#### SBI PO Mains 2017 – Memory Based Questions

#### **DATA ANALYSIS AND INTERPRETATION**

Directions (1 - 5): Study the following pie-chart and table carefully and answer the questions that follow: Some values are missing. Answer the questions on the basis of given table and information in question. Speed of stream is same for both upstream and downstream distance on respective days



1). Time taken to cover the upstream distance on Friday is same as time taken to cover the downstream distance on Thursday. Total speed of still water on Thursday and Friday is 10 km/hr. Find the ratio of speed of still water on Thursday and Friday.

A) 6: 13 B) 4: 11 C) 7: 13 D) 4: 15 E) 7: 12

2). On Monday, the boat takes a total of 4 hrs 30 minutes to cover both upstream and downstream distance. Ratio of speed of boat in still water in going upstream to downstream is 4 : 5. Find the speed of boat in still water while going downstream. A) 13 km/hr B) 15 km/hr C) 9 km/hr D) 10 km/hr E) 12 km/hr

3). On Tuesday, Ratio of speed of boat in still water in going upstream to downstream is
8 : 3. Also difference in speed of boat in still water in going upstream and downstream is 5 km/hr. If the total time taken by boat to cover upstream and downstream distance is 12 hours on Tuesday, find the speed of stream.

A) 2 km/hr B) 3.5 km/hr C) 3 km/hr D) 2.5 km/hr E) 1.5 km/hr

4). On Wednesday, Ratio of speed of boat in still water in going upstream to downstream is 4 : 5. The difference between time to cover upstream distance and downstream distance is 10 hours, find the total time taken to cover upstream distance and downstream distance.

A) 15 hours B) 14 hours C) 17 hours D) 18 hours E) 16 hours

5). Time taken to cover the upstream distance on Thursday is 12 hours more than time taken to cover the downstream distance on Friday. Total speed of still water on Thursday and Friday is 11 km/hr. Find the ratio of speed of still water on Thursday and Friday.

A) 6:7 B) 4:5 C) 7:9 D) 5:6 E) 7:8

6). MLKJ is a trapezoid. ABCD and PQRS are two rhombus. Diagonals of ABCD are 6 cm and 8 cm. One of the angle of PQRS is 120 degree and diagonal bisecting that angle measures 15 cm. Side of ABCD = ML, Side of PQRS = JK. Find ON (median of trapezoid).



A) 10 cm B) 12 cm C) 8 cm D) 15 cm E) 9 cm

## **Directions (7-8): Study the following carefully and answer the questions given below.**

Distance between stations P and Q is 516 km. Train A starts from station P at 9:45 AM with speed 'X' km/hr. Train B starts in opposite direction from station Q half an hour later with speed '1.5X' km/hr. They meet at 12:55 PM.

### 7). If both trains were moving in same direction, find the time at which they will meet.

A) 50 minutes B) 60 minutes C) 108 minutes D) 40 minutes E) 72 minutes

8). What is the relative speed of B with respect to A in m/sec?

A) 50 B) 60 C) 36 D) 48 E) 72

## **Directions (9-11): Study the following carefully and answer the questions given below.**

There are 3 bags containing 3 colored balls – Red, Green and Yellow.

#### **Bag 1 contains:**

15 red balls. Y yellow balls and G green balls. Probability of drawing one yellow ball is 2/9. The ratio of number of green and yellow balls is 9 : 4

#### **Bag 2 contains:**

Number of green balls is 2/3rd of G. Total number of balls in bag is 5/6th of balls in Bag A. Number of yellow balls is 3 greater than number of red balls

#### **Bag 3 contains:**

Number of red balls is 1/3rd of total number of red balls in bags A and B. Number of yellow balls is 20% more than number of yellow balls in bad B. Probability of drawing one green ball is 7/16.

# 9). One ball from each bag is drawn. Find the<br/>probability that these are yellow balls.A) 5/16B) 3/16C) 7/16D) 1/16E) 9/16

10). 5/6th of red balls, 4/9th of green balls from bag
B are placed in bad D. What is the probability that 2 out of 3 balls from bag D are red?
A) 15/37 B) 15/34 C) 17/33 D) 11/34 E) 19/34

#### 11). P yellow balls are transferred from bag A to C. One ball is picked at random from bag C and probability of yellow ball is 2/5. Find P.

A) 3 B) 1 C) 2 D) 4 E) Other than those given in options.

Directions (12-14): Each question below contains a statement followed by Quantity I and Quantity II. Find both to find the relationship among them. Mark your answer accordingly.

# 12). There are 65 cards (numbered 1, 2, 3, ....65) in a box. Two cards are picked at random.

**Quantity I:** Probability that both cards show 2 digit numbers which increase by 36 when its digits are reversed.

**Quantity II:** Probability that both cards show a number divisible by 8 but not 16.

A) Quantity I > Quantity II
B) Quantity I < Quantity II</li>
C) Quantity I > Quantity II
D) Quantity I > Quantity II
E) Quantity I = Quantity II or relationship cannot be

determined

# **13).** There are 5 couples who want to sit at different positions.

**Quantity I:** Number of ways in which men and women sit at alternate positions

**Quantity II:** Number of ways in which all men sit together and all women sit together.

A) Quantity I > Quantity II

B) Quantity I < Quantity II

C) Quantity I > Quantity II

D) Quantity I > Quantity II

E) Quantity I = Quantity II or relationship cannot be determined

14). Two parallel lines are given. s is an acute angle.



Quantity I: Angle a Quantity II: 25 degree A) Quantity I > Quantity II B) Quantity I < Quantity II C) Quantity I > Quantity II D) Quantity I > Quantity II E) Quantity I = Quantity II or relationship cannot be determined

Directions (15 - 19): Study the following table carefully and answer the questions that follow:

The table shows the discount % given by stores on different items. The Market Price of any article on all stores is same. Some values are missing. Answer the questions on the basis of given table and information in question.

Article	Store A	Store B	Store C
1	16%	7%	24%
П	28%	18%	40%
Ш	16%	-	30%
IV	-	18%	-
V	12%	11%	6%

**15). If the average SP of article II by in all the stores is Rs 2568, Find the MP of article II.** 

A) Rs 3200 B) Rs 4500 C) Rs 3600 D) Rs 4300 E) Rs 4000

16). Difference between SP of article I by stores A and B is Rs 486, Find the SP of same article by store C.

A) Rs 3506 B) Rs 4005 C) Rs 4808 D) Rs 4104 E) Rs 3205

17). Average SP of article III by stores A and B is Rs
3608, by stores B and C is Rs 3300. Find the SP of article III by store C.
A) Rs 2984 B) Rs 3122 C) Rs 3080 D) Rs 2764

E) Rs 3452

18). Store A earned 10% profit by selling product V.
If CP of articles at all articles is same, find the ratio of profits by B and C in selling V.
A) 6:15 B) 9:16 C) 8:15 D) 6:13 E) 9:14

19). Ratio of discounts on article IV by stores A and B is 2/3. Difference in SP of article IV by stores A and C is Rs 432. If SP of article IV by store A is Rs 216 more than that by store B, find the SP of article IV by store C?

A) Rs 2138 B) Rs 2687 C) Rs 2736 D) Rs 2522 E) Rs 2544

## DATA ANALYSIS AND INTERPRETATION (SOLUTION):

**1). Answer: C)** Distances upstream:

Monday = 18/100 \* 150 = 27 km, Tuesday = 12/100 \* 150 = 18 km. Wednesday = 39 km, Thursday = 45 km, Friday = 21 km Similarly Distances downstream: Monday = 27 km, Tuesday = 45 km. Wednesday = 18 km, Thursday = 36 km, Friday = 54 km Let speed of still water upstream on Friday = x, then downstream on Thursday = (10-x)Now 21/(x-3) = 36/[(10-x)+2.5)]Solve, x = 6.5So required ratio is 3.5 : 6.5 = 7 : 13

#### 2). Answer: B)

Speeds – 4x and 5x So on Monday 27/(4x-3) + 27/(5x+3) = 9/2Solve, x = 3 So downstream speed = 5x = 15 km/hr

#### 3). Answer: A)

8x and 3x, Also 8x - 3x = 5So x = 1, speeds are 8 and 5 km/hr So for Tuesday 18/(8-b) + 45/(3+b) = 12Solve, b = 2 km/hr

#### 4). Answer: E)

On Wednesday 39/(5x-2) - 18/(4x+2) = 10By solving,  $100x^2 - 23x - 77 = 0$   $100x^2 - 100x + 77x - 77 = 0$ Solve, x = 1 km/hr So required distance : 39/(5-2) + 18/(4+2) = 16 hours

#### 5). Answer: D)

Let speed of still water upstream on Thursday = x, then downstream on Friday = (11-x)Now 45/(x-2.5) - 54/[(11-x)+3)] = 1215/(x-2.5) - 18/(14-x) = 4 The time is integral value, so by putting values higher than 2.5, x can be found x = 5So required ratio is 5 : 6

#### 6). Answer: A)

Rhombus ABCD: Side of ABCD =  $(\sqrt{6^2 + 8^2})/2 = 10/2 = 5$  cm Rhombus PQRS:



Let angle of PQR is 120°; Angle PQO is 60, since diagonals of rhombus bisect each other. Also diagonals bisect each other at 90 degree. So angle POQ is 90°. Hence angle OPQ is 30 degree. Also  $SQ = 15 \rightarrow OQ =$ 7.5 In triangle OPQ. With OP as base sine 30 = perpendicular/Hypotenuse 1/2 = (15/2)/HypotenuseSide of PQRS = 15 cm [sine 30 = 1/2] {Since wkt, side of PQRS = Hypotenuse} Now ML = 5 cm, JK = 15 cm So Median ON = (5+15)/2 = 10 cm

#### 7). Answer: B) Speed of A = x km/hr So distance it traveled in 1/2 hr = x/2 km

Now remaining distance = (516 - x/2) km Time taken to meet = 12:55 - 10:15 = 8/3 hours So 8/3 = (516 - x/2)/(x+1.5x) [speed is added when in opposite direction] Solve, x = 72 km/hr So speed of A = 72 km/hr, B = 108 km/hr Now when moving in same direction: In half hour, A covered = 1/2 \* 72 = 36 km and relative speed = 108-72 = 36 km/hr So time = 36/36 = 1 hour 8). Answer: A) Relative speed = 108+72 = 180 km/hr = 180 \* 5/18 = 50 m/sec

#### 9). Answer: D)

First find balls in each bag. Start with **Bag A:** R = 15, Y = 4x, G = 9x. P(Y) = 2/9So 4x/(15+9x+4x) = 2/9Solve, x = 3So in bag A: R = 15, Y = 27, G = 12. Total = 54 **Bag B:** G = 2/3 \* 27 = 18Total = 5/6 \* 54 = 45Now 18 + Y + Y - 3 = 45So, yellow balls = 15, and then red = 12So in bag B: R = 12, Y = 15, G = 18. Total = 45 **Bag C:** R = 1/3 (15+12) = 9Yellow = 120/100 \* 15 = 18 Probability of green ball = 7/16So z/(9+18+z) = 7/16 [Let z green balls] Solve. z = 21So in bag C: R = 9, Y = 18, G = 21. Total = 48 Now probability of yellow ball from each bag = 27/54\* 15/45 \* 18/48 = 1/16

**10). Answer: B)** 

In bag D: Red balls = 5/6 \* 12 = 10Green balls = 4/9 \* 18 = 8So required probability =  ${}^{10}C_2 * {}^{8}C_1/{}^{18}C_3 = 15/34$ 

11). Answer: C) In bag C: Probability of yellow ball = (18+P)/(48+P) = 2/5Solve, P = 2

**12). Answer: A)** 15+36 = 51, 26+36 = 62, 37+36 = 73, 48+36 = 82, 59+36 = 95 So there are 5 such numbers (15,26,37,48,59) So required prob = 5/65 \* 4/64 = 20/65\*64 II: Such numbers are = 8, 24, 40, 56 So required prob = 4/65 \* 3/64 = 12/65\*64

#### 13). Answer: A)

I: ways for men = 5!, now 6 seats for 5 women, so for choosing 5 seats 6C5, and then arrangement of these 5 women is 5! So total number of ways = 5! \* 6C5 \* 5! = 5! \* 5! \* 6II: Ways for all men together = 5!, for all women together is 5!, now arrangement of men and women as group = 2!So total number of ways = 5! \* 5! \* 2! = 5! \* 5! \* 2So I > II

#### **14). Answer: B)**



s is acute means <90 degree, so x > 90In triangle a + (a+40)+ x = 1802a + 40 = 140 - xAs x > 90So 2a is < 50 So a < 25So I < II

**15). Answer:** C) SP by store A = (100-28)/100 \* MP = 72% of MP, by B = 82% of MP, by C = 60% of MP So (72+82+60)/3 \* MP/100 = 2568 Solve, MP = Rs 3600

**16). Answer: D)** Difference in SP = 93% of MP – 84% of MP So 9% of MP = 486 Solve, MP = 5400 So SP by store C = 76% of 5400 = Rs 4104 17). Answer: C)
Let x% discount by store B
So [84 + (100-x)]/2\*100 \* MP = 3608
And [70 + (100-x)]/2\*100 \* MP = 3300
Put value of (100-x) from 1 equation to another and solve for MP
MP = Rs 4400
So SP by store C = 70/100 \* 4400 = Rs 3080

#### **18). Answer: E)**

MP = xSP by A = 88% of x So CP by A = 100/110 \* 88/100 \*x = 4x/5 Now CP is same SP by B = 89x/100, so profit of B = 89x/100 - 4x/5 = 9x/100 SP by C = 94x/100, so profit of B = 94x/100 - 4x/5 = 14x/100 So required ratio = 9 : 14

#### **19). Answer: C)**

x/18 = 2/3So discount by A = 12% Now 88% of MP = 82% of MP + 216 Solve, MP = Rs 3600 Now: let y% discount by store C [88 - (100-y)]/100 \* MP = 432 MP = Rs 3600 Solve, y = 24% So SP by C = 76% of 3600 = Rs 2736

#### ENGLISH LANGUAGE

Direction (1-5): In each question a sentence is given followed by a blank. Each blank is followed by three options and you have determine which option can be used in place of blank to give a meaningful sentence and mark it as your answer.

1). The 268th report of the Law Commission has recommended that the government amend the bail provisions of the Criminal Procedure Code (i) to facilitate the early release of under trials. (ii) to make bail illegal in case of heinous crime. (iii) to restrict the usage of guns in crime. A) Only (i) B) Only (ii) C) Only (iii) D) Both (i) and (ii) E) Both (ii) and (iii) 2). The Centre's thrust to invest in blue-green infrastructure in urban areas (i) is a cause of worry for people living in rural areas. (ii) will enable people to step closer to the nature. (iii) will improve the quality of life for urban dwellers. A) Both (i) and (iii) B) Both (ii) and (iii) C) Both D) Only (ii) (i) and (ii) E) Only (i) 3). The first three cases of Zika virus that have been reported in the country, (i) is a cause of concern because the virus has a propensity to be transmitted through various forms within no time. (ii) must be a wake-up call for the Health Ministry (iii) the Government must now keep the World Health Organisation updated. A) Both (i) and (iii) B) Both (ii) and (iii) C) Both (i) and (ii) D) Only (ii) E) None of the above 4). Innovation and infusion of technological change have historically been (i) attempted adequately, possibly because the task would be much more complex (ii) expansion of banking facilities and availability of finance. (iii) major drivers of development and increase in human welfare. A) Only (i) B) Both (i) and (ii) C) Both (ii) and (iii) D) Only (iii) E) None of the above 5). A recent report released by the World Bank, which shows a reverse trend of women's participation in the job market, raises serious concerns and must compel our policy-makers to reflect upon

(i) a better place for woman by examining the report carefully.

(ii) what prevents India from achieving the heights many economic studies project.

(iii) how the situation of a woman can be improved as in other developed country.

A) Both (i) and (ii)
B) Both (i) and (iii)
C) Both (ii) and (iii)
D) All (i), (ii) and (iii)
E) None of the above

Direction (6-10): In each question below four statements are given. These four statements are connected in the four options given below in each question. You have to determine in which option the four statements have been most appropriately expressed giving the full meaning of the statements and mark it as your answer.

6). He earned the hatred of all good men; he incited youths to crime; he furnished them with means; he himself kept safely out of the way in time of danger. A) As he kept himself safely out of the way the youths were incited for crime and furnished with mean as a result he earned hatred by good men.

B) Furnishing the youth with means and inciting them to crime he earned the hatred of all good men and as a result he kept safely out of the way in time of danger.C) He earned the hatred of all good men by inciting youths to crime, furnishing them with means and keeping himself safely out of the way in time of danger.D) He has kept himself safely out of the danger by inciting youths to crime and means and earning the hatred of all good men

E) None of the above

7). The credit for the introduction of Electronic Voting Machines should go to Election Commission; Election Commission conducts election in the country; The country has about 850 million registered voters; Election Commission successfully manages this important task.

A) The credit for introducing Electronic Voting
Machine in a country that has a population of 850
million voters should be given to Election Commission.
B) Election Commission has been conducting election
in this country of 850 million voters since ages and
hence the credit for introduction of Electronic Voting
Machine should go to Election Commission.
C) In the country of 850 million registered voters the

monumental task of conducting election is undertaken

by Election Commission that has introduced the Electronic Voting Machines.

D) The credit for the introduction of Electronic Voting Machines should go to Election Commission which successfully manages the monumental task of conducting elections in a country with about 850 million registered voters.

E) None of the above

8). The second class carriage is full; we must pay first class fare; we may not travel first class with second class tickets; That is forbidden.

A) We cannot travel in first class by paying for second class as the second class is full and this is forbidden.B) Travelling in first class by paying for second class carriage is forbidden so we must pay for the first class.C) The second class carriage being full, we must pay first class fare for we are forbidden to travel first class with second class tickets.

D) As the second class carriage is full we must either wait for the next train or pay the fare of first class as traveling in first class with second class fare is forbidden

E) None of the above

9). Generally your conduct is good; you have been guilty of an act of folly; you will not be punished ; I advise you to be more prudent in future.

A) Generally your conduct is good and therefore you will not be punished for having been guilty of an act of folly, but I advise you to be more prudent in future.B) You will not be punished for your act of folly has I have advised them of your good conduct, but you should be more prudent in future.

C) You should be prudent in future as your act of folly has been pardoned this time because of good conduct but in future it may not happen so.

D) Because of your good conduct you have been pardoned for your act of folly, but I advise you to be prudent in future.

E) None of the above

10. He has not learned to read and write; he was very ignorant; he could not even talk fluently; such a man should not pretend to be a doctor. A) A man should not pretend to be a doctor when he cannot read and write or cannot talk fluently.

B) As he has not learned to read and write being ignorant and even cannot talk fluently he does not pretends to be a doctor.

C) He should not pretend to be a doctor as he has not learned to read and write and could not even talk fluently.

D) Being ignorant he has not learned to read and write and also is unable to talk fluently so he is not a doctor.E) None of the above

#### **RC1:**

**Paragraph 1:** At a global financial services firm we worked with, a longtime customer accidentally submitted the same application file to two offices. Though the employees who reviewed the file were supposed to follow the same guidelines—and thus arrive at similar outcomes-the separate offices returned very different quotes. Taken aback, the customer gave the business to a competitor. From the point of view of the firm, employees in the same role should have been interchangeable, but in this case they were not. Unfortunately, this is a common problem. Paragraph 2: Professionals in many organizations are assigned arbitrarily to cases: appraisers in credit-rating agencies, physicians in emergency rooms, underwriters of loans and insurance, and others. Organizations expect consistency from these professionals: Identical cases should be treated similarly, if not identically. The problem is that humans are unreliable decision makers;

their judgments are strongly influenced by irrelevant factors, such as their current mood, the time since their last meal, and the weather. We call the chance variability of judgments *noise*. It is an invisible tax on the bottom line of many companies.

**Paragraph 3:** Some jobs are noise-free. Clerks at a bank or a post office perform complex tasks, but they must follow strict rules that limit subjective judgment and guarantee, by design, that identical cases will be treated identically. In contrast, medical professionals, loan officers, project managers, judges, and executives all make judgment calls, which are guided by informal experience and general principles rather than by rigid

rules. And if they don't reach precisely the same answer that every other person in their role would, that's acceptable; this is what we mean when we say that a decision is "a matter of judgment." A firm whose employees exercise judgment does not expect decisions to be entirely free of noise. But often noise is far *above* the level that executives would consider tolerable-and they are completely unaware of it. Paragraph 4: The prevalence of noise has been demonstrated in several studies. Academic researchers have repeatedly confirmed that professionals often contradict their own prior judgments when given the same data on different occasions. For instance, when software developers were asked on two separate days to estimate the completion time for a given task, the hours they projected differed by 71%, on average. When pathologists made two assessments of the severity of biopsy results, the correlation between their ratings was only .61 (out of a perfect 1.0), indicating that they made inconsistent diagnoses quite frequently. Judgments made by different people are even more likely to diverge. Research has confirmed that in many tasks, experts' decisions are highly variable: valuing stocks, appraising real estate, sentencing criminals, evaluating job performance, auditing financial statements, and more. The unavoidable conclusion is that professionals often make decisions that deviate significantly from those of their peers, from their own prior decisions, and from rules that they themselves claim to follow.

**Paragraph 5:** Noise is often insidious: It causes even successful companies to lose substantial amounts of money without realizing it. How substantial? To get an estimate, we asked executives in one of the organizations we studied the following: "Suppose the optimal assessment of a case is \$100,000. What would be the cost to the organization if the professional in charge of the case assessed a value of \$115,000? What would be the cost of assessing it at \$85,000?" The cost estimates were high. Aggregated over the assessments made every year, the cost of noise was measured in billions—an unacceptable number even for a large global firm. The value of reducing noise even by a few

percentage points would be in the tens of millions. Remarkably, the organization had completely ignored the question of consistency until then.

#### 3 of the 5 Questions:

- Author's viewpoint as indicated in paragraph 5
- Opposite of phrase 'Unfortunately, this is a common problem.'
- Which of the following can follow paragraph 4 so as to connect it to paragraph 5?

#### **RC2:**

**Paragraph 1:** Deutsche is more leveraged than its peers; it is unusual in lacking a crown jewel around which it can base a business model; and it has a stack of derivatives whose prices are hard to observe in the market. More positively, it is light on the non-performing loans that clog the balance-sheets of banks in places like Italy. But in other ways its problems have a very familiar ring. Deutsche is struggling to make a decent return. It has taken too long to face up to its problems. And the market it operates in is overbanked. Years after American banks were forced to clean themselves up, too many European lenders are still flailing as a result

**Paragraph 2:** Europeans prefer to blame others for the turmoil. Deutsche has lashed out at "forces in the market" for its most recent bout of trouble. But its shares had already fallen by 42% this year before news broke last month of a proposed Department of Justice (DoJ) fine of \$14 billion for mortgage-related misdeeds. German politicians insinuate that the mooted fine represents revenge for Europe's recent tax case against Apple, an American champion. Yet the DoJ has slapped large fines on American banks, too. Deutsche's vulnerability to shocks is the problem, not the shocks themselves.

**Paragraph 3:** Fingers also point at global regulators. The boss of Credit Suisse, Tidjane Thiam, says his sector is "not really investible". It is true that the rules have got much stricter in the past few years, particularly for institutions, like Deutsche, that have big investment-banking arms. It is also true that ultra-loose monetary policy, and in particular the negative interest rates that now prevail in much of Europe, eat away at banks' profitability. But some banks cope better than others in this painful environment. The IMF has compared returns on equity before and after the financial crisis. Those at large European banks fell by 11.4 percentage points, whereas those at American lenders dipped by only three points. Rather than blaming speculators, Americans and regulators, Europe's bankers and policymakers need to put their own house in order.

**Paragraph 4:** Within institutions, that means cutting costs and raising capital. According to S&P Global Market Intelligence, the average cost-to-income ratio at an American bank in 2015 was 59%; Italy's figure stood at 67% and Germany's at 72%. Scandinavian banks already operate with much lower costs than their peers elsewhere in Europe. The axe is now swinging: Commerz bank, another struggling German lender, and ING, a Dutch bank, have announced thousands of job cuts in the past few days.

**Paragraph 5:** But more can be done. Pay is one obvious lever. Deutsche's bankers trousered roughly the same amount in annual compensation between 2011 and 2015, even as the bank's share price dived. And before shareholders complain too loudly about that, recall that in 2007-15 the dividend payments by 90 euro-zone banks amounted to €223 billion (\$250 billion). Their retained earnings would have been 64% higher at the end of that period if they had not paid out dividends.

#### ENGLISH LANGUAGE (Answer Key):

#### 1). Answer: D)

No one can restrict usage of something in crime by amending a law.

#### 2). Answer: B)

Any natural development in urban area will not cause worry in rural area.

- 3). Answer: C)
- 4). Answer: D)
- 5). Answer: C)

Reflect upon means to think about; (i) give an incomplete meaning.

6). C; 7). D); 8). C; 9). A;

#### 10). Answer: E)

None of the sentence gives the complete and exact meaning of the four sentences.

#### **REASONING & COMPUTER APTITUDE**

**Directions (1-2):** There are 8 persons – A, B, C, D, E, F, G, and H standing on gates of 2 rectangular parks. The rectangular parks are such that one is small and second large with small inside the larger one. The gates are on the 4 sides of park. The ones on outer park are standing facing centre and ones on inner park are standing facing outside the centre. So in this way, the persons are facing each other when they are standing on same side of parks.

There is one person standing between B and D. C faces B. A is to the immediate right of C. G is not either to the immediate right or immediate left of D. G faces neither D nor F. One person is standing between H and F. E is facing the centre.

**1. F** is facing which of the following persons? A) C B) E C) H D) A E) B

**2. Which of the following does not form a part of group?** A) D B) B C) H D) G E) F

**Directions (3-4):** First 12 even numbers are written from top to bottom. The letters of word 'SACRED' are written in alphabetical order against each multiple of 4 (One letter against one number). There are 2 letters between N and S. There are as many letters between E and N as between P and D. P is not against number 14. There are 5 letters between U and T. U is above T. I is written against number 6. (No letter is repeated against any number)

**3.** Which is the second letter in word formed by letters against numbers 6, 12, 14, and 20? A) T B) D C) N D) I E) R

4.If there are 3 alphabets in English alphabetical series between alphabets written against numbers 10 and 22. Then how many alphabets in English alphabetical series are there between the alphabets written against numbers 18 and 22? A) Three B) Five C) One D) Four

A) Three B) Five C) One D) FoE) Cannot be determined

**Directions (5-6):** P is the grandson of J. S is husband of J. K is married to the son of T. T has only 2 children one being son. D is the daughter of K's brother. R is brother-in-law of the son of T. J has one only 1 child. S is the father of R.

#### 5.If A is married to R, then how is A related to P?

A) father B) sister C) mother D) grandfather E) brother

#### 6. How is R related to J?

A) grandson B) son-in-law C) brother D) son E) father

**Directions (7-9):** The first step has been obtained by multiplying the digits in input. The next steps are not obtained the same way. They are obtained by applying a certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step.



**7.Each of numbers in step II are halved, then find the sum of the numbers obtained.** A) 17.5 B) 18 C) 24.5 D) 22.5 E) 20

**8.Find the multiplication of the two numbers obtained in step III.** A) 2.5 B) 1.5 C) 1 D) 0.5 E) 2

**9.Find the difference between sum of numbers** obtained in 1<sup>st</sup> step and sum of numbers obtained in

#### all other steps.

A) 183 B) 170 C) 189 D) 172 E) 195

**10.** 8 people – A, B, C, D, E, F, G and H are sitting in a line. No two people with consecutive letters are sitting together like A cannot site together. B cannot sit with A and C and so on.

A is sitting at an extreme end. There are 2 people between A and B. There are 2 people between C and D. C nor D is sitting at extreme end. D is somewhere right of B. B is sitting second to left of F. There are more than 3 people sitting between C and H. How many people are sitting G and H? A) 6 B) 5 C) 3 D) 2 E)4

### Directions (11–15): Answer the questions on the basis of the information given below.

There are 10 shelves numbered 1, 2... 10. They are arranged in two rows one above the other. The shelves 1, 2, ....5 are in row 1 and rest in row 2 which is above row 1. The shelves are arranged in increasing order of number given to them. Like the shelf number 1 is placed on extreme left of row 1, then shelf number 2 and so on. Similarly the shelf number 6 is placed on extreme left of row 2, and so on. Each shelf contains a certain number of glass slabs and photo frames. There is at least one glass slab in each shelf. the length of each glass slab is 15 cm and that of each photo frame is 6 cm.

The shelf 3 has length 33 cm. There is one shelf between shelf 3 and yellow shelf. The yellow shelf contains 1 glass slab and 6 photo frames more than that in shelf 3. The silver shelf is just above the yellow shelf. The silver shelf contains same number of glass slabs as yellow shelf and 1 photo frame. There are 2 shelves between silver and green slabs. The length of green shelf is 3 cm greater than the silver shelf. The blue shelf is immediate next in number to green shelf. The blue shelf contains 1 glass slab more than that in silver shelf and 1 photo frame less than that in green shelf. There is one shelf between blue and orange shelves. The white shelf is just below the orange shelf. There is one shelf between white and red shelf. Black shelf is in row 2. The pink shelf is just below the black shelf. The black shelf has same number of photo frames and glass slabs. The orange shelf has 1 glass slab more than black shelf. The length of orange shelf is 24 cm more than the length of pink shelf. The length of violet shelf is half the length of yellow shelf. The red shelf

has greater than or equal to four glass slabs. The length of pink shelf is 6 cm less than the shelf immediate next in number. The length of row 1 is 267 cm and that of row 2 is 249 cm.

### **11.How many more photo frames can the row 2 adjust?**

A) 1 B) 2 C) 3 D) None E) 4

#### 12. The color of shelf 2 is?

A) Cannot be determined B) violet C) red D) white E) pink

### **13.How many total glass slabs do the silver, black and red shelves contain?**

A) 7 B) 9 C) 10 D) Other than those given in options E) 12

### 14.What is the total length of the pink, orange and blue shelves?

A) 146 cm B) 134 cm C) 141 cm D) 133 cm E) 126 cm

#### 15.If all the photo frames of silver and white shelves are removed and added in black shelf then what will be the length of black shelf?

A) 67 cm B) 66 cm C) 61 cm D) 69 cm E) 62 cm

### Directions (16 - 20): Answer the questions on the basis of the information given below.

There are 12 professors – A, B, C, D, Q, R, S, and T. They have conferences in different months – January, March, April, June, August, and October. The conferences are on dates 6th or 21st of a given month. Each conference is attended by some number of people. If the month contains odd number of days then number of people attending the conference is odd. Like conference in March (31 days) was attended by odd number of people and conference in April (30 days) was attended by even number of people.

A had conference on June 6. Q's conference was before A. Q's conference was attended by 55 people and he had conference on 21st of a month. There was one conference between Q's and S's conference. The number of people attending S's conference was 6 less than the number of people who attended Q's conference. There were 3 conferences between D's conference and the conference attended by 26 people. D had conference before the conference attended by 26 people. D's conference was not in January. There were 2 conferences between T's conference and the conference attended by 26 people. The number of people who attended T's conference was greater than the number of people who attended S's conference but less than the number of people who attended Q's conference. The number of people who attended T's conference was a multiple of 3. E and P had conference in same month but not April. There was one conference between the conferences of E and U. There were 2 conferences between F's conference and the conference attended by 16 people. F had conference before the conference attended by 16 people. The total number of people who attended the conferences of U and Q was twice the total number of people who attended the conferences of A and B. Conference of C and that attended by 18 people was in same month. The total number of people who attended the conferences of E and P was 20. The number of people who attended E's conference was greater than the number of people who attended the conference of F and P. The number of people who attended the conference of T was greater than the number of people who attended the conference of B by 24. The one who had conference in March had more number of people attending it than B but less than 30. There were more than 3 conferences between the conferences of R and S.

# **16.The total number of people who attended the conferences of D and F is?**

A) 43 B) 50 C) 47 D) 49 E) 44

# 17.Which of the following pair had conferences in August?

A) U, T B) D, T C) P, E D) D, F E) C, A

#### 18.Who had conference on 21st June?

A) S B) B C) RD) Other than those given in optionsE) A

### **19.Which of the following is true with respect to the given arrangement?**

A) There are 3 conferences between the conferences of A and F  $\,$ 

B) The total number of people attending the conferences of B and R is 44

C) The conference of U is in October.

D) The total number of people attending the conferences of F and R is 34E) A and C have conferences in same month

#### 20.How many conferences are there which are attended by less number of people than the conference of A if conference of C was attended by 28 people?

- A) One
- B) Three
- C) Seven
- D) Four D = 0
- E) Six

**Directions (21-25):** 6 cars - A, B, C, D, E and F are parked in a straight line not necessarily in the same order. Distance between each car is a successive multiple of 3.

The distance between cars A and B is 33 m. A is parked immediate left of B. The distance between cars B and C is 75 m. Car D is parked left of C but not immediate left. The distance between cars E and F is 99 m. The distance between cars E and D is a multiple of 2. Car F moves for 12 m in North direction, takes a right turn, moves for 63 m, takes a right turn again, moves for 6 m and stops at point Z.

Car C moves for 18 m in South direction, takes a right turn, moves for 75 m, takes a right turn again, moves for 7 m and stops at point X.

Car M is parked 13 m west of point Z. It moves 77 m towards west and stops at point Y.

**21.How many cars are parked between D and F** A) One B) Two C) None D) Three E) Four

### 22.Car A will have to travel how much distance to reach point X?

A) 11 m North, 33 m East
B) 33 m East, 12 m South
C) 33 m West, 11 m North
D) 11 m South, 33 m East
E) 33 m West, 11 m South

**23.What is the distance between points Z and X?** A) 19 m B) 18 m C) 15 m D) 16 m E) 17 m

24.What is the position of Car M with respect to the last car in the row?

A) South-West B) North-West C) North-East D) South-East E) Cannot be determined

### **25.** What is the maximum distance between any two cars?

A) 171 m B) 165 m C) 162 m D) 159 m E) 149 m

### **Directions (26-28): Symbols represent time in a clock as:**

#' – Either the hour or minute hand of clock on 3
\$' – Either the hour or minute hand of clock on 12
'%' – Either the hour or minute hand of clock on 4
'@' – Either the hour or minute hand of clock on 8
'+' – Either the hour or minute hand of clock on 5
Example: Time '+%' represents 5 hours 20 minutes.
All the times are in PM.

The first symbol represents hours and second symbol represents minutes.

26.A train reaches station at time '\$+'. If it gets late by 8 hours 15 minutes, then what is the time at which it reaches the station?

A) +# B) @+ C) @# D) @@ E) +\$

27.A person has to catch a train that is scheduled to depart at '@%'. It takes the person 4 hours and 15 minutes to reach the railway station from his home. At what time should he leave from his home for the railway station to arrive at the station at least 25 minutes before the departure of the train? A) %@ B) #@ C) %+ D) +@ E) None of these

28.A train is scheduled to leave the station at '+@'. A person has reached the station 20 minutes before the train's scheduled time. AT what time the person has reached the station?

A) #@ B) +# C) %+ D) +% E) None of these

**Directions (29-30):** In each of the following questions, a question is followed by three statements numbered I, II and III. Read all the statements to find the answer to given question and then answer accordingly that which statement/s can give the answer alone/together.

### **29.**What is the direction of point U with respect to point X?

Statement I: Point R is 7 m to the North of point Q. Point P is 8 m to the West of point Q. Point R is 6 m to the West of point U. Statement II: Point B is 9 m to the North of point A. Point P is 5 m to the North of point Z. Point Z is 4 m to the West of point A. Statement III: Point C is 7 m to the East of point A.

Point X is 2 m to the East of point F. Point  $\vec{F}$  is 3 m to the North of point C.

A) Both I and III

B) Both II and III

C) All I, II and III

- D) II and either I or III
- E) Even I, II and III together are also not sufficient

### **30.What does the code 'bp' stand for in the given code language?**

Statement I: In the language, 'black white red' is coded as 'df dc or' and 'green blue grey' is coded as 'sthnwo' Statement II: In the language, 'blue pink brown' is coded as 'erbphn' and 'pink blue white' is coded as 'hn or bp'

Statement III: In the language, 'green violet orange' is coded as 'pa wo kl' and 'yellow pink brown' is coded as 'bp bi er'

A) Both II and III

- B) I and either II or III
- C) II and either I or III
- D) Both I and III
- E) All I, II and III

#### REASONING & COMPUTER APTITUDE (SOLUTION)

#### 1). Option D

#### Arrangement:

Start with There is one person standing between B and D.

Make 2 possibilities. One in which B and D are at gates of inner park. Second in which they are at gates of outer park. Proceed and one arrangement will get cancelled. We get:



<ul> <li>2). Option D</li> <li>Solution:</li> <li>All others are standing at the gates of inner park.</li> <li>3). Option D</li> <li>Arrangement:</li> <li>2 - U</li> <li>4 - A</li> <li>6 - I</li> <li>8 - C</li> <li>10 - P</li> <li>12 - D</li> <li>14 - T</li> <li>16 - E</li> <li>18 - N</li> <li>20 - R</li> <li>22 -</li> <li>24 - S</li> </ul>	Step II:22
6, 12, 14, 20 – I, D, T, R Word formed is DIRT. So second letter – I 4). Option C Solution: 10 is P. So 3 letters between 10 and 22. P + 3 = T, but T is already written . We cannot repeat any letter. So P – 3 = L So against 22 is L Now 18 is N. 22 is L. So between them is only 1 letter in English alphabetical series i.e. M 5). Option C Solution: J has one only 1 child. S is the father of R. A is married to R. So P is son of R and A. J is brother in law. So A is female hence mother of P. 6). Option D 7). Option D Solution: From Input to 1st step: 3*3 = 9, 4*2 = 8, so 9   8 4*2 = 8, 1*7 = 7, so 8   7 and so the next numberNumbers of step II have been obtained by using at least1 digit of each number in step I.Step II:So from step I, add the first digits – (9+8+6) = 23Also from step I, add the first digits – (8+7+9) = 24Now for step III: $3/2 = 1.5, 4/2 = 2Step IV:2 - 1.5 = 0.5So for given Input:Step I: 588897$	6-silver7-black8-orange9-green10-blue 1-yellow2-pink3-white4-violet5-red yellow - 84 cm. 2 glass slab, 2 photo frame pink - 27 cm. 1 glass slab, 2 photo frame white - 33 cm. 1 glass slab, 2 photo frame red - 267 - 186 = 81, 5 glass slabs = 75 cm, 1 photo frame = 6 cm silver - 36 cm. 2 glass slab, 1 photo frame black - 42 cm. 2 glass slab, 1 photo frame green - 39 cm. 1 glass slab, 4 photo frame green - 39 cm. 1 glass slab, 3 photo frame blue - 63 cm. 3 glass slab, 3 photo frame blue - 63 cm. 3 glass slab, 3 photo frame green - 39 cm. 1 glass slab, 4 photo frame blue - 63 cm. 3 glass slab, 3 photo frame 2. Length of row 2 given = 249 cm And length of shelves in row 2 = 36 + 42 + 51 + 39 + 63 = 231 Means left space = 249-231 = 18 cm, so $6*3 = 18$ , so 3 frames 12. Option E 13. Option B 2+2+5 14. Option C 27 + 51 + 63 = 141 cm 15. Option B Silver = 1, white = 3, Black shelf's length = 42 cm, 42 + 4*6 = 66 cm 16. Option C Arrangement:

Month	6th	21st
January	B(27)	S(49)
March	D(29)	Q(55)
April	F(18)	С
June	A(26)	R(16)
August	U(51)	T(51)
October	E(19)	P(1)

29 + 18 = 47

17). Option A

18). Option C

19). Option D

20). Option D

A by 26. So less than 26 is F(18), R(16), E(19), P(1) **21). Option C** 

#### Arrangement:

Remember: Distance between each car is a successive multiple of 3.



Between B and C = 36+39 = 75mBetween E and F = 30+33+36 = 99mBetween D and E = 27+30+33+36 = 126m

#### 22). Option D

23). Option E
Solution:

(12-6) + (18-7) = 6+11 = 17 m

24). Option B
Solution:

Last car is C. So M is North West of C

25). Option B
Solution:

Maximum distance will be between cars D and C which

is 27+30+33+36+39 = 165 m

26). Option D Solution: -12, +-5So 12:25 PM + 8 hours 15 minutes = 8:40PM 40 means minute hand at 8 So time is @@ 27). Option B Solution: Scheduled time of departure of train= @% = 8:20 PM Time for travel+ early arrival= 4 hour 15 minutes + 25minutes = 4 hour 40 minutes 8:20 PM- 4 hour 40 minutes= 3:40 PM= #@ All other options are later than this time. 28). Option D Solution: '+@' − 5 : 40 PM 20 minutes before = 5:20 PM. So '+%' 29). Option C Solution: From all statements:



