they have gained through analysis and understating of one English text to another
 - (C) To build skills or close reading amongst students to improve their ability to paraphrase from one of English text to another
 - (D) To build skills of close reading so that students can independently analyses one English text and prepare for class discussions

Solution:

A good reading of the passage, particularly of the last paragraph, suggests that it is about building skills in the student to apply the knowledge gained to other texts. Please note how the last sentence captures the essence.

Choice (B)

PASSAGE – 3

As someone said, this crisis was too valuable to waste. I, for one, learnt many lessons on crisis management and leadership. By far the most important lesson I learn it that the primary focus of a central bank during a crisis has to be on restoring confidence in the markets, and what this requires is swift, bold and decisive action. This is not as obvious as it sounds because central banks are typically given to agonizing over every move they make out of anxiety that failure of their actions to deliver the intended impact will hurt their creditability and their policy effectiveness down the line. There is a lot to be said for such deliberative action in normal times. In crisis times though, it is important for them to take more chances without being too mindful of whether all of their actions are going to be fully effective or even mildly successful. After all, crisis management is a percentage game and you do what you think has the best chance of reversing the momentum. Oftentimes, it is the fact of the action rather than the precise nature of the action that bolsters codependence. Take the Reserve Bank's measure I wrote about earlier of instituting exclusive lines of credit for augmenting the liquidity of NBFCs and mutual funds (MFs)

which came under redemption pressure. It is simply unthinkable that the Reserve Bank would have done anything like this in normal times. In the event of a liquidity constraint in normal times, the standard response of the Reserve Bank would be to ease liquidity in the overall system and leave it to the banks to determine how to use that additional liquidity.

But here, we are targeting monetary policy at a particular class of financial institutions—the MFs and NBFCs—a decidedly unconventional action. This departure from standard protocol pushed some of our senior staff beyond their comfort zones. Their reservations ranged from: ‘this is not how monetary policy is done’ to ‘this will make the Reserve Bank vulnerable to pressures to bail out other sectors’. After hearing them out, I made the call to go ahead. Market participants applauded the new facility and saw it as the Reserve Bank’s willingness to embrace unorthodox measures to address specific areas of pressure in the system. In the event, these facilities were not significantly tapped. In normal times, that would have been seen as a failure of policy. From the crisis perspective though, it was a success inasmuch as the very existence of the central bank backstop restored confidence in the NBFCs and MFs, and smoothed pressures in the financial system. Similarly, the cut in the repo rate of one full percentage point that I effected in October 2008 was a non-standard action from the perspective of a central bank used to cutting the interest rate by a maximum of half a percentage point (50 basis points in the jargon) when it wanted to signal strong action. Of course, we deliberated the advisability of going into uncharted waters and how it might set expectations for the future. For example, in the future, the market may discount a 50 basis-point cut as too tame. But considering the uncertain and unpredictable global environment and the imperative to improve the flow of credit in a stressed situation, I bit the bullet again and decided on a full percentage-point cut.

Managing the tension between short-term pay-offs and longer-term consequences is a constant struggle in all central bank policy choices as indeed it is in all public decisions. This balance between horizons shifts in crisis times, as dousing the fires becomes an overriding priority even if some of the actions taken to do that may have some longer-term costs. For example, in 2008, we saw massive infusion of liquidity as the best bet for preventing the financial stability of our markets. Indeed, in uncharted waters, erring on the side of caution meant providing the system with more liquidity than considering adequate. This strategy was effective in the short-term, but with hindsight, we know what excess liquidity may have reinforced inflation pressures down the line. But remember, we know making a judgement call in real time. Analysts who are criticizing us are doing so with the benefit of hindsight. Another lesson we learnt is that even in a global crisis, central banks have to adapt their responses to domestic conditions. I am saying this because all through the crisis months, whenever another central bank, especially an advanced economy central bank, announced any measure, there was immediate pressure that the Reserve Bank too should institute a similar measure. Such straightforward copying of measures of other central banks without first examining their appropriateness for the domestic situation can often do more harm than good. Let me illustrate. During the depth of the crisis, fearing a run on their banks, the UK authorities had extended deposit insurance across board to all deposits in the UK banking system. Immediately, there were commentators asking that the Reserve Bank too must embrace such an all-out measure. If we had actually done that, the result would have been counterproductive if not outright harmful. First, the available premium would not have been able to support such a blanket insurance, and the markets were aware of that.

If we had glossed over that and announced a blanket cover anyway, that action would have clearly lacked credibility. Besides, any such move would be at odds with what we had been asserting—that our banks and our financial systems were safe and sound. The inconsistency between our walk and talk would have confused the markets; instead of reassuring them, any blanket insurance of the UK type would have scared the public and sown seeds of doubt about the safety of their bank deposits, potentially triggering a run on some vulnerable banks. Finally, an important lesson from the crisis relates to the imperative of the government and the regulators speaking and acting in unison. It is possible to argue that public disclosure of difference within closed doors of policymaking could actually be helpful in enhancing public understanding on how policy might evolve in the future. For example, a 6-6 vote conveys a different message from a 12-0 vote. During crisis times, though, sending mixed signals to fragile markets can do huge damage. On the other hand, the demonstration of unity of purpose would, and our own experience too, showed that coordination could be managed without compromising regulatory autonomy. Merely synchronizing policy announcements for exploiting the synergistic impact need not necessarily imply that regulators were being forced into actions they did not own.

87. What ‘crisis’ is the author referring to, in the above passage?

- (A) Financial crisis of 2008
- (B) Currency crisis of 1997
- (C) Balance of Payment crisis of 1991
- (D) De-monetization crisis of 2016

Solution:

A good reading of the passage, particularly the middle of the second paragraph, suggests that the passage is about the Financial crisis of 2008.

Choice (A)

88. According to the author, what is the typical response of Central banks in times of crisis? Answer with reference to the passage.

- (A) Central banks are proactive in their approach and are quick to respond to crisis
- (B) Central banks take risks and are aggressive in their response to crisis
- (C) Central banks are deliberate in their approach and respond cautiously to crisis
- (D) Central banks analyse different policy issue and then respond to crisis

Solution:

The fourth sentence of the first paragraph "This is not as obvious ... down the line" suggests that Central banks typically do things consciously and deliberately so as not to jeopardize their credibility. They are also cautious because they are concerned that any haste will affect the effectiveness of their policies at the implementation level. Choice (C)

89. Why does the author say "... even in a global crisis, central banks have to adapt their responses to domestic conditions"? Answer with reference to passage.

- (A) Central banks do not have sufficient knowledge or expertise with regard to global conditions and cannot apply them to domestic conditions
- (B) Only World bank has the information and expertise to deal with global conditions and help countries deal with domestic conditions
- (C) Domestic conditions are typical to every country and applying solutions from other countries creates confusion

(D) Central bank policies are different for different countries and government permission is required to apply them in domestic conditions

Solution:

The portion "Another lesson we learnt if not outright harmful", specifically. "Can often do more harm than good" in the third paragraph points to C as the apt choice. Choice (C)

90. With reference to the above passage, what is the role of government and regulators in times of crisis? Select the most appropriate response with reference to information provided in the passage.

- (A) In times of crisis the government and regulators play the role of check and balance to provide safety to financial systems of a country
- (B) In times of crisis regulators have to become more strict with government to prevent misuse of power and compromising regulatory anatomy
- (C) In times of crisis the government has to exercise control on the regulators so that they do not become too powerful and exploit the financial systems
- (D) In times of crisis the government and the regulators have to work on common ground and avoid any conflicts to prevent instability and confusion

Solution:

The portion "Finally, an important lesson synergies" in the last paragraph points to D being the answer. Choice (D)

PASSAGE – 4

Any company can generate simple descriptive statistics about aspects of its business-average revenue per employee, for example, or average order size. But analytics competitors look well beyond basic statistics. These companies use predictive modelling to identify the most profitable customers-plus those with the greatest profit potential and the ones most likely to cancel their accounts. They pool data generated in-house and data acquired from outside sources (which they analyze more deeply than do their less statistically savvy competitors) for a comprehensive understanding of their customers. They optimize their supply chains and can thus determine the impact of an unexpected constraint, simulate alternatives and route shipments around problems. They establish prices in real time to get the highest yield possible from each of their customer transactions. They create complex models of how their operational costs relate to their financial performance. Leaders in analytics also use sophisticated experiments to measure the overall impact or "lift" of invention strategies and then apply the results to continuously improve subsequence analyses. Capital One, for example, conducts more than 30,000 experiments a year, with different interest rates, incentives, direct-mail packaging, and other variables. Its goal is to maximize the likelihood both that potential customers will sign up for credit cards and that they will pay back Capital One.

Analytics competitors understand that most business functions - even those, like marketing, that have historically depended on art rather than science-can be improved with sophisticated quantitative techniques. These organizations don't gain advantage from one killer app, but rather from multiple applications supporting many parts of the business-and, in a few cases, being rolled out for use by customers and suppliers. UPS embodies the evolution from targeted analytics user to comprehensive analytics competitor. Although the company is among the world's most rigorous practitioners of operations research and industrial engineering, its capabilities were, until fairly recently, narrowly focused. Today, UPS is wielding its statistical skill to track the movement of packages and to anticipate and influence the actions of people-assessing the likelihood of customer attrition and

identifying sources of problems. The UPS Customer Intelligence Group, for example, is able to accurately predict customer defections by examining usage patterns and complaints.

When the data point to a potential defector, a salesperson contacts that customer to review and resolve the problem, dramatically reducing the loss of accounts. UPS still lacks the breadth of initiatives of a full-bore analytics competitor, but it is heading in that direction. Analytics competitors treat all such activities from all provenances as a single, coherent initiative, often massed under one rubric, such as “information-based strategy” at Capital One or “information-based customer management” at Barclays Bank. These programs operate not just under a common label but also under common leadership and with common technology and tools. In traditional companies, “business intelligence” (the term IT people use for analytics and reporting processes and software) is generally managed by departments; number-crunching functions select their own tools, control their own data warehouses, and train their own people. But that way, chaos lies. For one thing, the proliferation of user-developed spreadsheets and databases inevitably leads to multiple versions of key indicators within an organization.

Furthermore, research has shown that between 20% and 40% of spreadsheets contain errors; the more spreadsheets floating around a company, therefore, the more fecund the breeding ground for mistakes. Analytics competitors, by contrast, field centralized groups to ensure that critical data and other resources are well managed and that different parts of the organization can share data easily, without the impediments of inconsistent formats, definitions, and Standards. Some analytics competitors apply the same enterprise approach to people as to technology. Procter & Gamble, for example, recently created a kind of uberanalytics group consisting of more than 100 analysts from such functions as operations, supply chain sales, consumer research, and marketing. Although most of the analysts are embedded in business operating units, the group is centrally managed. As a result of this consolidation, P&G can apply a critical mass of expertise to its most pressing issues. So, for example sales and design corporate supply networks. The supply chain analysts, in turn, apply their expertise who certain decision-analysis techniques to such new areas as competitive intelligence. The group at P&G also raise the visibility of analytical and data based decision making with the company. Previously, P&G’s crack analysts had improved business processes and saved the firm money; but because they were squirreled away in dispersed domains, many executives didn’t know what services they offered or how effective they could be. Now those executives are more likely to tap the company’s deep pool of expertise for their projects. Meanwhile, masterful number crunching has become part of the story P & G tells to investors, the press and the public.

A companywide embrace of analytics impels changes in culture, processes, behavior, and skills for many employees. And so, like any major transition, it requires leadership from executives at the very top who have a passion for the quantitative approach. Ideally, the principal advocate is the CEO. Indeed, we found several chief executives who have driven the shift to analytics at their companies over the past few years, including Loveman of Harrah’s, Jeff Bezos of Amazon, and Rich Fairbank of Capital One. Before he retired from the Sara Lee Bakery Group, former CEO Barry Beracha kept a sign on his desk that summed up his personal and organizational philosophy: “In God we trust. All others bring data!” We did come across some companies in which a single functional or business unit leader was trying to push analytics throughout the organization, and a few were making some progress. But we found that these lower-level people lacked the clout, the perspective, and the cross-functional scope to change the culture in any meaningful way. CEOs leading the analytics charge require both an appreciation of and a familiarity with the subject.

A background in statistics isn’t necessary, but those leaders must understand the theory behind various quantitative methods so that they recognize those models’ limitations—which factors are being weighed and which ones aren’t. When the CEOs need help grasping quantitative techniques, they turn to experts who understand the business and how analytics can be applied to it. We interviewed several leaders who had retained such advisers, and these executives stressed the need to find someone who can explain things in plain language and be trusted not to spin the numbers. A few CEOs we spoke with had surrounded themselves with very analytical people—professors, consultants, MIT graduates and the like. But that was personal preference rather than a necessary practice. Of course, not all decisions should be grounded in analytics – at least not wholly so. Research shows that human beings can make quick, surprisingly minded leaders then the challenge boils down to knowing when to run with the numbers and when to run with their guts.

91. With reference to the above passage what does the phrase “Uberanalytic group” mean?

- (A) A centralized homogeneous group comprising of experts in analytics with the organization who provide their expertise to all.
- (B) A centralized group that draws upon expertise from multifunctional areas within

the organization and provides their expertise to all

- (C) A centralized group consisting of data analytics experts from within the organization who provide their expertise to all.
- (D) A powerful centralized group of crack analysts within the organization who provide their expertise to all.

Solution:

Paragraph 4, particularly the portion “Proctor and Gamble, for example, (.....) corporate supply networks” points to the fact that unberanalytics groups draw expertise from different functional areas in the organization and, in turn, provide the skill to the other functional areas. Choice (B)

92. Replace the phrase ‘more fecund the breeding ground for mistakes’ from the passage by selecting the most appropriate phrase without changing the meaning.
- (A) An unsuitable environment where mistakes are bound to happen.
 - (B) Fructiferous environment for mistakes
 - (C) A highly fertile ground for producing more errors
 - (D) Creating a high possibility of inaccuracy.

Solution:

The first two sentences of the fourth paragraph point to option C being the right choice. “Breeding ground for mistakes” means a fertile ground where even more errors can inadvertently creep in. Choice (C)

93. According to the author, what is the leadership challenge for analytics minded leaders?
- (A) The analytics minded leader has to be well versed in statistics and quantitative analysis in order to be effective.
 - (B) The analytics minded a leader should have experts in data analysis from the top institutes such as MIT etc. to advise him
 - (C) The analytics minded leader should be able to strike a balance between data driven decisions and intuition

- (D) The analytics minded leader should be able to lead teams of cross-functional experts.

Solution:

The very last sentence of the passage suggests that for all the virtues of analytics, an effective manager will know how to balance the effectiveness of analytics and his own gut feeling or instinct or intuition. Choice (C)

94. In the above passage, how does the author differentiate between ‘Analytics competitors’ and ‘traditional companies’ with regard to their strategy towards data management?
- (A) Analytics competitors have a centralized, multi-functional approach to data management and encourage data sharing whereas traditional companies have a departmental, multiple databases approach
 - (B) Traditional companies surround themselves with very analytical people from academia, consultants, and pass outs from institutes like MITs but Analytics competitors hire the best analytical minds
 - (C) Analytics competitors use predictive modelling to identify the most profitable options whereas traditional companies use basic statistics
 - (D) Analytics competitors train all employees in data analytics.

Solution:

The first three sentences of the passage give the difference between analytics competitors and traditional companies (note “any company”) Choice (C)

SECTION – 6

Directions for Questions 95-99: Read the information provided and answer the questions which follow.

Five MBA students - Aman, Manish, Rohit, Sandeep and Vinay, specializing in sales and marketing got final campus placement in five different companies - Asian Paints, Dabur, Hindustan Unilever, ITC and L'oreal (though not necessarily in the same order). Their initial job assignment has been fixed in five different cities - Bhopal, Chennai, Delhi, Mumbai and Patna (in any order). They are avid book readers, but like different themes - business and management, classic fiction, historical fiction, mystery fiction and non-fiction (again in any order). Further the following additional information are provided:

- (a) Vinay got placed in Asian Paints.
- (b) Aman is not placed in Hindustan Unilever.
- (c) Manish's job location is not in Chennai and he does not like books on mystery fiction.
- (d) Sandeep got placed at Delhi, while Vinay is not placed at Mumbai.
- (e) Aman likes reading books on historical fiction and is placed either at Chennai or Patna and the student who got placed in ITC does not like mystery fiction and his job posting is in the other city amongst Chennai or Patna.
- (f) The student who got placed in L'oreal likes reading non-fiction books and is not posted at Mumbai.
- (g) The student who likes reading classic fiction, is posted at Bhopal.

95. In which company has Aman got placed?
(A) Dabur
(B) Hindustan Unilever
(C) ITC
(D) L'oreal
96. Name the person who likes reading books on business and management.
(A) Manish
(B) Rohit
(C) Sandeep
(D) Vinay
97. Name the type of books the student who is placed in Mumbai likes reading.
(A) Business and management
(B) Historical fiction
(C) Mystery fiction
(D) Non-fiction
98. If Sandeep is transferred to Rohit's city and Rohit is transferred to Sandeep's city, then in which city the student who likes reading mystery fictions will work?
(A) Chennai
(B) Delhi
(C) Mumbai
(D) Patna
99. Who among the following is posted in Patna?
(A) Manish
(B) Rohit
(C) Aman
(D) Cannot be determined

Solutions for questions 95 to 99:

The given information can be translated as follows.

Company	Person	City	Theme
Asian paints	Vinay	Not Mumbai	
Dabur			
Hindustan Unilever	Not Aman		
ITC		Chennai or Patna	Not mystery fiction
L'oreal		Not Mumbai	Non-fiction

From (e), we know that Aman is placed neither in L'oreal (as the one placed in L'oreal reads non-fiction, while Aman read, Historical fictions) nor in ITC. Hence, Aman is placed in Dabur. Aman's assignment is in Patna or Chennai.

Now it is clear that the one whose assignment is in Mumbai got placement in Hindustan Unilever.

From (d), we know that Sandeep is placed in L'oreal.

From (g) and the above it can be concluded that the student who likes reading classic fiction and posted in Bhopal is placed in Asian points.

Now it can be concluded that Rohit is placed in Hindustan Unilever and reads mystery fiction.

Manish is placed in ITC and reads business and management and his assignment is in Patna.

Thus we get the following arrangement

Company	Person	City	Theme
Asian paints	Vinay	Bhopal	Classic fiction
Dabur	Aman	Chennai	Historical fiction
Hindustan Unilever	Rohit	Mumbai	Mystery fiction
ITC	Manish	Patna	Business & Management
L'oreal	Sandeep	Delhi	Non-Fiction

95. Aman got placed in Dabur. Choice (A) (a) Out of the seven matches played by Chennaiyan FC, it won five and the other two matches were drawn.
96. Manish likes reading books on business and management. Choice (A) (b) FC Pune City won the match against FC Goa and Kerala Blasters but lost the match against Delhi Dynamos and Chennaiyan FC.
97. The student placed in Mumbai likes reading mystery fiction. Choice (C) (c) Atletico De Kolkata drew a match against FC Goa, Chennaiyan FC and FC Pune City.
98. Rohit reads mystery fiction, after the transfer he will be working in Delhi. Choice (B) (d) None of the teams lost all the matches.
99. Manish is posted in Patna. Choice (A) 100. If Chennaiyan FC won the match against FC Goa, what could have been the maximum score of FC Goa?

Directions for Questions 100-101: Read the information provided and answer the questions which follow.

In ISL football competition, eight football teams - Atletico De Kolkata, Chennaiyan FC, Delhi Dynamos, FC Goa, FC Pune City, Kerala Blasters, Mumbai City FC and North-East United FC - participated where each team played against every other team exactly once. Every win earned three points for the teams and a loss earned 0. If there was a draw, each team was rewarded one point. Now, as per the fixtures, following are some of the observations:

- (A) 11
(B) 12
(C) 13
(D) 14

101. What could be the minimum absolute difference between the scores of FC Pune City and Chennaiyan FC?
- (A) 0
(B) 1
(C) 3
(D) 4

Solutions for questions 100 and 101:

The given information can be tabulated as follows.

Team	Won against	Drawn	Lost to	Points
Chennaiyan	5, FC Pune	2, Kolkatta	-----	17
FC Pune	FC Goa, Kerala	Kolkata	Delhi, chennaiyan	
Kolkata		FC Goa, Chennaiyan, FC Pune		
FC Goa		Kolkata	FC Pune	

100. Given that Chennaiyan FC won against FC Goa. Thus the minimum possible numbers of games that FC Goa lost is two. The minimum possible number of games ended in draw is one. Hence, the remaining four games can be assumed to be won by FC Goa. Thus the maximum possible score could be $4 \times 3 + 1 \times 1 = 13$.

Choice (C)

101. To get minimum difference, we shall maximize the score FC Pune City. From the above table it is clear that the maximum possible number of games won by FC Pune city can be four. Hence, the maximum possible score of FC Pune could

be $4 \times 3 + 1 \times 1 = 13$. Hence, the maximum possible difference is 4.

Choice (D)

Directions for Questions 102-103: Read the information provided and answer the questions which follow.

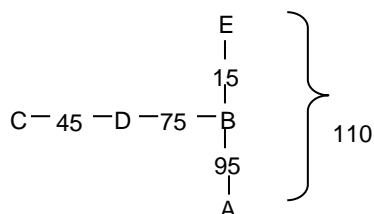
On a cricket ground, five players - A, B, C, D and E are standing as described below facing the North

- (a) B is 75 meters to the right of D
(b) A is 95 meters to the south of B
(c) C is 45 meters to the west of D
(d) E is 110 meters to the north of A

102. Who is to the north-east of the player who is to the left to B?
 (A) A
 (B) C
 (C) Either A or C
 (D) None of the above

Solution:

Given information can be represented as



Only 'E' is to the north-east of the player who is to the left of B. Choice (D)

103. If a player walks from C, meets D followed by B, then A and finally E, how many metres has the player walked if he has travelled the straight distance all through?
 (A) 185 (B) 135 (C) 230 (D) 325

Solution:

$$45 + 75 + 95 + 110 = 325$$

Choice (D)

Directions for Questions 104-107: Read the information provided and answer the questions which follow.

Given an input, a coding machine generates pass codes everyday as follows:

Input : my bag carries no more than ten books
 Pas codes :
 Batch I : more my than bag ten carries books no
 Batch II : bag ten than carries my books more no
 Batch III : my bag books ten more than no carries

Solutions for questions 104 to 107:

By observation we can find the following pattern of rearrangement of words.

Input	1	2	3	4	5	6	7	8
Batch I	4	1	6	2	7	3	8	2

From Batch I to Batch II, the rearrangement next is in the following pattern:

Batch I	1	2	3	4	5	6	7	8
Batch II	4	5	3	6	2	7	1	8

The above two patterns repeat in the subsequent steps.

Batch IV : ten more books than bag no my carries and so on.

The first batch timing is 9.30 AM and each batch is of one hour's duration. There is a rest period of one hour after the work for the fourth batch is over.

104. If the pass code on a particular day for the second batch is 'if winter comes can spring be far behind', what will be the pass code for the batch at 2.30 PM on that day?

- (A) if winter behind far comes can spring be
 (B) behind winter if spring comes can far be
 (C) behind winter if spring comes far be can
 (D) if winter behind far spring be can comes

105. On a particular day, Rahul was to begin the work in the batch at 10.30 AM with a pass code 'I like tea and biscuit but not together'. However, he came late on that day and hence joined the next batch. What was his new pass code?

- (A) together but like not biscuit I tea and
 (B) together but like I tea and biscuit not
 (C) biscuit I but like not tea together and
 (D) biscuit I but tea together like and not

106. On a particular day, the pass code for the batch immediately before the rest hour was 'bah bah black sheep have you any wool'. What was the input for the pass code on that day?

- (A) any have wool bah sheep you black bah
 (B) any have wool you bah sheep bah black
 (C) any have wool you bah black bah sheep
 (D) None of the above

107. On a particular day, the pass code for the second batch was 'India's core strength lies in unity in diversity'. What was the input on that day in the reverse order of its words?

- (A) in in India's lies diversity strength core unity
 (B) unity core strength in diversity lies India's in
 (C) in in strength India's core diversity unity lies
 (D) None of the above

104. Batch II (10:30) : If winter comes can spring be far behind

Batch III (11:30) : Spring if be winter far comes behind can

Batch IV (12:30) : winter far becomes if behind spring can
1:30 to 2:30 rent

Batch V (2:30) : If winter behind far spring be can comes

Choice (D)

105. Batch II(10:30): I like tea and biscuit but not together

Batch III(11:30): biscuit I but like not tea together and

Choice (C)

106. Batch (IV)(12:30): bah bah break sheep have you any wool

Batch III(11:30): any have black bah bah sheep you wool

Batch II(10:30): have bah sheep wool any black bah you

Batch I(9:30): bah any sheep have bah wool black you

Input: any have wool you bah sheep bah black

Choice (B)

107. Batch II(10:30): India's core strenght lies in unity in diversity.

Batch I(9:30): in in strength India's core lies unity diversity

Input: in India's lies diversity is strength core unity

Input in reverse order is "unity core strength in diversity lies India's in".

Choice (B)

108. In the following question, two statements are given followed by four conclusions. Taking the given statements to be true, decide which of the given conclusions logically follows from the given statements:

Statements: Some rivers are plateau. No plateau is mountain.

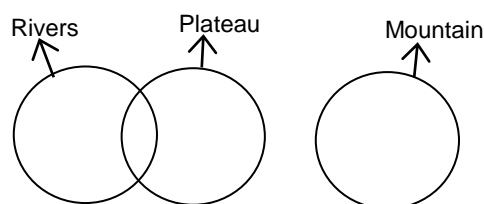
Conclusions:

- I. Some plateau are rivers.
- II. Some mountains are rivers.
- III. Some rivers are not mountains.
- IV. All mountains are rivers.

- (A) Only I follows
- (B) Both II and III follows
- (C) Both I and III follow
- (D) Both I and II follow

Solution:

The given statements can be represented in the following basic diagram.



From the above,

Conclusion I, affirmative, follows.

Conclusion II, affirmative, does not follow.

Conclusion III, negative, follows.

Conclusion IV, affirmative, does not follow.

Here, a negative conclusion follows from the basic diagram. The negation of it is "All rivers are mountains". This cannot be represented in any alternate diagram. Hence, only I and III follow.

Choice (C)

Directions for Questions 109-110: In each of the following problems, there is one question and three statements I, II and III given below the question. You have to decide whether the data given in the statements is sufficient to answer the question. Read all the statements carefully and find which of the statement(s) is/are sufficient to answer the given question.

109. What is Mohit's rank from the top in an annual appraisal of a FMCG Company comprising of 70 sales executives?

- I. Mohit is 5 ranks below Rashmi from the top
- II. Rashmi's rank from the bottom is 44
- III. Mohit is 5 ranks above Rashmi from the bottom

- (A) Any two of the Three
- (B) Only II and III
- (C) Only I and either II or III
- (D) Only II and either I or III

Solution:

From statement II we get "Rashmi's rank from the bottom is 44".

R
43
From I and II together

26
R
4
M
38

∴ Mohit's rank is 32nd from the top.

Similarly if we take II and III together we get

21
M
4
R
43

∴ Mohit's rank is 22nd from the top.

The question can be answered by taking II along with I and III.

Choice (D)

110. What does 'orange' represent in a code language?

- I. 'rim pa xab' means 'orange and apple' in that code language
 - II. 'na pie tac' means 'I dislike sweet' in that code language
 - III. 'na tsi pa' means 'orange is sweet' in that code language
- (A) All I, II and III
(B) Only II and III
(C) Only I and III
(D) Only I and either II or III

Solution:

From I and III, 'orange' is the only common word and 'pa' is the only common code. Hence, the code for 'orange' is 'pa'. Thus I and III are sufficient to answer the question. Choice (C)

Directions for Questions 111-112: Read the information provided below and answer the questions which follow.

Seven friends - A, B, C, D, E, F and G - are traveling from Delhi to Amritsar in Swarna Shatabdi train. They are seated in three different coaches - A₁, A₂ and A₃. Further the following additional information are provided:

- (a) There are two married couples among them.
- (b) Three friends love playing tennis, two love playing cricket and two love playing volleyball amongst them.
- (c) There are at least two of them in each coach and each of them loves playing different games.
- (d) No husband-wife couple loves playing the same game.
- (e) C is seated in coach A₁ and is married to A, who loves playing tennis.
- (f) G loves playing volleyball and is married to D who is seated in coach A₂ with F, a cricket enthusiast.
- (g) B and G are not seated with C.
- (h) E, who loves playing tennis, is seated in Coach A₃.

111. Which game does C like to play?

- (A) cricket or tennis
- (B) volleyball
- (C) tennis or volleyball
- (D) cricket or volleyball

112. How many friends are seated in coach A₁?

- (A) 2
- (B) 3
- (C) 2 or 3

(D) Data inadequate

Solutions for questions 111-112:

The given data can be represented as follows.

- A₁ – C
- A₂ – D, F (Cricket)
- A₃ – E (Tennis)

From, (g) and (c) it can be concluded that A (tennis) sits in coach A₁. From (d) and (e) it can be said that C does not love playing tennis. Hence, C loves playing cricket or volleyball.

From (f) and (d), D does not love playing volleyball.

111. C loves to play either cricket or volleyball.

Choice (D)

112. Only A and C are seated in coach A₁.

Choice (A)

Directions for Questions 113-114: Read the information provided below and answer the questions which follow.

Last week, Rajeev watched four sports of different types: tennis, cricket, football and kabaddi. The sports were shown by four different channels - Star Sports 1, Ten Sports 2, Sony Six and Neo Sports (not necessarily in the same order). These sports were telecasted on different days - Monday, Tuesday, Thursday and Friday (not necessarily in the same order). Further the following additional information are provided:

- (a) The sports by Star Sports 1 was shown on Friday.
- (b) Tennis was shown on Monday.
- (c) Kabaddi was shown by Sony Six and not telecasted on Thursday.
- (d) Football was shown by Neo Sports

113. Which of the following combination is true?

- (A) Star Sports 1 - Tennis
- (B) Neo Sports - Thursday
- (C) Kabaddi - Thursday
- (D) Data inadequate

114. Which sports was telecasted in Ten Sports 2 and on which day of the week?

- (A) Football on Friday
- (B) Kabaddi on Thursday
- (C) Cricket on Monday
- (D) Tennis on Monday

Solutions for question 113 and 114:

From the given data we get the following

	Channel	Sports
Monday		Tennis
Tuesday		
Thursday		
Friday	Star sports	

Using (c) we can conclude that, on Tuesday, sony six broadcasted kabbadi and from (d) football must be broadcasted by Neo sports on Thursday.

Thus the final arrangement is as follows.

	Channel	Sports
Monday	Ten sports	Tennis
Tuesday	Sony six	Kabbadi
Thursday	Neo sports	Foot ball
Friday	Star sports	Cricket

113. Only B is true.

Choice (B)

114. Ten Sports-2 telecasted tennis on Monday.

Choice (D)