# **NIACL AO Prelims 2016**

# REASONING ABILITY

**Directions** (1-5): Study the following information carefully and answer the given questions:

A, B, C, D, E, F and G are seven students. They read three different newspaper, viz Times of India, Hindustan Times and The Indian express. Each newspaper is read by at least two students. Each one of them has a favorite topic, viz Editorial, Education, Science, Business, Sports, Lifestyle and Entertainment (but not necessarily in the same order).

B likes Sports topic and does not read The Indian express. The one who likes Entertainment topic reads the same newspaper as E. G does not read Hindustan Times. F does not like Entertainment topic. G likes neither Business nor Science topic. D does not like Business topic. E does not like Editorial topic. C likes Education topic and he reads the same newspaper as G. D reads Hindustan Times only with the one who likes Editorial topic. G does not read newspaper with the one who reads The Indian express.

- Which of the following group reads Times of India?
  - (a) B, G
- (b) A, B, C
- (c) B, C, G

- (d) D, G, B
- (e) None of these
- Who likes Business topic? 2.
  - (a) G
- (b) A
- (c) E

- (d) C
- (e) F
- Which of the following topic does A like? 3.
  - (a) Science
  - (b) Entertainment
  - (c) Editorial
  - (d) Either Entertainment or Lifestyle
  - (e) None of these
- 4. Which of the following combinations is true?
  - (a) A-Entertainment-The Indian express
  - (b) G-Editorial-The Indian express
  - (c) B-Sports-Hindustan Times
  - (d) D-Science-Times of India
  - (e) None is true

- Which topic among the following is liked by the one who reads newspaper with F?
  - (a) Editorial
  - (b) Entertainment
  - (c) Business
  - (d) Science
  - (e) None of these

**Directions** (6-10): In each of the questions below. Some statements given followed by conclusions/group of conclusions numbered I and

- II. You have to assume all the statements to be true even if they seem to be at variance from the commonly known facts and then decide which of the given two conclusions logically follows from the information given in the statements.
- (a) If only conclusion I follows
- (b) If only conclusion II follows
- (c) If either I or II follows
- (d) If neither I nor II follows
- (e) If both I and II follow
- 6. Statements: Some Reward are Award. Some gift are trophy. No award is trophy Conclusions:
  - I. Some reward can never be trophy
  - II. Some gift can be awards
- Statements: All Asia is Galaxy. Some World are 7. universe. No Asia is World.

#### **Conclusions:**

- I. All Galaxy can be world
- II. Some universe can be Galaxy.

8. **Statements:** Some city are metro. Some Town are Metro. All Metro are Village.

**Conclusions:** 

I. Some City are Village

II. Some Town are Village is a possibility.

**Statements:** Some lips are eyes. All nose are lips. 9. No nose is ears.

**Conclusions:** 

I. Some nose are eyes

II. Some lips are ears

10. Statements: No Water is sky. Some Fire are water. All Water are Air.

**Conclusions:** 

- I. Some Fire are not sky.
- II. No Fire is sky

**Direction** (11-15): Study the following information carefully and answer the question given below-

Eight people viz. P, Q, R, S, T, U, V and W live in a building of eight different floors. The ground floor is numbered as 1, the floor just above it is numbered as 2 and so on till top floor which is numbered as 8. Each of them works in a different company viz. CTS, TCS, HCL, L&T, Oracle, Capgemini, Infosys and Wipro (but not necessarily in the same order).

Only three persons live below the floor in which the one who works in CTS live. Two persons live between T and the one who works in CTS. P who works in HCL lives immediately above T. Four persons live between the one who works in Wipro and the one who works in Infosys and neither of them lives on the ground floor. R works in L&T and does not live on an odd numbered floor. V works in Capgemini. There are as many persons live between V and the one who works in HCL as there are between S and the one who works in CTS. U works in Oracle. W lives in one of the floor above Q. The one who works in Infosys does not live above W.

- 11. Who among the following lives on floor number
  - (a) W
- (b) Q

(c) R

(d) V

- (e) None of these
- **12.** Q works in which of the following company?
  - (a) Wipro
- (b) CTS
- (c) Infosvs

- (d) TCS
- (e) None of these
- 13. Who among the following lives immediately below the one who works in Wipro?
  - (a) The one who works in TCS
  - (b) The one who works in L&T
  - (c) The one who works in HCL
  - (d) The one who works in Capgemini
  - (e) None of these

- **14.** How many persons live between V and S?
  - (a) None
- (b) One
- (c) Two

- (d) Three
- (e) More than three
- **15.** Which among the following statement is true?
  - (a) S lives on floor number 7
  - (b) T lives below the one who works in Wipro
  - (c) The one who works in Infosys lives on floor number 8
  - V lives above the one who works in CTS (d)
  - (e) None is true

**Directions** (16-20): In each of the question, relationships between some elements are shown in the statements. These statements are followed by conclusions numbered I and II. Read the statements and give the answer.

- (a) If only conclusion I follows.
- (b) If only conclusion II follows.
- (c) If either conclusion I or II follows.
- (d) If neither conclusion I nor II follows.
- (e) If both conclusions I and II follow.
- 16. Statements:

 $T \le L \le M = P$ ;  $S = N \ge O > P$ ;  $W \ge S$ **Conclusions:** 

LS > L

II.  $O \le W$ 

17. Statements:

 $J \ge L = O \ge A$ ;  $K \ge O \le N \le G$ ;  $U \le K$ 

**Conclusions:** 

I.  $N \ge U$ 

II.  $G \ge L$ 

18. Statements:

 $V > I \ge S \ge T = A ; R \le F \le A > G$ 

**Conclusions:** 

I. R < V

II. G > S

19. Statements:

 $B < L \le E \le U$ ;  $D \ge A \ge E < R$  ; F > D

**Conclusions:** 

I. F > B

II.  $U \le D$ 

20. Statements:

 $D < J \le Y = X$ ;  $Z \ge W \ge X$ ;  $W \le U$ 

**Conclusions:** 

I. U > X

II. Y = U

**Directions (21-25):** Study the following information carefully and answer the questions given below:

In a certain code language

'sweets are tasty food' is coded as 'sa ra fa ta' 'food are good nutrients' is coded as 'na fa ga ra'

'nutrients are healthy' is coded as 'ha ra na'

'healthy sweets good business' is coded as 'sa ha ba ga'

| <ul><li>21.</li><li>22.</li></ul>             | (a) na fa<br>(d) fa ga                                                                                                                                                    | for 'healthy food'? (b) ra ha (e) None of these for 'tasty' in the gi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (c) ha fa                                                                                                            | 28.                   | way and so fo following does not (a) R                                                           | owing five are alik<br>rm a group. Wh<br>ot belong to that gr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | o among the                           |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <i></i> .                                     | language? (a) na (d) ra                                                                                                                                                   | (b) ta (e) Cannot be dete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (c) fa                                                                                                               |                       | (d) The one who                                                                                  | likes green color<br>likes white color<br>likes yellow color                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                       |
| 23.                                           | 'ba' is the code f (a) healthy (d) business                                                                                                                               | for? (b) are (e) None of these                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (c) tasty                                                                                                            | 29.                   | What is the posit who likes yellow (a) Second to the                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ct to the one                         |
| <ul><li>24.</li><li>25.</li></ul>             | language? (a) na (d) ga                                                                                                                                                   | (b) ha (e) None of these for 'good nutrients' (b) ga ra (e) Cannot be dete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (c) ra<br>?<br>(c) ga na                                                                                             | 30.                   | (b) Second to the (c) Third to the rid (d) Fourth to the (e) Cannot be de How many person        | eright<br>ight<br>right                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                       |
| arou<br>sit a<br>in th<br>colo<br>and<br>face | fully and answer t<br>Eight friends P, Q<br>nd a square table<br>t four corners of t<br>he middle of each<br>rs viz. green, blue<br>orange. The ones                      | Study the following the given questions:  2, R, S, T, U, V and in such a way that the square while the sides. All of them the e, red, black, white, who sit at the four of the them while those who the square square while the square squa | W are sitting four of them other four sit like different pink, yellow corners do not                                 | 18m<br>of Po<br>F. Po | Point A is 15m to<br>to the South of Point C. Point E is 4<br>point C lies exactly               | (e) Cannot be detected that the following questions to the East of point oint A. Point F is 34m to the North of between Point A aron is Point E with reference to the following that the following the following that the following that the following the following the following that the following the f | B. Point D is me to the West Point D. |
| Only<br>gree<br>neig<br>right<br>likes<br>not | y two persons sit of the color. So likes to the one who is red color faces the an immediate neighbor. U likes blue color.  Who sits exactly from the right of (a) Q (b) U | and sits third to the between T and the colack color and is a pink color. Q sits likes orange color. He one who likes which core where the one whom. Neither V nor V to between P and T to P?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | one who likes<br>an immediate<br>second to the<br>The one who<br>ite color. U is<br>no likes white<br>V likes orange | 32.                   | In which direction F?  (a) Northwest (b) Northeast (c) Southwest (d) Southeast (e) None of these | (b) Northwest (c) Cannot be determined in is Point A with reserved.  e est distance between (b) 9m (e) None of these                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ned<br>espect to Point                |

(d) The one who likes white color

**27.** What is the position of V with respect to R?

(e) Cannot be determined

(e) Cannot be determined

(a) Second to the left

(b) Third to the right

(c) Fourth to the left

(d) Third to the left

**Directions** (34-35): Study the following information and answer the given questions.

In a family of nine members there are five male members. M is the son of V. V is married to J. L is daughter-In-law of V. J has three children and two of them are married. U is the mother of B. W is son-in-law of J. S is aunt of B and is single. J is grandfather of A. B don't have any siblings.

- **34.** How is L related to A?
  - (a) Mother-in-law
  - (b) Daughter
  - (c) Mother
  - (d) Aunt
  - (e) None of these
- **35.** How is V related to B?
  - (a) Mother
  - (b) Maternal Grandmother
  - (c) Paternal Grandmother
  - (d) Aunt
  - (e) Cannot be determined

# QUANTITATIVE APTITUDE

- **36.** A truck covers a certain distance at certain speed. If speed is 4 km/hr more than the original speed it would take 4 hour less to cover the same distance and if speed is 6 km/hr less than original speed it would take 8 hour more than the normal time. Find distance covered by truck? (in km)
  - (a) 1520
- (b) 1360
- (c) 1480

- (d) 1440
- (e) 1260
- 37. Abhi swims from point A against current for 6 min and then swims backward in the direction of current for next 6 min. & comes to another point B. If distance between A to B is 200m then find speed of current (in km/hr)?
  - (a) 2
- (b) 1
- (c) 3

- (d) 4
- (e) 0.5
- **38.** Sum of 4 consecutive even numbers are 94 more than the sum of 3 consecutive odd numbers and if average of largest even no. & smallest odd no. is 42. Then find the 2<sup>nd</sup> lowest even no.?
  - (a) 32
- (b) 42
- (c) 36

- (d) 46
- 46 (e) 48
- **39.** Rahul and Ayush together can complete a work in half the time of Veer, while Ayush and Veer together can complete the same work in  $\frac{1}{3}$  rd

time of Rahul. If they together complete the work in 30 days then in how many days Rahul alone can complete the work?

- (a) 120 days
- (b) 150 days
- (c) 90 days

- (d) 100 days
- (e) 140 days

- **40.** Tap A can empty a tank in 6 hours and another tap B can fill the tank at the rate of 15 l/min. If both the taps are opened the tank can be emptied in 10 hours then find the capacity of tank?
  - (a) 13,200 ℓ
- (b) 14,500ℓ
- (c) 13,700ℓ
- (d) 13,500\(e\) 12,240\(e\)

**Directions** (41-45): Given table shows total Population in five different cities, ratio of male to female population and percentage of literate population in these cities.

Answer the following questions based on given data.

| City | Total<br>Population | Male :<br>Female | Percentage of<br>Literate<br>Population |
|------|---------------------|------------------|-----------------------------------------|
| Α    | 12000               | 2:3              | 25%                                     |
| В    | 8000                | 1:1              | 30%                                     |
| С    | 5000                | 3:2              | 40%                                     |
| D    | 7000                | 3:4              | 50%                                     |
| Е    | 4500                | 1:2              | 20%                                     |

- **41.** In city B, 20% of the literate population are female, then find the ratio of number of literate male to the number of illiterate female in that city?
  - (a) 6:11
- (b) 7:11
- (c) 3:7

- (d) 5:11
- (e) 3:8
- **42.** Total number of males in city D & E together is what percent more/less than total number of females in city B & C together?
  - (a) 40%
- (b) 30%
- (c) 20%

- (d) 35%
- (e) 25%

- **43.** If 25% of illiterates in city A died due to alcohol consumption, in which half were females. Then number of illiterate males who died due to alcohol consumption in city A is what percent of number of females in city B?
  - (a)  $\frac{37}{7} = \frac{10}{6}$
- (b) 28 ½%
- (c) 33 %

- (d) 28%
- (e)  $\frac{1}{21} \%$
- **44.** Find the ratio of total number of literate population in city A and E together to total number of illiterate population in city B & D together?
  - (a) 3:5
- (b) 4:7
- (c) 2:7

- (d) 3:7
- (e) 5:7
- **45.** If in city C, 45% of illiterate population is females. Then number of male who are illiterate in city C is how much more/less than number of females in city E?
  - (a) 1400
- (b) 1300
- (c) 1350

- (d) 1450
- (e) 1250

**Directions (46-50):** In each of these questions, two equations (I) and (II) are given. You have to solve both the equations and give answer

- (a) if x>y
- (b) if  $x \ge y$
- (c) if x < y
- (d) if  $x \le y$
- (e) if x = y or no relation can be established between x and y.
- **46. I.**  $6x^2 + 11x 35 = 0$
- **II.**  $2y^2 + 15y + 28 = 0$
- **47. I.**  $x^2 17x = 0$
- **II.**  $y^3 4913 = 0$
- **48.** I.  $(x-5)^2 100 = 0$
- II.  $y^2 + 16y = 5(y 6)$
- **49. I.**  $11x^2 + 18x + 7 = 0$
- **II.**  $22y^2 + 25y + 7 = 0$
- **50. I.** 8x + 7y = 38
- II. 3x 5y = -1

842,

**Directions (51-55):** What will come at the place of question mark?

- **51.** 92, 117, (a) 1367
- 217, 442, (b) 1397
- (c) 1457

- (d) 1467
- (e) 1497
- **52.** ?, 212, 339, 508, 725, 996
  - (a) 120
- (b) 121
- (c) 116

- (d) 115
- (e) 125
- **53.** 4, 6, 9, 13.5, 20.25, ?
  - (a) 30.375
- (b) 30.275
- (c) 29.375

- (d) 32.375
- (e) 32.275

- **54.** 81, ?, 155, 276, 445, 734
  - (a) 105
- (b) 104
- (c) 106

- (d) 110
- (e) 112
- **55.** 5986, 2996, 1502, 756, ?, 199
  - (a) 264 (d) 374
- (b) 284 (e) 384
- (c) 354

**Directions (56-60):** Find the approximate value of given questions.

- **56.** 1782.011 ÷ 53.99 + 455.889 2346.011 × 1.011 = ? × 2.93
  - (a) -629 (d) 619
- (b) -619
- (e) -609
- **57.**  $(574.99 + 7511.11 2768.91) \div (76.1 \times 0.98 + 674.976 342.001) = \sqrt{?}$ 
  - (a) 529
- (b) 49
- (c) 169

(c) 27

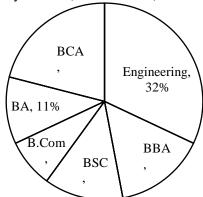
(c) 629

- (d) 289
- (e) 729
- **58.**  $[(\sqrt{38439 \times 9.09}) \div (2699)^3] \times 23012 = ?^2 + \frac{1}{2}$ 
  - 336.97
  - (a) 33 (d) 37
- (b) 23 (e) 43
- **59.**  $\sqrt{(9599)} \times 1201 \div 179 + 25899 9011 =$ 
  - (64.9-?)% of 35.88
  - (a) 50
- (b) 35
- (c) 30

- (d) 40
- (e) 20
- **60.**  $11.9 \times \sqrt{224.89 + 1212.09} (1053.11 \div 8.9) = ?$ 
  - (a) 1,275 (d) 1,255
- (b) 1,225
- (c) 1,175
- (e) 1,245

**Direction (61-65):** The given below pie-chart shows the percentage distribution of students studying six different courses in a particular college.

Total number of students = 36,000Boys: Girls (in each course) = 5:4



| 61. | What is the ratio between total number of students |
|-----|----------------------------------------------------|
|     | studying B.Com to the number of girls studying     |
|     | Engineering?                                       |

(b) 9:16

(c) 3:8

(e) 9:22

The average number of boys studying BSC and BCA is what percent more/less than the number of girls studding BBA.

(d) 183 %

Find the total number of Boys studying BA and B.Com together.

(a) 3720

(b) 3600

(c) 4200

(d) 3800

(e) 4150

What is the difference between the number of boys studying B.Com and Engineering together and the number of girls studying the same courses together?

(a) 1400

(b) 1600

(c) 1800

(d) 1700

(e) 1200

The difference between the number of students studying Engineering and B.com is what percent of the total number of students studying the remaining courses?

(a)  $66^{\frac{2}{3}}$ %

(c) 40%

(d) 48%

(e) 38%

66. A boat travels in upstream. If the speed of boat in upstream in decreased by 40% then it is equal to the speed of current and speed of boat in still water is given as 240 km/hr. Then find upstream speed of boat? (in km/hr).

(a) 120

(b) 180

(c) 150

(d) 210

(e) 125

**67.** The age of father is 4 times the age of his son. 5 years ago the age of son was 1 times of his father age. Find the present age of son.

(a) 20 yrs

(b) 30 yrs

(c) 28 yrs

(d) 25 yrs

(e) 32 yrs

**68.** Abhishek invested some amount for 3 yrs at rate of 16  $\frac{2}{3}$ % per annum at CI. The difference of CI obtained only on  $3^{rd}$  year and C.I. obtained only on second year is Rs 210. Find the amount invested by Abhishek?

(a) Rs 6,220

(b) Rs 6,480

(c) Rs 8,420

(d) Rs 7,420

(e) Rs 8,240

69. A dishonest shopkeeper makes a cheating of 10% at the time of buying the items & 10% of at the time of selling the items. Find the overall profit percentage if he professes to sell goods at cost price?

(a) 20% (b)  $21\frac{2}{9}\%$  (c)  $22\frac{1}{9}\%$  (d)  $22^2 - \frac{1}{9}\%$  (e) 25%

70. Perimeter of rectangle is equal to the perimeter of square whose area is 400 cm<sup>2</sup> and length of rectangle is 40% more than the side of a square then find the area of rectangle?

(a) 248 cm<sup>2</sup>

(b) 420 cm<sup>2</sup>

(c) 356 cm<sup>2</sup>

(d) 336 cm<sup>2</sup> (e) 348 cm<sup>2</sup>

# **ENGLISH LANGUAGE**

Directions (71-80): Read the following passage carefully and answer the questions given below it. Certain words have been printed in bold to help you locate them, while answering some of the questions.

Intellectual property (IP) regulation remains an active issue in trade negotiations between the China and the United States. The most straightforward element of the negotiation—US attempts to reduce its trade deficit by persuading China to buy more American goods—gets the publicity. But it's likely to have less long-term impact than if China would agree to relax Chinese ownership requirements on American firms desiring to do business in that country through business partnerships. Such partnerships, in which Chinese ownership typically is required to be 50 percent, often lead to transfer of intellectual property from the US firm to its Chinese partner and perhaps to other entities.

This is an illustration of a more general issue, whether or not international trade in IP should be regulated. Addressing that question, David Wittenberg presented the argument for the negative when he commented that, "That idea (that government acquires an ownership interest in IP created within its borders) is inimical to our legal and economic system." Rick Mueller countered this argument. "IP developed in this country is largely a result of public investment augmented by private interest..." Those private interests must be held accountable to a certain level of stewardship, "meaning that they are not allowed to give it away to those with interest counter to our endeavors as a nation." Others were doubtful that regulation, whether desirable or not, could be effective. As Walter put it, "the pace of many IP developments today far outstrips the ability of governments to

develop adequate IP protection in a timely manner." Edward commented, "Make all the rules you want ... if people or countries don't follow them you've wasted your time and shown that the rules don't matter much... Bottom line: rules need enforcement."

The current Chinese-US trade negotiation provides a real-life test of these ideas. For example, there have been discussions about China phasing out ownership requirements over time that could reduce the amount of IP transfer as the price of admission for American firms. It raises the questions: How hard should US trade negotiators seek to encourage such a change in Chinese policy? Does IP ownership belong in international trade deals? Unusual attention currently is focused on trade policy, triggered by new tariffs on imports announced by the United States. Nearly all of it involves the trade of manufactured goods. Much less attention is being paid to trade in services, which represent 84 percent of all employment in the US, 80 percent of global spending, and significant positive trade balances for many developed economies.

Regulating trade in manufactured goods like steel and aluminum is a relatively straightforward matter; tariffs are easy to understand and to apply. But trade in intellectual property (IP) is much harder to measure and shape. Unlike manufactured goods, IP can be shared and in a sense multiplied, it is hard to hoard, and it leaks. Intellectual property is created, protected, sold, traded, shared, and stolen on an ongoing basis. When this is done across international borders, it complicates the matter further. That's why the World Trade Organization's TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement was negotiated during the 1986-1994 Uruguay Round, which introduced intellectual property rules into the multilateral trading system for the first time. It provides for minimum standards of protection for IP rights, such as patents, that signers of the agreement agree to maintain. It has provided some protection against thieves.

On the other hand, the argument for protection often centers around national long-term interests. IP transferred to gain access to Chinese markets, for example, can be used for long-term global advantage .It encourages the concentration of trade in the hands of a relatively few world economic powers. It redistributes the fruits from the world's leaders in innovation to its laggards.

- **71.** Out of which of the following are the events that might help US in reducing its trade deficit?
  - (a) Developing adequate IP protections in a timely manner
  - (b) Swaying China to buy more American Goods and hence in this way getting the publicity.
  - (c) Making China relax ownership requirements on American firms desiring to do business in that country through business partnerships
  - (d) Both (b) and (c)
  - (e) Both (a) and (b)
- **72.** What was Rick Mueller's argument about the intellectual property developed in this country?
  - (a) IP in the long run should benefit of the world's inhabitants.
  - (b) Protection often centers around national long-term interests.
  - (c) Government acquires an ownership interest in IP created within its borders.
  - (d) Pace of many IP developments today far outstrips the ability of governments to develop adequate IP protection.
  - (e) IP is largely a result of public investment augmented by private interest.
- **73.** What is the criterion that makes US trade negotiators to seek significant change in Chinese policy?
  - (a) Unusual attention currently is focused on trade policy, triggered by new tariffs on imports announced by the United States.
  - (b) Intellectual property rules were introduced into the multilateral trading system for the first time.
  - (c) China phasing out ownership requirements over time that could reduce the amount of IP transfer as the price of admission for American firms.
  - (d) Both (a) and (b)
  - (e) Both (b) and (c)
- **74.** Why there is a need to pay attention to trade in services of US?
  - (a) It represents significant positive trade balances for many developed economies.
  - (b) It represents 84 percent of all employment in the US and 80 percent of global spending.
  - (c) Redistributes the fruits from the world's leaders in innovation to its laggards.
  - (d) Both (a) and (b).
  - (e) All of these.

- **75.** What is the function of World Trade Organization's TRIPS(Trade-Related Aspects of Intellectual Property Rights)?
  - (a) Provides for minimum standards of protection for IP rights, such as patents, that signers of the agreement agree to maintain. It has provided some protection against thieves.
  - (b) To develop adequate IP protection in a timely manner.
  - (c) Augmenting public investment by private interest.
  - (d) Encouraging the concentration of trade in the hands of a relatively few world economic powers.
  - (e) Resulting in a positive and significant trade balance.

**Directions** (76-78): Choose the word which is most nearly the SAME in meaning to the word given in bold as used in the passage.

#### 76. Desirable

- (a) Advantageous
- (b) Inferior
- (c) Unfavourable
- (d) Adverse
- (e) Troubled

### 77. Augmented

- (a) Insignificant
- (b) Undermined
- (c) Compress
- (d) Demolish
- (e) Amalgamated

# 78. Triggered

- (a) Halted
- (b) Prompted
- (c) Retarded
- (d) Defused
- (e) Blocked

**Directions** (79-80): Choose the word which is OPPOSITE in meaning to the word given in bold as used in the passage.

### 79. Hoard

- (a) Reservoir
- (b) Disperse
- (c) Aggregation
- (d) Accumulate
- (e) Backlog

# 80. Intellecutal

- (a) Accommodate
- (b) Reconcile
- (c) Unreasonable
- (d) Expert
- (e) Creative

**Direction (81-90):** In each of the questions given below a sentence is given which is then divided into four parts. There may or may not be error in any one part of the sentence .You must choose that part with error as your answer. If all the parts are correct choose (e).

- **81.** River water pollution (a)/ is often (b)/ indicate by(c) /algae distribution (d)/ No error (e)
- **82.** The first year (a)/of the child's (b) /life is characterized (c) /in rapid (d)/ physical growth (e)
- **83.** A ray of light passing through (a)/ the centre (b) /of a thin lens keep(c)/ its original direction (d)/No error (e).
- **84.** The teacher was (a)/ happy when (b) /he entered the (c) /class which comprises (d)/of a hundred students.(e)
- **85.** When I shall get back (a)/ I shall pay of the money (b)/ that I borrowed (c)/from you last month (d)/No error
- **86.** He does not (a)/ fail to came (b)/ to my help (c)/ whenever I am in trouble. (d)/ No error. (e)
- **87.** My parents (a)/ prevented me (b)/ in accepting (c)/ the invitation. (d)/ No error. (e)
- **88.** He climbed (a)/ from the ladder (b)/ to reach (c)/ the ceiling. (d)/ No error. (e)
- **89.** My sister (a)/ insists (b)/ that she should be allowed to (c)/ remain unmarried (d)/ No error. (e)
- **90.** In another departure from the (a)/ post-Deng practice, no potential successor (b)/ to Mr. Xi has been included (c)/ in the new line-up of the PBSC.(d)/ No error (e).

**Directions** (91-100): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, some words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

| As a human being, you have no choice about the            |
|-----------------------------------------------------------|
| fact that you need a philosophy. Your only choice is      |
| whether you define your philosophy by a conscious,        |
| (91), disciplined process of thought                      |
| and (92) logical deliberation — or                        |
| let your subconscious (93) junk                           |
| heap of unwarranted conclusions, false generalizations,   |
| undefined contradictions,                                 |
| undigested slogans, unidentified wishes, doubts and       |
| fears, thrown together by chance, but                     |
| (94)by your subconscious into a                           |
| kind of mongrel philosophy and                            |
| (95)into a solid weight: self-doubt,                      |
| like a ball and chain in the place where your mind's      |
| wings should have grown. Your time is limited, so         |
| don't waste it living someone else's life. Don't be       |
| trapped by the which is                                   |
| living with the results of other people's thinking. Don't |
| let the noise of others' opinions drown out your own      |
| inner voice. And most important, have the courage         |
| to follow your heart and                                  |
| (97) All our activities are                               |
| by time, by our death. We fill                            |
| up our time with(99), never                               |
| asking whether they are important, whether we really      |
| find them of value. And so we come to live an             |
| (100) life.                                               |
| <b>91.</b> (a) Baseless (b) Irrational (c) Rational       |

(e) Unreasonable

- **92.** (a) Artificially
  - (b) Thoroughly
  - (c) Recklessly

(d) Scientific

- (d) Negligently
- (e) Carelessly

- **93.** (a) Scatter
- (b) Distribute
- (c) Twist

- (d) Disperse
- (e) Accumulate
- 94. (a) Integrated
  - (b) Diverge
  - (c) Sequential
  - (d) Constituted
  - (e) Confused
- **95.** (a) Caught
  - (b) Unit
  - (c) Separated
  - (d)Fused
  - (e) Disconnected
- **96.** (a) Ambiguity
  - (b) Belief
  - (c) Illusion
  - (d) Uncertainty
  - (e) Queue
- 97. (a) Reassurance
  - (b) Supposition
  - (c) Evidence
  - (d) Conception
  - (e) Intuition
- **98.** (a) Indefinite
  - (b) Obvious
  - (c) Immeasurable
  - (d) Limited
  - (e) Awful
- 99. (a) Applications
  - (b) Records
  - (c) Distractions
  - (d) Researches
  - (e) Willingness
- **100.** (a) Genuine
  - (b) Inauthentic
  - (c) Original
  - (d) Accurate
  - (e) Unanimous

# Mock 06: NIACL AO Prelims 2016 (Solutions)

# **REASONING ABILITY**

#### Directions (1-5):

B likes Sports topic and does not read The Indian express. G does not read Hindustan Times. F does not like Entertainment topic. G likes neither Business nor Science topic. D does not like Business topic. E does not like Editorial topic. C likes Education topic. D reads Hindustan Times. G does not read paper with the one who reads The Indian express.

By the given conditions----

| Person | Topic               | Newspaper                             |
|--------|---------------------|---------------------------------------|
| A      |                     | -                                     |
| В      | Sports              | The Indian Express                    |
| C      | Education           |                                       |
| D      | Business            | Hindustan times                       |
| E      | Editorial           |                                       |
| F      | Entertainment       |                                       |
| G      | Business<br>Science | Hindustan times<br>The Indian Express |

The one who likes Entertainment topic reads the same newspaper as E. C reads the same newspaper as G. D reads Hindustan Times only with the one who likes Editorial topic.

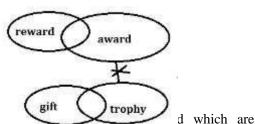
Final arrangement will be---

| Person | Topic         | Newspaper          |
|--------|---------------|--------------------|
| В      | Sports        | Times of India     |
| C      | Education     | Times of India     |
| G      | Lifestyle     | Times of India     |
| D      | Science       | Hindustan Times    |
| F      | Editorial     | Hindustan Times    |
| E      | Business      | The Indian express |
| A      | Entertainment | The Indian express |

- 1. (c); 2. (c); 3. (b);
- 4. (a); 5. (d);

Directions (6-10):

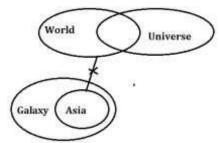
6. (e);



award cannot be trophy. Hence conclusion I follows.

For-II True, as there in no direct relation between gift and award, possibility case will hold True.

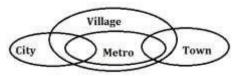
7. (b);



For-I False, because All those galaxy which are Asia cannot be World.

For-II True, as there is no direct relation between Universe and galaxy possibility case will hold true.

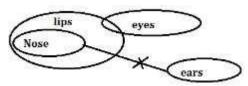
8. (a);



For-I From venn diagram it is clear that some City are Village. Hence Conclusion I follows.

For-II False, as it is a definite case therefore possibility case will not hold true.

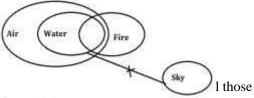
# 9. (d);



For-I Since there is no direct relation between Nose and eyes therefore, we cannot conclude this.

For-II Since there is no direct relation between lips and ears therefore, we cannot conclude this.

## 10. (a);



fire which are water cannot be sky. Hence conclusion I is true.

For-II From venn diagram it is clear All those fire which are water cannot be sky, but we cannot say anything about No fire being sky. Hence conclusion II will not hold true.

#### **Directions (11-15):**

Only three persons live below the floor in which the one who works in CTS live. Two persons live between T and the one who works in CTS. P who works in HCL lives immediately above T. R works in L&T and does not live on an odd numbered floor. Four persons live between the one who works in Wipro and the one who works in Infosys and neither of them lives on the ground floor. There are as many persons live between V and the one who works in HCL as there are between S and the one who works in CTS. V works in Capgemini. U works in Oracle. We have two possibilities-

### Case

| Floor | Person | Company   |
|-------|--------|-----------|
| 8     | P      | HCL       |
| 7     | T      | Wipro     |
| 6     | R      | L&T       |
| 5     | V      | Capgemini |
| 4     |        | CTS       |
| 3     | U      | Oracle    |
| 2     |        | Infosys   |
| 1     | S      |           |

#### Case 2

| Floor | Person | Company   |
|-------|--------|-----------|
| 8     | P      | HCL       |
| 7     | T      | Infosys   |
| 6     | R      | L&T       |
| 5     | V      | Capgemini |
| 4     |        | CTS       |
| 3     | U      | Oracle    |
| 2     |        | Wipro     |
| 1     | S      |           |

Now, W lives in one of the floor above Q. The one who works in Infosys does not live above W. This will eliminate Case 2. So the final arrangement will be-

| Floor | Person             | Company               |
|-------|--------------------|-----------------------|
| 8     | P                  | HCL                   |
| 7     | T                  | Wipro                 |
| 6     | R                  | L&T                   |
| 5     | V                  | Capgemini             |
| 4     | W                  | CTS                   |
| 3     | U                  | Oracle                |
| 2     | Q                  | Infosys               |
| 1 12  | S <sub>(c)</sub> : | TCS <sub>1</sub> (b); |

11. (a);14. (d);

15. (d);

**Direction (16-20):** 

**16.** (e); I.S > L (True)

II.  $0 \le W$  (True)

**17. (b)**; **I.**  $N \ge U$  (False)

II.  $G \ge L$  (True)

**18.** (a); **I.** R < V (True)

II. G > S (False)

**19.** (a); **I.** F > B (True)

II.  $U \le D$  (False)

**20.** (c); I. U > X (False)

**II.** Y = U(False)

## Directions (21-25):

| Elements  | Codes |
|-----------|-------|
| sweets    | sa    |
| are       | ra    |
| food      | fa    |
| tasty     | ta    |
| good      | ga    |
| nutrients | na    |
| healthy   | ha    |
| business  | ba    |

21. (c);

22. (b);

23. (d);

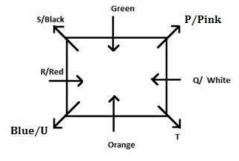
24. (c);

25. (c);

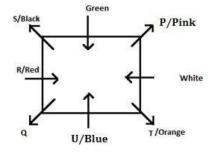
# **Directions (26-30):**

R likes red color and sits third to the right of T. Only two persons sit between T and the one who likes green color. The one who likes red color faces the one who likes white color. S likes black color and is an immediate neighbor of R. P likes pink color. U likes blue color. Q sits second to the right of the one who likes orange color. U is not an immediate neighbor of the one who likes white color. We have following possibilities-

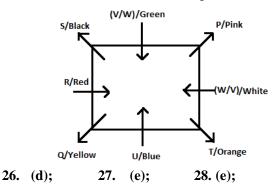
#### Case 1



Case 2

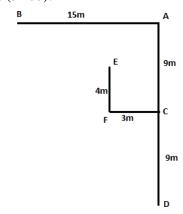


Now, Neither V nor W likes orange color. This will eliminate Case 1. So the final arrangement will be-



29. (b); 30. (c);

**Directions (31-33):** 

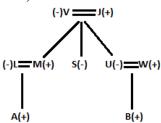


31. (d); Southeast

32. (b); Northeast

33. (c); Distance =  $\sqrt{\Box} + \Box \Box = 15$ m

**Directions (34-35):** 



34. (c);

35. (b);

# QUANTITATIVE APTITUDE

**36. (d)**; We know

 $Distance(D) = Speed(S) \times time(t)$ 

ATQ,

(S + 4) (t - 4) = St

(S-6)(t+8) = st

-4S + 4t = 16 ... (i)

8S - 6t = 48

+4S - 3t = 24 ... (ii)

Solving (i) & (ii)

T = 40 hours, S = 36 km/hour

Distance =  $40 \times 36 = 1440 \text{ km}$ 

**37. (b);** Let speed of Abhi in still water be x km/hr & speed of current be y km/hr

ATO

 $(x-y) \times {}^{6} + \frac{200}{60} = (x + y) \times {}^{6} = 60$   $02 = {}^{1} \underbrace{[x + y] - (x - y)}_{10}$ 

2 = 2y

y=1 km/hr

- $\therefore$  speed of current = 1 km/hr
- **38.** (e); Let 4 consecutive even no. are x, x + 2, x + 4 & x+ 6

& 3 consecutive odd no. are y - 2, y, y + 2

4x + 12 - 3y = 94

4x - 3y = 82 ... (i)

 $\frac{x+6+y-2}{2} = 42$ 

x + y = 84 - 4

x + y = 80 ... (ii)

multiplying .(ii) by 3 & solving with ...(i)

x = 46

- $\therefore$  Second lowest even no. = 48
- **39.** (a); Let efficiency of Rahul, Ayush & veer be x, y & z resp.

And we know time is inversely proportional to efficiency

$$\therefore \frac{x+y}{z} = \frac{2}{1} = \frac{8}{1}$$

$$\frac{y+z}{z} = \frac{3}{1} = \frac{9}{1}$$

Therefore ratio of efficiency

x : y : z = 3 : 5 : 4

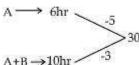
total work =  $12 \times 30 = 360$  unit

Rahul alone can complete the work

 $=\frac{360}{2}$  = 120 days

40. (d);

Time Efficiency



A+B → 10nr

 $\therefore$  Efficiency of B = 2

 $\therefore$  tap B can fill the tank =  $\frac{30}{2}$  = 15 hrs

Capacity of tank =  $15 \times 60 \times 15$ 

= 13500 litre

41. (a); Literate female in city B

$$= 8000 \times {}^{30} \times {}^{20} = 480$$

Literate male in city B

$$=8000\times \frac{30}{100} = 1920$$

Illiterate female in city B

$$= 8000 \times {}^{1} - 480 = 3520$$

Required ratio =  $\frac{^{1920}}{^{3520}}$  = 6: 11

**42.** (e); Total males in city D & E together

$$=7000\times^{3}+4500\times^{1}$$

Total females in city B & C together

$$=8000 \times {}^{1} + {}^{5}_{2}000 \times {}^{2}$$

= 3000 + 1500 = 4500

=4000+2000=6000

Required percentage = 
$$\frac{6000-4500}{6000} \times 100$$

= 25%

**43. (b);** Illiterate males in city A who died due to alcohol consumption

$$= {}^{1}\underline{[12000 \times {}^{75} \times {}^{25}\underline{]} = 11}\underline{25}$$

Females in city B =  $8000 \times ^{1} = 4000$ 

Required percentage = 
$$\frac{1125}{4000} \times 1000$$

$$=28^{-1}\frac{2}{8}$$

**44.** (d); Total literate in city A & E together

$$=12000\times^{25}+4500\times^{20}$$

100

$$=3000+900=3900$$

Total illiterate in city B & D together

$$=8000 \times {}^{70} + \underline{7000} \times {}^{50}$$
$$= 5600 + 3500 = 9100$$

Required ratio 3:7

45. (c); Illiterate males in city C  
= 
$$5000 \times \frac{60}{100} \times \frac{55}{100} = 1650$$
  
Females in city E= $4500 \times \frac{2}{3} = 3000$   
Required difference =  $3000 - 1650$   
=  $1350$ 

46. (b); I. 
$$6x^2 + 11x - 35 = 0$$
  
 $\Rightarrow 6x^2 + 21x - 10x - 35 = 0$   
 $\Rightarrow 3x (2x + 7) - 5 (2x + 7) = 0$   
 $\Rightarrow (3x - 5) (2x + 7) = 0 x$   
 $= \frac{5}{3}x = \frac{-7}{2}$ 

II. 
$$2y^2 + 15y + 28 = 0$$
  
 $\Rightarrow 2y^2 + 8y + 7y + 28 = 0$   
 $\Rightarrow 2y (y + 4) + 7 (y + 4) = 0$   
 $\Rightarrow (2y + 7) (y + 4) = 0$   
 $y = \frac{-7}{2}, y = -4$   
 $\therefore x \ge y$ 

**47.** (d); I. 
$$x^2 - 17x = 0$$
  
 $\Rightarrow x (x - 17) = 0$   
 $\Rightarrow x = 0 \text{ or } 17.$ 

II. 
$$y^3 - 4913 = 0$$
  
 $\Rightarrow y = \sqrt[3]{4913} = 17$   
 $\therefore y \ge x$ 

48. (b); I. 
$$(x-5)^2 - 100 = 0$$
  
 $\Rightarrow x^2 - 10x + 25 - 100 = 0$   
 $\Rightarrow x^2 - 10x - 75 = 0$   
 $\Rightarrow x^2 - 15x + 5x - 75 = 0$   
 $\Rightarrow (x-15)(x+15) = 0x$   
 $= 15, x = -5$ 

II. 
$$y^2 + 16y = 5(y - 6)$$
  
 $\Rightarrow y^2 + 16y - 5y + 30 = 0$   
 $\Rightarrow y^2 + 11y + 30 = 0$   
 $\Rightarrow y^2 + 6y + 5y + 30 = 0$   
 $\Rightarrow (y + 6) (y + 5) = 0$   
 $y = -6, y = -5$   
 $\therefore x \ge y$ 

49. (d); I. 
$$11x^2 + 18x + 7 = 0$$
  
 $\Rightarrow 11x^2 + 11x + 7x + 7 = 0$   
 $\Rightarrow (\underline{11}x + 7)(x + 1) = 0$   
 $x = \overline{11}^7, x = -1$ 

II. 
$$22y^2 + 25y + 7 = 0$$
  

$$\Rightarrow 22y^2 + 14y + 11y + 7 = 0$$

$$\Rightarrow 2y (11y + 7) + 1 (11y + 7) = 0$$

$$\Rightarrow (2y + 1) (11y + 7) = 0 y$$

$$= {}^{-1}\frac{7}{?} \Box = {}^{-7}\overline{11}$$

$$\therefore y \ge x$$

**50.** (a); 
$$8x + 7y = 38$$
  
 $3 \square - 5 \square = -1$   
Multiply 1st equation by 5 and 2nd equation by 7 and add both.  
 $40 \square + 35 \square = 190$ 

$$21 \square -35 \square = -7$$

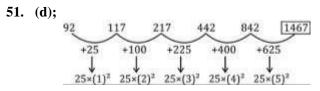
$$61x = 183$$

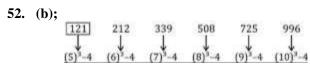
$$\Rightarrow x = 3$$
Put  $x = 3$  in  $2^{nd}$  equation.
$$\Rightarrow 9 - 5y = -1$$

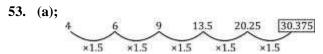
$$\Rightarrow 5y = 10$$

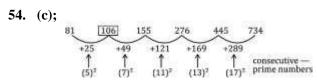
$$\Rightarrow y = 2$$

$$\therefore x > y$$











**56. (b)**; 
$$1782 \div 54 + 456 - 2346 \times 1 = ? \times 3$$
  
⇒  $33 + 456 - 2346 = ? \times 3$   
⇒  $-1857 = ? \times 3$   
⇒  $? = \frac{-1857}{3} = -619$ 

**57.** (c); 
$$(575 + 7511 - 2769) \div (76 \times 1 + 675 - 342) = \sqrt{?}$$
  
=  $5317 \div 409 = \sqrt{?}$   
 $\Rightarrow ? = (13)^2 = 169$ 

**59.** (d); 
$$\sqrt{(96)} \times 12 \div 18 + 26 - 9$$
  
=  $(65 - ?) \% \text{ of } 36$   
 $\Rightarrow 9 = \frac{(65 - ?)}{100} \times 36 \Rightarrow (65 - ?) = \frac{9 \times 100}{36}$   
 $\Rightarrow ? = 65 - 25 = 40$ 

**60.** (a); 
$$12 \times \sqrt{225 + 1212 - (1053 \div 9)} = ?$$
  
 $\Rightarrow 1392 - (117) = ? \Rightarrow ? = 1275$ 

**61. (b);** Required ratio = 
$$\frac{8 \times \frac{36000}{100}}{\frac{36000 \times 324}{1009}} = \frac{8 \times 9}{32 \times 4} = \frac{9}{16}$$

**62.** (a); Average number of boys studying in BSC

Average number of boys study and BCA together
$$= \frac{\frac{36000(}{}{} \frac{\frac{}{1009} \frac{1}{100} \frac{9}{100} \frac{1}{9}}{2} = 3400$$

Number of girls studying BBA =  $36000 \times \frac{15}{100} \times \frac{4}{9} = 2400$ Required % =  $\frac{3400 - 2400}{2400} \times 100 =$ 

Required % = 
$$\frac{3400-2400}{2400} \times 100 = 41^{2} \%$$

63. (d); Total number of boys studying in BA and B.Com together

$$=\frac{36000}{100} \times {}^{5}_{9} \times (11+8) = 200 \times 19$$
  
= 3800

**64. (b)**; Total number of students studying B.com and Engineering together =  $36000 \times \frac{40}{100} = \frac{14}{100} \times \frac{400}{100}$ 

$$= 36000 \times {}^{40} = \frac{14,400}{100}$$

Total number of boys studying B.com and Engineering together

$$=\frac{5}{9} \times 14400 = 8000$$

Required number of girls = 6400Required difference = 1600

**65.** (c); Difference between number of students in Engineering and B.Com

$$= \frac{24}{100} \times 36000 = 8640$$

Total number of students studying BBA, BSC, BA and BCA together

$$=\frac{36000}{100}\times60=21600$$

Required % = 
$$\frac{8640}{21600} \times 100 = 40\%$$

Alternative Sol.

Required % = 
$$\frac{(32-8)}{(21+15+13+11)} \times 100 = 40\%$$

**66.** (c); Let speed of current be x km/hr.

ATQ,  

$$(240-x) \times \frac{60}{100} = x$$
  
 $144-0.6x = x$   
 $1.6x = 144$   
 $x = 90$ 

speed in upstream=250-90=150km/hr

**67.** (a); Let the age of his son be x yrs Therefore age of father = 4x yrs

$$(\Box - 5) = (4\Box - 5) \times^{1}$$

$$5x - 25 = 4x - 5$$

$$x = 20 \text{ yrs}$$

$$\therefore \text{ age of son} = 20 \text{ yrs}$$

**68. (b);** Total CI for 3 yrs
$$CI = P[(1+\frac{50}{300}) \frac{3}{300} - 1]$$

$$= P[\frac{7}{-} \times \frac{7}{7} \times \frac{7}{-} - 1]$$

$$= P \left[ \begin{array}{c} \frac{7}{6} \times \frac{7}{6} \times \frac{7}{6} - 1 \right]$$

$$CI = P \left[ \begin{array}{c} \frac{127}{216} \end{array} \right] = \begin{array}{c} \frac{127}{216} - P \end{array}$$

Total CI for 2 yrs

CI = P[(1 + 
$$\frac{50}{300}^2$$
 - 1]  
= P[ $\frac{49}{36}$  - 1] =  $\frac{13}{36}$  P  
CI only for 3<sup>rd</sup> year =  $\frac{127}{36}$  -  $\frac{13}{6}$  =  $\frac{49}{36}$  CI only for 2<sup>nd</sup> year =  $\frac{13}{36}$  -  $\frac{216}{36}$  =  $\frac{7}{36}$ 

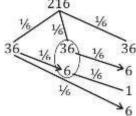
ATQ,  

$$\frac{49}{216} - 7 = 210 \Rightarrow 49 = 42 = 210$$
  
 $= 30 \times 216 = 6480$ 

# Alternative solution

$$16^{\frac{2}{3}} = \frac{1}{6}$$

Let the amount be  $(6)^3 = Rs. 216$ 



Total CI in  $2^{nd}$  yr = Rs. 42 Total CI in  $3^{rd}$  yr = Rs. 49 ATQ,

7 → 210  
1 → 
$$\frac{210}{7}$$
 = 30  
216 → 216 × 30 = Rs. 6480

**69.** (d); Let CP of 100 gm be Rs 100 After cheating at time of buying CP of 110 gm be Rs 100.

After cheating at time of selling SP of 90 gm be Rs 100

After equating 110 gm & 90 gm

Multiplying 110 gm by 9 & 90 gm by 11.

∴ CP of 990 gm be Rs 900

& SP of 990 gm be Rs 1100  

$$\therefore \text{ Profit } \% = \frac{200}{900} \times 100 = 22^{2} \% \frac{1}{9}$$

70. (d); Let side of square be a cm.

$$a^{2} = 400 \text{ cm}^{2}$$

$$a = 20 \text{ cm}$$
Length of rectangle ( $\ell$ ) = 20 × 1.4 = 28 cm

Length of rectangle (
$$\ell$$
) = 20 × 1.4 = 28 cm ATO.

$$4 \times 20 = 2(\ell + b)$$

 $[b \rightarrow breadth of rectangle]$ 

$$80 = 2(28 + b)$$

$$b = 12 \text{ cm}$$

 $\therefore$  Area of rectangle =  $28 \times 12 = 336 \text{ cm}^2$ 

# **ENGLISH LANGUAGE**

- 71. (d); The answer is given in the first paragraph of the passage itself where it is said that US attempts to reduce its trade deficit by persuading China to buy more American goods—gets the publicity. But it's likely to have less long-term impact than if China would agree to relax Chinese ownership requirements on American firms desiring to do business in that country through business partnerships.
- 72. (e); Refer to the second paragraph when David Wittenburg presented the argument of ownership interest in IP created within its borders. Rick Mueller countered his argument by saying that IP developed in this country is largely a result of public investment augmented by private interest. Hence option (e) is the answer.
- 73. (c); In the third paragraph it is given that there have been discussions about China phasing out ownership requirements over time that could reduce the amount of IP transfer as the price of admission for American firms. And then the question is raised in the next line that how hard should US trade negotiators seek to encourage such a change in Chinese policy. Hence option (c) is the right choice.

- 74. (d); Refer to the third paragraph of the passage, second last line it is given, "Much less attention is being paid to trade in services, which represent 84 percent of all employment in the US, 80 percent of global spending, and significant positive trade balances for many developed economies."
- 75. (a); The answer is illustrated in the second last paragraph of the passage where the author is talking about World Trade Organization's TRIPS and its role. Intellectual property is created, protected, sold, traded, shared, and stolen on an ongoing basis. When this is done across international borders. complicates the matter further. That's why the World Trade Organization's TRIPS (Trade- Related Aspects of Intellectual Property Rights) agreement was negotiated during the 1986-1994 Uruguay Round, which introduced intellectual property rules into the multilateral trading system for the first time. "It provides for minimum standards of protection for IP rights, such as patents, that signers of the agreement agree to maintain. It has provided some protection against thieves."

- 76. (a); Desirable means wished for as being an attractive, useful, or necessary course of action. Hence option (a) is the right choice. Adverse means preventing success or development; harmful; unfavourable. Inferior means lower in rank, status, or quality.

  Troubled means beset by problems or difficulties.
- 77. (e); Augmented means incremented.

  Amalgamated means combined or united to form one organization or structure. Hence this is the word which is most similar to augmented and hence is the right choice.

  Undermined means lessened the effectiveness.
- 78. (b); Triggered means provoked. Hence prompted is the most suitable choice. Halted means stopped.

  Retarded means less advanced in mental, physical, or social development than is usual for one's age.

  Defused means deactivated.

  Blocked means obstructed or hindered.
- 79. (b); Hoard means a stock or store of money. Disperse means to distribute or spread over a wide area. which is the opposite of hoard. Hence the answer is option (b). Reservoir means a population or natural or artificial lake used as a source of water supply. Aggregation is the formation of a number of things into a cluster.
  Backlog means an accumulation of uncompleted work or matters needing to be dealt with.
- 80. (c); Intellectual means relating to the intellect; while unreasonable means not guided by or based on good sense. Hence, they are opposite of each other.

  Accommodate means (of a building or other area) provide lodging or sufficient space for. Reconcile means restore friendly relations between.

Creative means relating to or involving the use of the imagination or original ideas to create something.

- **81. (c)**; 'is often indicate' is wrong. Instead 'is often indicated' will be used because after be(is/are/am/was/were/be/been) ,the original form of verb is not used instead past participle form or present participle form is used.
- **82.** (d); Option (d) has an error. 'by' will be used instead of 'in' because in passive voice by+ **Agent** is used.
  - (i) Ram beat Sita.[Active]
  - (ii) Sita was beaten by Ram.[Passive]
- **83.** (c); There is error in part (c) of the sentence. 'keeps' will be used instead of 'keep' because the subject of sentence is 'A ray ' and this is singular.
- **84. (d)**; Instead of comprises, 'comprised' should be used.
- **85.** (a); 'When I shall get back' will not be used, instead 'when I get back' will be used. Hence there is error in part (a) of the sentence.
- **86. (b)**; Use 'come' in place of 'came' as V1 is used after Infinitive Particle (to).

  Ex. He does not want **to stay** here.

  She never tries **to come** here.
- **87. (c);** 'from' will be used in place of 'in' as preposition 'from' is used after 'prevent, prohibit, abstain, refrain, escape, absent' Ex. He **prevented** me **from** going there.
- **88. (b);** 'up' will be used in place of 'from' as after 'climb', preposition 'up/ down' is used. Ex. He **climbed up** a tree.
- **89.** (e); The sentence is grammatically correct.
- **90.** (e); The sentence is grammatically correct.
- is based about the philosophy of life. Since in the given line the author is talking that it depends on a person how one defines philosophy that is either by a conscious and a logical inquisitive mind that is described by the word 'rational' or by a heap of unwarranted conclusions. Scientific means based on or

means based on or characterized by the methods and principles of science.

**Baseless** means without foundation in fact

92. (b); Option (b) is the correct choice. This is because we are talking about the disciplined process of thought and a thorough and careful way of logical deliberation. Thoroughly is an adverb which means in a thorough manner.
Recklessly means without regard to the danger or the consequences of one's actions; rashly.

**Negligently** means habitually neglecting duties.

93. (e); Option (e) is the right option. The author is referring about the two choices we have as an option i.e. either to define the philosophy of life by our conscious and rational thought process or to lead our subconscious accumulate means gather junk heap of unwarranted conclusions and false

generalizations.

**Scatter** means throw in various random directions.

**Disperse** means distribute or spread over a wide area.

94. (a); Option (a) fits appropriately in the blank. This is so because in the above line we are talking about unification of one's subconscious into a kind of mongrel philosophy that is the consolidation.

Integrated means meshed.

**Diverge** means (of a road, route, or line) separate from another route and go in a different direction.

**95.** (d); Option (d) is the correct choice. Fused means joined or blended to form a single entity.

**Separated** means cause to move or be apart. **Disconnected** means having had a connection broken.

96. (b); Option (b) fits appropriately in the given blank. This is so because in the next line the explanation of doctrine is given "which is living with the results of other people's thinking". Hence belief means a principle or set of principles laid down by an authority as incontrovertibly true.

**Ambiguity** means inexactness. **Illusion** means a deceptive appearance or impression.

Uncertainty means unreliability.

97. (e); Option (e) is the right choice. This is so because the author is asking humans to have the courage to follow their heart and intuition to know the philosophy of life.Intuition means instinct. Reassurance the action means of removing someone's doubts or fears. Supposition means a belief held without proof or certain knowledge; an assumption or hypothesis.

**Conception** means the forming or devising of a plan or idea.

**98. (d)**; **Option (d)** fits appropriately according to the context of the passage. Author is saying that all our activities are limited by time and death.

**Indefinite** means not clearly expressed or defined; vague.

Appalling means very bad; awful.

- 99. (c); Option (c) is the right answer. The author is saying that we fill up our time with activities that include distractions, never asking whether they are important or even whether they hold any value. Applications means the action of putting something into operation.
  Deliberations means long and careful consideration or discussion.
- **100. (b)**; **Option (b)** is the appropriate choice of the word that must come in the given blank. The concluding line of the passage is portraying that how due to our choices of life we come to live an insincere or say not genuine life; i.e inauthentic.

**Genuine** means truly what something is said to be; authentic.

**Unanimous** means (of two or more people) fully in agreement.

Accurate means (especially of information, measurements, or predictions) correct in all details; exact.