PRACTICE MOCK

NIACL AO 2023
PREVIOUS YEAR PAPER
WITH DETAILED SOLUTIONS

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NIACL AO Free Mock Test 2023

NIACL AO Quantitative Aptitude

Directions: Answer the questions based on the information given below.

The given data is about number of students who are in class 10th and 12th in three different states. The number of students in class 10th in Punjab is 500 more that in Sikkim. The total number of students in 10th and 12th together in Sikkim and Punjab is 4000 and 3100, respectively. The number of students in class 12th in Bihar is 20% more than the number of students in 10th in Sikkim. The total number of students in class 12th in these three states is 5400. The number of students in 10th in Bihar is 1900.

Question 1: Find the ratio of the number of students in class 10th in Punjab to the number of students in class 12th in Sikkim.

A) 7:8

B) 5:6

C) 3:4

D) 2;3

E) 4:5

Question 2: Find the average of number of students in class 10th in the given three states.

A) 1800

B) 1500

C) 1600

D) 1900

E) 1750

Question 3: The number of students in class 12th in Bihar is how much percent more/less than that in Sikkim?

A) 25%

B) 36%

C) 28%

D) 32%

E) 30%

Question 4: Find the difference between total number of students in the given two classes in Bihar and the number of students in class 10th in Sikkim.

A) 2400

B) 2200

C) 2000

D) 2500

E) 1900

Question 5: 35% of students in class 12th in Punjab are girls. Find the number of boys in class 12th in Punjab.

A) 690

B) 705

C) 730

D) 715

E) 675

Question 6: What will come in place of the question mark (?) in the following series?

16, 8, ?, 30, 105, 472.5

A) 24

B) 16

C) 12

D) 18

E) 10

Question 7: What will come in place of the question mark (?) in the following series?

120, 140, 180, 260, ?, 740

A) 420

B) 360

C) 300

D) 340

E) 560

Question 8: What will come in place of the question mark (?) in the following series?

10, 35, 260, ?, 2110, 4135

A) 715

B) 885

C) 925

D) 780

E) 800

Question 9: What will come in place of the question mark (?) in the following series?

24, 40, 56, 72, 88, ?

A) 124

B) 112

C) 114

D) 104

E) 110

Question 10: What will come in place of the question mark (?) in the following series?

31, 38, 52, ?, 101, 136

A) 73

B) 65

C) 84

D) 69

E) 75

Directions: Answer the questions based on the information given below.

The given table shows the total number of students (male and female), and the difference between the number of male and female students, in five different schools.

Note: Number of male students in each school is more than that of female students.

	Total number of students	Number of (male – female) students
A	3000	600
B	1000	200
C	1100	400
D	850	400
E	1300	500

Question 11: The number of male students in school 'A' is how much percent more/less than the number of female students in school 'E'?

A) 200%

B) 350%

C) 150%

D) 320%

E) 250%

Question 12: Find the ratio of the number of male students in school 'C' to the number of female students in school 'D'.

A) 10:3

B) 15:8

C) 9:5

D) 7:4

E) 6:5

Question 13: Find the average number of students in school 'A', 'B' and 'C'.

A) 1800

B) 1500

C) 2400

D) 2000

E) 1700

Question 14: Find the difference between total number of male students in school 'B' and 'E' together, and the number of female students in school 'A'.

A) 200

B) 500

C) 300

D) 400

E) 600

Question 15: 25% of female students in school 'B' and 20% of female students in school 'C' are scholarship holder. Find the total number of female students in 'B' and 'C' who are not scholarship holder.

A) 420

B) 580

C) 360

D) 560

E) 400

Question 16: In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

I. $x^3 = 125$

II. $y^2 - 14y + 45 = 0$

A) x > y

B) x < y

C) x = y or the relationship cannot be established

D) x ≥ y

E) x ≤ y

Question 17: In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

I. 5x + 4y = 77

II. 42y = 336

A) x > y

B) x < y

C) x = y or the relationship cannot be established

D) x ≥ y

E) x ≤ y

Question 18: In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

I. $x^2 – 2x = 24$

II. $y^2 + 11y + 28 = 0$

A) x > y

B) x < y

C) x = y or the relationship cannot be established

D) x ≥ y

E) x ≤ y

Question 19: In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

I. $5x^2 = 4x^2 – 12x – 32$

II. $6y^2 = 96$

A) x > y

B) x < y

C) x = y or the relationship cannot be established

D) x ≥ y

E) x ≤ y

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Question 20: In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

I. $x^2 - 81 = 0$

II. $y^3 = 729$

A) x > y

B) x < y

C) x = y or the relationship cannot be established

D) x ≥ y

E) x ≤ y

Directions: Answer the questions based on the information given below.

The given line graph shows the percentage of cars sold out of total number of vehicles sold (cars + bikes) and total number of vehicles sold, by five different sellers.

2400

1800

1500

1200

1000

75%

65%

45%

48%

52%

A   B   C   D   E

— Percentage of cars sold out of total number of vehicles sold

— Total number of vehicles sold
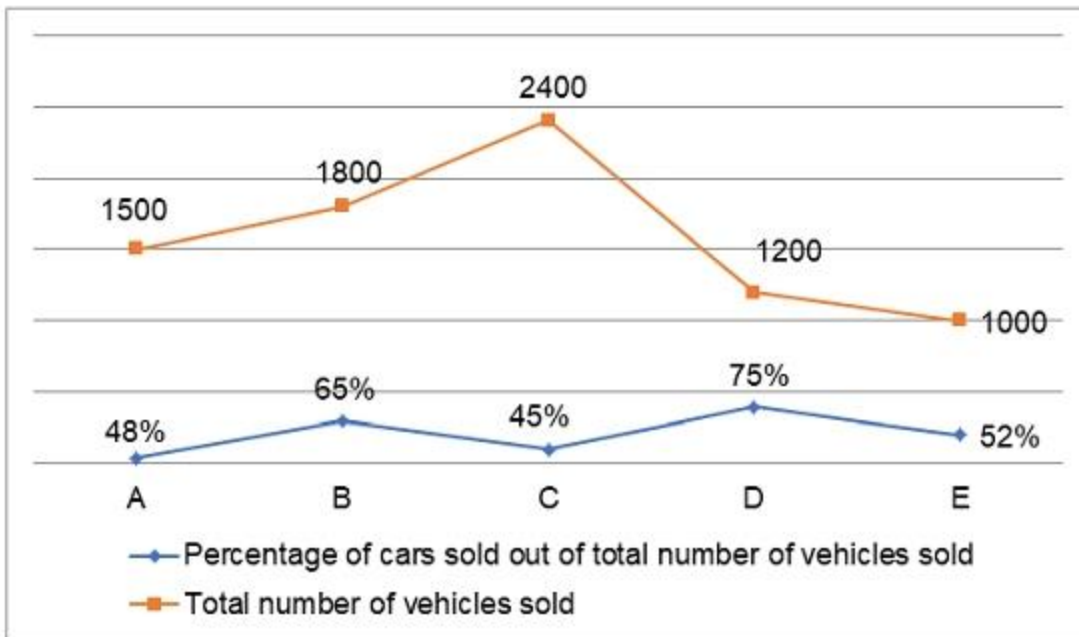
Question 21: Find the ratio of the number of bikes sold by 'B' and the number of cars sold by 'D', respectively.

A) 7:10

B) 5:9

C) 6:11

D) 3:8

E) 2:5

Question 22: The number of cars sold by 'A' is how much percent more/less than the number of bikes sold by 'E'?

A) 60%

B) 40%

C) 50%

D) 30%

E) 20%

Question 23: Find the average of number of vehicles sold by 'C' and 'A'.

A) 1820

B) 1480

C) 1950

D) 1450

E) 2120

Question 24: Find the difference between the number of cars sold by 'C' and number of bikes sold by 'D'.

A) 540

B) 780

C) 1260

D) 920

E) 840

Question 25: Find the sum of the number of cars sold by 'E' and number of bikes sold by 'A'.

A) 1200

B) 1000

C) 1500

D) 1300

E) 1600

Question 26: The average present age of three persons is 32 years. If the age of one of the persons is 25% less than the other and 24 years more than the third person, then find the present age of eldest person.

A) 32 years

B) 48 years

C) 40 years

D) 36 years

E) 54 years

Question 27: Find the selling price of an article whose cost price is Rs. 3250 and which is marked by 40% above its cost price and sold after giving Rs. 280 discount.

A) Rs. 3910

B) Rs. 3650

C) Rs. 4270

D) Rs. 4510

E) None of these

Question 28: Vikash spends some share of his monthly income in the ratio 3:2:5:7, respectively on four different items and saves the rest which is Rs. 6000. If his highest spending is Rs. 14000, then his saving is how much percent of his monthly income?

A) 15%

B) 12%

C) 20%

D) 25%

E) 10%

Question 29: In a mixture (vinegar and water), the quantity of vinegar is 60 litres more than that of water. When 20 litres of vinegar is added to this mixture, then the quantity of water becomes 40% less than that of vinegar. Find the initial quantity of water.

A) 90 litres

B) 180 litres

C) 135 litres

D) 120 litres

E) None of these

Question 30: 'A' takes 4 days more than 'B' to complete a piece of work. If 'A' takes 20 days to complete the work then find the time taken by 'A' and 'B' to complete 90% of the work together.

A) 6 days

B) 8 days

C) 7 days

D) 5 days

E) None of these

Question 31: 'A' invested Rs. 1800 for 6 months and 'B' invested Rs. 3200 for 9 months. The profit received by 'A' is how much percent more/less than that by 'B'?

A) 68.5%

B) 72.5%

C) 56.5%

D) 62.5%

E) 52.5%

Question 32: 'A' covered 378 km with a speed of 21 m/sec while 'B' covered 720 km with a speed of 25 m/sec. Find the ratio of time taken by 'A' to 'B' to cover their respective distances.

A) 5:8

B) 3:4

C) 4:7

D) 6:11

E) 2:3

Question 33: The cost of cultivating a squared field at the rate of Rs. 4.5/m^2 is Rs. 2592. Find the cost of fencing the same field at the rate of Rs. 5/metre.

A) Rs. 560

B) Rs. 480

C) Rs. 320

D) Rs. 400

E) Rs. 540

Question 34: Find the difference between the interests received when Rs. 3200 is invested at 45% p.a. simple interest for 24 years and 12 years, respectively.

A) Cannot be determined

B) Rs. 18920

C) Rs, 15760

D) Rs. 16640

E) Rs. 17280

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Question 35: The ratio of the present ages of 'A' and 'B' is 12:5, respectively. If the ratio of their ages 8 years ago from now was 10:3, respectively, then find the ratio of their ages 12 years hence from now.

A) 11:5

B) 12:7

C) 15:8

D) 10:3

E) 9:4

निर्देश: नीचे दी गई जानकारी के आधार पर प्रश्नों के उत्तर दें।

दी गई जानकारी तीन अलग-अलग राज्यों में कक्षा 10th और 12th में छात्रों की संख्या के बारे में हैं|कक्षा 10th में Punjab में छात्रों की संख्या कक्षा 10th में Sikkim से छात्रों की संख्या से 500 अधिक है।Sikkim और Punjab में कक्षा 10th और 12th के छात्रों की कुल संख्या क्रमशः 4000 और 3100 है।Bihar में कक्षा 12th के छात्रों की संख्या Sikkim में 10th के छात्रों की संख्या से 20% अधिक है।इन तीन राज्य में 12th कक्षा में छात्रों की कुल संख्या 5400 है।Bihar में 10th के छात्रों की संख्या 1900 है।

प्रश्न 1: Punjab में 10th कक्षा के छात्रों की संख्या और Sikkim में 12th के छात्रों की संख्या का अनुपात ज्ञात करें?

A) 7:8

B) 5:6

C) 3:4

D) 2;3

E) 4:5

प्रश्न 2: दिए गए तीनों राज्यों में कक्षा 10th के छात्रों की औसत संख्या ज्ञात करें|

A) 1800

B) 1500

C) 1600

D) 1900

E) 1750

प्रश्न 3: Bihar में 12 वीं कक्षा के छात्रों की संख्या Sikkim में 12 वीं कक्षा के छात्रों की संख्या से कितने प्रतिशत अधिक/कम है?

A) 25%

B) 36%

C) 28%

D) 32%

E) 30%

प्रश्न 4: Bihar में दिए गए दोनों कक्षाओं में छात्रों की कुल संख्या और Sikkim में कक्षा 10 वीं में छात्रों की संख्या के बीच का अंतर ज्ञात करें?

A) 2400

B) 2200

C) 2000

D) 2500

E) 1900

प्रश्न 5: Punjab में 12 वीं कक्षा में 35% छात्र लड़कियां हैं।Punjab में 12वीं कक्षा में लड़कों की संख्या ज्ञात करें?

A) 690

B) 705

C) 730

D) 715

E) 675

प्रश्न 6: निम्नलिखित श्रृंखला में प्रश्न चिह्न (?) के स्थान पर क्या आएगा?

16, 8, ?, 30, 105, 472.5

A) 24

B) 16

C) 12

D) 18

E) 10

प्रश्न 7: निम्नलिखित श्रृंखला में प्रश्न चिह्न (?) के स्थान पर क्या आएगा?

120, 140, 180, 260, ?, 740

A) 420

B) 360

C) 300

D) 340

E) 560

प्रश्न 8: निम्नलिखित श्रृंखला में प्रश्न चिह्न (?) के स्थान पर क्या आएगा?

10, 35, 260, ?, 2110, 4135

A) 715

B) 885

C) 925

D) 780

E) 800

प्रश्न 9: निम्नलिखित श्रृंखला में प्रश्न चिह्न (?) के स्थान पर क्या आएगा?

24, 40, 56, 72, 88, ?

A) 124

B) 112

C) 114

D) 104

E) 110

प्रश्न 10: निम्नलिखित श्रृंखला में प्रश्न चिह्न (?) के स्थान पर क्या आएगा?

31, 38, 52, ?, 101, 136

A) 73

B) 65

C) 84

D) 69

E) 75

निर्देश: नीचे दी गई जानकारी के आधार पर प्रश्नों के उत्तर दें।

दी गई तालिका पाँच अलग-अलग schools में छात्रों (पुरुष और महिला) की कुल संख्या और पुरुष और महिला छात्रों की संख्या के बीच के अंतर को दर्शाती है।

नोट: प्रत्येक school में पुरुष छात्रों की संख्या महिला छात्रों की संख्या से अधिक है।

	Total number of students	Number of (male – female) students
A	3000	600
B	1000	200

C	1100	400
D	850	400
E	1300	500

प्रश्न 11: School 'A' में पुरुष छात्रों की संख्या school 'E' में महिला छात्रों की संख्या से कितने प्रतिशत अधिक/कम है?

A) 200%

B) 350%

C) 150%

D) 320%

E) 250%

प्रश्न 12: School 'C' में पुरुष छात्रों की संख्या और school 'D' में महिला छात्रों की संख्या का अनुपात ज्ञात करें?

A) 10:3

B) 15:8

C) 9:5

D) 7:4

E) 6:5

प्रश्न 13: School 'A', 'B' और 'C' में छात्रों की औसत संख्या ज्ञात करें?

A) 1800

B) 1500

C) 2400

D) 2000

E) 1700

प्रश्न 14: School 'B' और 'E' में कुल पुरुष छात्रों की संख्या और school 'A' में महिला छात्रों की संख्या के बीच का अंतर ज्ञात करें?

A) 200

B) 500

C) 300

D) 400

E) 600

प्रश्न 15: School 'B' में 25% महिला छात्र और school 'C' में 20% महिला छात्र छात्रवृति धारक हैं।'B' और 'C' में उन कुल महिला छात्र ज्ञात करें जो छात्रवृति धारक नहीं हैं।

A) 420

B) 580

C) 360

D) 560

E) 400

प्रश्न 16: प्रश्न में, दो समीकरण I और II दिए गए हैं। आपको x और y के बीच सही संबंध स्थापित करने और सही विकल्प चुनने के लिए दोनों समीकरणों को हल करना होगा।

I. $x^3 = 125$

II. $y^2 - 14y + 45 = 0$

A) x > y

B) x < y

C) x = y या सम्बन्ध स्थापित नहीं किया जा सकता

D) x ≥ y

E) x ≤ y

प्रश्न 17: प्रश्न में, दो समीकरण I और II दिए गए हैं। आपको x और y के बीच सही संबंध स्थापित करने और सही विकल्प चुनने के लिए दोनों समीकरणों को हल करना होगा।

I. 5x + 4y = 77

II. 42y = 336

A) x > y

B) x < y

C) x = y या सम्बन्ध स्थापित नहीं किया जा सकता

D) x ≥ y

E) x ≤ y

प्रश्न 18: प्रश्न में, दो समीकरण I और II दिए गए हैं। आपको x और y के बीच सही संबंध स्थापित करने और सही विकल्प चुनने के लिए दोनों समीकरणों को हल करना होगा।

I. $x^2 – 2x = 24$

II. $y^2 + 11y + 28 = 0$

A) x > y

B) x < y

C) x = y या सम्बन्ध स्थापित नहीं किया जा सकता

D) x ≥ y

E) x ≤ y

प्रश्न 19: प्रश्न में, दो समीकरण I और II दिए गए हैं। आपको x और y के बीच सही संबंध स्थापित करने और सही विकल्प चुनने के लिए दोनों समीकरणों को हल करना होगा।

I. $5x^2 = 4x^2 – 12x – 32$

II. $6y^2 = 96$

A) x > y

B) x < y

C) x = y या सम्बन्ध स्थापित नहीं किया जा सकता

D) x ≥ y

E) x ≤ y

प्रश्न 20: प्रश्न में, दो समीकरण I और II दिए गए हैं। आपको x और y के बीच सही संबंध स्थापित करने और सही विकल्प चुनने के लिए दोनों समीकरणों को हल करना होगा।
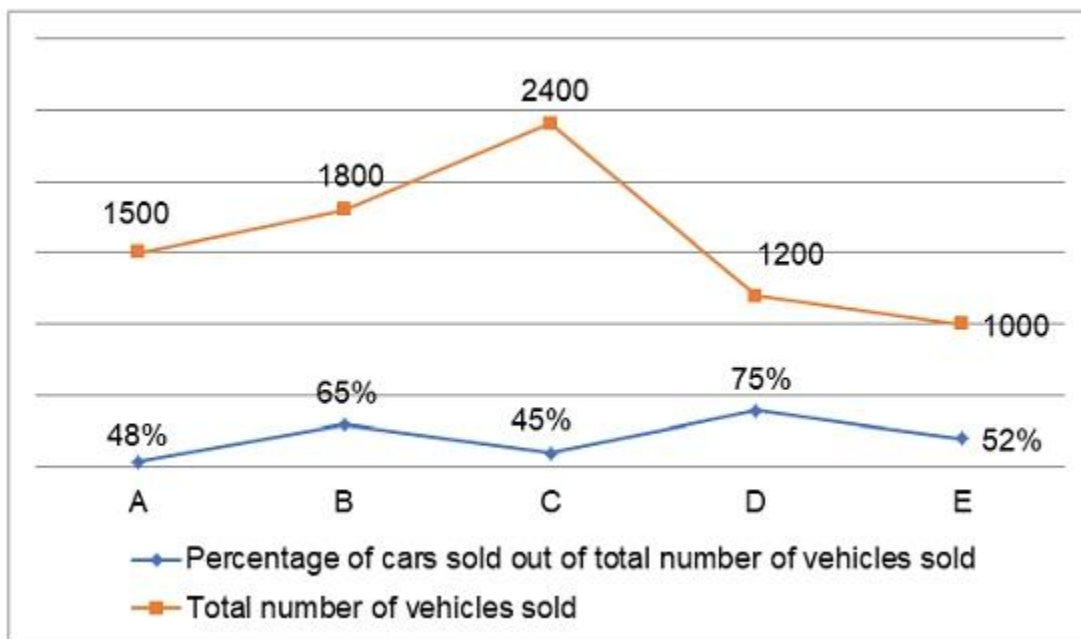
I. $x^2 - 81 = 0$

II. $y^3 = 729$

A) x > y

B) x < y

C) x = y या संबंध स्थापित नहीं किया जा सकता है

D) x ≥ y

E) x ≤ y

निर्देश: नीचे दी गई जानकारी के आधार पर प्रश्नों के उत्तर दें।

दी गई line graph पांच अलग-अलग विक्रेताओं द्वारा बेचे गए कुल वाहनों (cars + bikes) की संख्या में से cars का प्रतिशत और बेची गई कुल वाहनों की कुल संख्या को दर्शाता है।

प्रश्न 21: 'B' द्वारा बेची गई bikes की संख्या और 'D' द्वारा बेची गई cars की संख्या का अनुपात ज्ञात करें?

A) 7:10

B) 5:9

C) 6:11

D) 3:8

E) 2:5

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प्रश्न 22: 'A' द्वारा बेची गई cars की संख्या 'E' द्वारा बेची गई bikes की संख्या से कितने प्रतिशत अधिक / कम है?

A) 60%

B) 40%

C) 50%

D) 30%

E) 20%

प्रश्न 23: 'C' और 'A' द्वारा बेचे जाने वाले वाहनों की औसत संख्या ज्ञात करें?

A) 1820

B) 1480

C) 1950

D) 1450

E) 2120

प्रश्न 24: 'C' द्वारा बेची गई carsकी संख्या और' D 'द्वारा बेची गई bikes की संख्या के बीच का अंतर ज्ञात करें?

A) 540

B) 780

C) 1260

D) 920

E) 840

प्रश्न 25: 'E' द्वारा बेची गई cars की संख्या और 'A' द्वारा बेची गई bikes की संख्या का योग ज्ञात करें?

A) 1200

B) 1000

C) 1500

D) 1300

E) 1600

प्रश्न 26: तीन व्यक्तियों की औसत वर्तमान आयु 32 वर्ष है।यदि किसी एक व्यक्ति की आयु अन्य व्यक्ति की तुलना में 25% कम है और तीसरे व्यक्ति की तुलना में 24 वर्ष अधिक है, तो सबसे बड़े व्यक्ति की वर्तमान आयु ज्ञात करें?

A) 32 years

B) 48 years

C) 40 years

D) 36 years

E) 54 years

प्रश्न 27: उस वस्तु का विक्रय मूल्य ज्ञात करें जिसका क्रय मूल्य Rs. 3250 और जिसे उसके क्रय मूल्य से 40% ऊपर अंकित किया गया है और 280 की छूट देने के बाद बेचा गया है।

A) Rs. 3910

B) Rs. 3650

C) Rs. 4270

D) Rs. 4510

E) इनमें से कोई नहीं

प्रश्न 28: Vikas अपने मासिक आय के कुछ हिस्से को चार अलग-अलग वस्तुओं पर क्रमशः 3:2:5:7 के अनुपात में खर्च करता है और शेष की बचत करता है जो कि Rs. 6000 है।यदि उसका उच्चतम खर्च Rs. 14000 है तो उसकी बचत उसकी मासिक आय का कितना प्रतिशत है?

A) 15%

B) 12%

C) 20%

D) 25%

E) 10%

प्रश्न 29: एक मिश्रण (vinegar और water) में, vinegar की मात्रा water की मात्रा से 60 litres अधिक है।जब इस मिश्रण में 20 litres vinegar मिलाया जाता है, तो water की मात्रा vinegar की मात्रा से 40% कम हो जाती है।Water की प्रारंभिक मात्रा ज्ञात करें?

A) 90 litres

B) 180 litres

C) 135 litres

D) 120 litres

E) इनमें से कोई नहीं

प्रश्न 30: एक कार्य को करने के लिए 'A' 'B' से 4 दिन अधिक लेता है।यदि 'A' को काम पूरा करने में 20 दिन लगते हैं तो 90% काम पूरा करने के लिए 'A' और 'B' द्वारा साथ में लिया गया समय ज्ञात करें?

A) 6 days

B) 8 days

C) 7 days

D) 5 days

E) इनमें से कोई नहीं

प्रश्न 31: 'A' ने 6 महीने के लिए Rs. 1800 का निवेश किया और 'B' ने 9 महीने के लिए Rs. 3200 का निवेश किया।'A' द्वारा प्राप्त लाभ 'B' द्वारा प्राप्त लाभ से कितना प्रतिशत अधिक / कम है?

A) 68.5%

B) 72.5%

C) 56.5%

D) 62.5%

E) 52.5%

प्रश्न 32: 'A' ने 21 m/sec की गति के साथ 378 km की दूरी तय की, जबकि 'B' ने 25 m/sec की गति के साथ 720 km को तय किया। अपनी संबंधित दूरी को तय करने के लिए 'A' और 'B' द्वारा लिये गये समय का अनुपात ज्ञात करें?

A) 5:8

B) 3:4

C) 4:7

D) 6:11

E) 2:3

प्रश्न 33: Rs. 4.5/m^2 की दर से एक वर्गाकार मैदान को जोतने की लागत Rs. 2592 है।उसी क्षेत्र में Rs. 5/metre की दर से बाड़ लगाने की लागत ज्ञात करें?

A) Rs. 560

B) Rs. 480

C) Rs. 320

D) Rs. 400

E) Rs. 540

प्रश्न 34: जब Rs. 3200 को क्रमशः 24 वर्ष और 12 वर्ष के लिए 45% प्रतिवर्ष साधारण ब्याज की दर से निवेश किया जाता है तो अर्जित ब्याज के बीच का अंतर ज्ञात करें?

A) Cannot be determined

B) Rs. 18920

C) Rs, 15760

D) Rs. 16640

E) Rs. 17280

प्रश्न 35: 'A' और 'B' की वर्तमान आयु का अनुपात क्रमशः 12: 5 है। यदि 8 वर्ष पहले उनकी आयु का अनुपात क्रमशः 10: 3 था, तो अब से 12 वर्ष बाद उनकी आयु का अनुपात ज्ञात करें?

A) 11:5

B) 12:7

C) 15:8

D) 10:3

E) 9:4

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ANSWER KEYS and SOLUTIONS:

1) - E)	2) - A)	3) - C)	4) - B)	5) - D)	6) - C)
7) - A)	8) - B)	9) - D)	10) - A)	11) - B)	12) - A)
13) - E)	14) - C)	15) - B)	16) - E)	17) - A)	18) - D)
19) - E)	20) - E)	21) - A)	22) - C)	23) - C)	24) - B)
25) - D)	26) - B)	27) - C)	28) - A)	29) - D)	30) - B)
31) - D)	32) - A)	33) - B)	34) - E)	35) - C)	

Solution 1: E)

Let the number of students in class 10th in Sikkim be 'x'

Therefore, number of students in class 10th in Punjab = (x 500)

Number of students in class 12th in Punjab = 3100 – (x 500) = (2600 – x)

Number of students in class 12th in Sikkim = (4000 – x)

Number of students in class 12th in Bihar = 1.2x

According to the question,

2600 – x 1.2x 4000 – x = 5400

Or, 0.8x = 1200

Or, x = 1200/0.8 = 1500

Therefore,

	Number of students in class 10th	Number of students in class 12th	Total
Punjab	(x 500) = 2000	2600 – x = 1100	3100
Bihar	1900	1.2x = 1800	3700
Sikkim	x = 1500	(4000 – x) = 2500	4000
Total	5400	5400	10800

Required ratio = 2000:2500 = 4:5

Hence, option e.

Solution 2: A)

Required average = 5400/3 = 1800

Hence, option a.

Solution 3: C)

Required percentage = {(2500 – 1800)/2500} × 100 = 28%

Hence, option c.

Solution 4: B)

Required difference = 3700 – 1500 = 2200

Hence, option b.

Solution 5: D)

Required number of boys = 0.65 × 1100 = 715

Hence, option d.

Solution 6: C)

16 × 0.5 = 8

8 × 1.5 = 12

12 × 2.5 = 30

30 × 3.5 = 105

105 × 4.5 = 472.5

Hence, option c.

Solution 7: A)

120 + 20 = 140

140 + 40 = 180

180 + 80 = 260

260 + 160 = 420

420 + 320 = 740

Hence, option a.

Solution 8: B)

$10 + 5^2 = 35$

$35 + 15^2 = 260$

$260 + 25^2 = 885$

$885 + 35^2 = 2110$

$2110 + 45^2 = 4135$

Hence, option b.

Solution 9: D)

24 + 16 = 40

40 + 16 = 56

56 + 16 = 72

72 + 16 = 88

88 + 16 = 104

Hence, option d.

Solution 10: A)

31 + 7 = 38

38 + 14 = 52

52 + 21 = 73

73 + 28 = 101

101 + 35 = 136

Hence, option a.

Solution 11: B)

For school A:

Males females = 3000……. (1)

Males – females = 600……. (2)

On solving equation (1) and (2), we get

Number of male students = 1800

Number of female students = 1200

	Total number of students	Number of male students	Number of female students
A	3000	1800	1200
B	1000	600	400
C	1100	750	350
D	850	625	225
E	1300	900	400

Required percentage = {(1800 – 400)/400} × 100 = 350%

Hence, option b.

Solution 12: A)

Required ratio = 750:225 = 10:3

Hence, option a.

Solution 13: E)

Required average = (3000 + 1000 + 1100)/3 = 1700

Hence, option e.

Solution 14: C)

Required difference = (600 + 900) – 1200 = 300

Hence, option c.

Solution 15: B)

Required number = 0.75 × 400 + 0.8 × 350 = 580

Hence, option b.

Solution 16: E)

From I:

$x^3 = 125$

$x = 5$

From II:

$y^2 - 14y + 45 = 0$

$y^2 - 9y - 5y + 45 = 0$

$y(y - 9) - 5(y - 9) = 0$

$(y - 9)(y - 5) = 0$

$y = 9, 5$

X	Relation	Y
5	=	5
5	<	9

So, $x \leq y$

Hence, option e.

Solution 17: A)

From II:

42y = 336

y = 8

From I:

5x + 4y = 77

5x + 32 = 77

5x = 45

x = 9

So, x > y

Hence, option a.

Solution 18: D)

From I:

$x^2 - 2x = 24$

$x^2 - 2x - 24 = 0$

$x^2 + 4x - 6x - 24 = 0$

$x(x + 4) - 6(x + 4) = 0$

$(x + 4)(x - 6) = 0$

x = -4, 6

From II:

$y^2 + 11y + 28 = 0$

$y^2 + 7y + 4y + 28 = 0$

$y(y + 7) + 4(y + 7) = 0$

$(y + 7)(y + 4) = 0$

y = -7, -4

X	Relation	y
-4	>	-7
-4	=	-4
6	>	-7
6	>	-4

So, x ≥ y

Hence option d.

Solution 19: E)

From I:

$5x^2 = 4x^2 – 12x – 32$

$x^2 + 12x + 32 = 0$

$x^2 + 4x + 8x + 32 = 0$

$x(x + 4) + 8(x + 4) = 0$

$(x + 4)(x + 8) = 0$

x = -4, -8

From II:

$6y^2 = 96$

$y^2 = 16$

y = -4, 4

X	Relation	y
-4	<	4
-4	=	-4
-8	<	4
-8	<	-4

So, x ≤ y

Hence, option e.

Solution 20: E)

From I:

$x^2 - 81 = 0$

$x^2 = 81$

x = 9, -9

From II:

$y^3 = 729$

y = 9

X	Relation	y
9	=	9
-9	<	9

So, x ≤ y

Hence, option e.

Solution 21: A)

	Total number of vehicles sold	Number of cars sold	Number of bikes sold
A	1500	0.48 × 1500 = 720	1500 – 720 = 780
B	1800	0.65 × 1800 = 1170	1800 – 1170 = 630
C	2400	0.45 × 2400 = 1080	2400 – 1080 = 1320
D	1200	0.75 × 1200 = 900	1200 – 900 = 300
E	1000	0.52 × 1000 = 520	1000 – 520 = 480

Required ratio = 630:900 = 7:10

Hence, option a.

Solution 22: C)

Required percentage = {(720 – 480)/480} × 100 = 50%

Hence, option c.

Solution 23: C)

Required average = (1500 + 2400)/2 = 1950

Hence, option c.

Solution 24: B)

Required difference = 1080 – 300 = 780

Hence, option b.

Solution 25: D)

Required sum = 520 + 780 = 1300

Hence, option d.

Solution 26: B)

Let the age of one of the person be 'x' years

Therefore, present age of 2nd person = 0.75x years

Present age of 3rd person = (0.75x – 24) years

According to the question,

0.75x + x + 0.75x – 24 = 96

Or, x = 120/2.5 = 48 years

Hence, option b.

Solution 27: C)

Selling price of the article = 1.4 × 3250 – 280 = Rs. 4270

Hence, option c.

Solution 28: A)

Let the expenditures of Vikash be Rs. 3x, Rs. 2x, Rs. 5x and Rs. 7x, respectively.

According to the question,

7x = 14000

Or, x = 2000

Therefore, his total income = 3x + 2x + 5x + 7x + 6000 = Rs. 40000

Required percentage = (6000/40000) × 100 = 15%

Hence, option a.

Solution 29: D)

Let the initial quantity of water in the mixture be 'x' litres

Therefore, initial quantity of vinegar in the mixture = (x + 60) litres

According to the question,

0.6(x + 60 + 20) = x

Or, 0.4x = 48

Or, x = 48/0.4 = 120

Therefore, initial quantity of water = 120 litres

Hence, option d.

Solution 30: B)

Therefore, time taken by 'B' to complete the work = (20 – 4) = 16 days

Let the total work = 80 units (LCM of 20 and 16)

Efficiency of 'A' = 80/20 = 4 units/day

Efficiency of 'B' = 80/16 = 5 units/day

Required time taken = 0.9 × 80/9 = 8 days

Hence, option b.

Solution 31: D)

Ratio of the profits received by 'A' to 'B'

= (1800 × 6):(3200 × 9) = 3:8

Required percentage = {(8 – 3)/8} × 100 = 62.5%

Hence, option d.

Solution 32: A)

Speed of 'A' = 21 × (18/5) = 75.6 km/hr

Speed of 'B' = 25 × (18/5) = 90 km/hr

Required ratio = (378/75.6):(720/90) = 5:8

Hence, option a.

Solution 33: B)

Let each side of the squared field be 'x' metres

According to the question,

2592/4.5 = x^2

Or, x^2 = 576

Or, x = 24 metres

Therefore, cost of fencing = 4 × 24 × 5 = Rs. 480

Hence, option b.

Solution 34: E)

Required difference = {(3200 × 45) × (24 – 12)/100} = Rs. 17280

Hence, option e.

Solution 35: C)

Let the present ages of 'A' and 'B' be 12x years and 5x years, respectively.

According to the question,

(12x – 8)/(5x – 8) = 10/3

Or, 36x – 24 = 50x – 80

Or, x = 56/14 = 4

Required ratio = (12x + 12)/(5x + 12) = 60/32 = 15:8

Hence, option c.

NIACL AO Free Mock Test 2023

NIACL AO English Language

Directions: In the following passage, some of the words have been left out and replaced by a blank represented by a letter. First read the passage and try to understand what it is about. Then fill in the blanks as per the questions given.

Ukraine gained independence 30 years ago, after the ___(A)___ of the Soviet Union. It has since struggled to ___(B)___ corruption and bridge deep internal divisions. Ukraine's western region generally supported integration with Western Europe. The country's eastern side, meanwhile, favored closer ___(C)___ with Russia. Tensions between Russia and Ukraine peaked in February 2014, when violent protesters ___(D)___ Ukraine's pro-Russian president, Viktor Yanukovych, in what is now known as the Revolution of Dignity. Around the same time, Russia forcibly annexed Crimea. Ukraine was in a ___(E)___ position for self-defense, with a temporary government and unprepared military.

Question 1: (A)

A) fear

B) fall

C) hold

D) entry

E) rear

Question 2: (B)

A) combat

B) conclude

C) adhere

D) aid

E) insult

Question 3: (C)

A) turmoil

B) benefits

C) kin

D) ties

E) analysis

Question 4: (D)

A) addressed

B) scolded

C) ousted

D) hunted

E) pursued

Question 5: (E)

A) novel

B) vulnerable

C) opulent

D) hasty

E) ubiquitous

Question 6: In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the appropriate option. If the sentence is free from error, select 'No Error'.

A) When members of the public

B) make a complaint, they are classed

C) as low priority and have to wait until

D) more serious crimes is dealt with.

E) No error

Question 7: In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the appropriate option. If the sentence is free from error, select 'No Error'.

A) Young people need to have

B) clear aware of the wide range

C) of worthwhile and remunerative careers

D) to which STEM subjects can lead.

E) No error

Question 8: In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the appropriate option. If the sentence is free from error, select 'No Error'.

A) People have argued that

B) Einstein grew up as a

C) scientist while he was

D) developing the general theory.

E) No error

Question 9: In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the appropriate option. If the sentence is free from error, select 'No Error'.

A) We have to assure

B) us that others are not

C) committing similar offenses

D) and getting away with it.

E) No error

Question 10: In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the appropriate option. If the sentence is free from error, select 'No Error'.

A) The desks have damaged the

B) walls, whereas a more

C) appropriately choice could

D) have prevented such damage.

E) No error

Directions: Read the following passage carefully and answer the questions.

The Black Death was an epidemic of bubonic plague, a disease caused by the bacterium *Yersinia pestis* that circulates among wild rodents where they live in great numbers and density. Such an area is called a 'plague focus' or a 'plague reservoir'. Plague among humans arises when rodents in human habitation, normally black rats, become infected. The black rat, also called the 'house rat' and the 'ship rat', likes to live close to people, the very quality that makes it dangerous. In contrast, the brown or grey rat prefers to keep its distance in sewers and cellars. Normally, it takes ten to fourteen days before plague has killed off most of a contaminated rat colony, making it difficult for great numbers of fleas gathered on the remaining, but soon-dying, rats to find new hosts. After three days of fasting, hungry rat fleas turn on humans. From the bite site, the contagion drains to a lymph node that consequently swells to form a painful bubo, most often in the groin, on the thigh, in an armpit or on the neck. Hence the name bubonic plague. The infection takes three–five days to incubate in people before they fall ill, and another three–five days before, in 80 per cent of the cases, the victims die. Thus, from the introduction of plague contagion among rats in a human community it takes, on average, twenty-three days before the first person dies.

In order to become an epidemic the disease must be spread to other rat colonies in the locality and transmitted to inhabitants in the same way. Plague bacteria can break out of the buboes and be carried by the bloodstream to the lungs and cause a variant of plague that is spread by contaminated droplets from the cough of patients, called pneumonic plague. However, contrary to what is sometimes believed, this form is not contracted easily, spreads only episodically or incidentally and constitutes therefore only a small fraction of plague cases. The bloodstream of humans is not invaded by plague bacteria from the buboes, or people die with so few bacteria in the blood that bloodsucking human parasites become insufficiently infected to become infective and spread the disease: the blood of plague-infected rats contains 500-1,000 times more bacteria per unit of measurement than the blood of plague-infected humans.

Another very characteristic feature of the Black Death and plague epidemics in general, both in the past and in the great outbreaks in the early twentieth century, reflects their basis in rats and rat fleas: a much higher number of inhabitants contract plague and die from it in the countryside than in urban centres. In the case of English plague history, this feature has been underlined by Oxford historian Paul Slack. All diseases spread by cross-infection between humans, on the contrary, gain increasing powers of spread with increasing density of population

and cause highest mortality rates in urban centres. Lastly it could be mentioned that scholars have succeeded in extracting genetic evidence of the causal agent of bubonic plague, the DNA-code of *Yersinia pestis*, from several plague burials in French cemeteries from the period 1348-1590.

Two contemporary chroniclers identify the estuary of the river Don where it flows into the Sea of Azov as the area of the original outbreak, but this could be mere hearsay, and it is possible that it started elsewhere, perhaps in the area of the estuary of the river Volga on the Caspian Sea. At the time, this area was under the rule of the Mongols of the Golden Horde. Some decades earlier, the area had been converted to Islam and trade with Christians was no longer tolerated. As a result the Silk Road caravan routes between China and Europe were cut off. For this reason, the Black Death did not spread from the east through Russia towards western Europe, but stopped abruptly on the Mongol border with the Russian principalities. As a result, Russia which might have become the Black Death's first European conquest, in fact was its last, and was invaded by the disease not from the east but from the west.

Question 11: According to the passage, what is a 'plague focus'?

A) The part of the body that is first affected by plague.

B) The area where plague originated.

C) A region where wild rodents live in great numbers.

D) The country where the highest number of people are infected by plague.

E) The country where the highest number of plague-related deaths have occured.

Question 12: Which of the following characteristics makes the black rat dangerous?

A) It lives close to humans.

B) It lives in sewers.

C) It has a long lifespan.

D) It can contaminate water by drinking.

E) It is the fastest reproducing rodent.

Question 13: What do rat fleas do when a rat colony has been wiped out by plague?

A) They die of starvation.

B) They turn to humans.

C) They move to a different rat colony.

D) They move to other rodents in the vicinity.

E) None of the above

Question 14: The bubonic plague derives its name from _____.

A) a herbal remedy

B) a town in England

C) the first infected animal

D) a swollen lymph node

E) the goddess of diseases

Question 15: Which of the following is true of pneumonic plague?

A) It is contracted very easily.

B) It has no cure.

C) It constitutes a large fraction of plague cases.

D) It is spread by contaminated droplets.

E) Both (c) and (d)

Question 16: From which of the following sources have scholars been able to extract the DNA-code of *Yersinia pestis*?

A) patients who have been cured of plague

B) plague burials in cemeteries

C) rats infected by plague

D) rat fleas feeding on infected rats

E) bacteria cultured in the laboratory

Question 17: Why did the Black death not spread from the east through Russia towards western Europe?

A) Because western Europe was medically advanced.

B) Because of the warm weather in western Europe.

C) Because caravan routes on the Silk Road were cut off.

D) Both (a) and (b)

E) (a), (b) and (c)

Question 18: Which of the following words is the closest in meaning to the word 'characteristic' as used in the passage?

A) typical

B) accessible

C) attribute

D) restrained

E) scarce

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Question 19: In the question below, a sentence is given with four words highlighted in bold. One of these four words may either be wrongly spelt or inappropriate in the context of the sentence. Find out the word, which is wrongly spelt or inappropriate, if any. If all the words are correctly spelt and appropriate in the context of the sentence, mark (e) as your answer.

Despite the endangers, some parents actively encourage their children to take part in the street clashes.

A) endangers

B) encourage

C) part

D) clashes

E) All are correct

Question 20: In the question below, a sentence is given with four words highlighted in bold. One of these four words may either be wrongly spelt or inappropriate in the context of the sentence.

Find out the word, which is wrongly spelt or inappropriate, if any. If all the words are correctly spelt and appropriate in the context of the sentence, mark (e) as your answer.

Critically evaluate the steps that companies can take to endure that their direct mail does not become junk mail.

A) critically

B) evaluate

C) steps

D) endure

E) All are correct

Question 21: In the question below, a sentence is given with four words highlighted in bold. One of these four words may either be wrongly spelt or inappropriate in the context of the sentence. Find out the word, which is wrongly spelt or inappropriate, if any. If all the words are correctly spelt and appropriate in the context of the sentence, mark (e) as your answer.

This process involves large teams of ground staff that inspect the aircraft and take weather conditions into account.

A) process

B) teams

C) inspect

D) account

E) All are correct

Question 22: In the question below, a sentence is given with four words highlighted in bold. One of these four words may either be wrongly spelt or inappropriate in the context of the sentence. Find out the word, which is wrongly spelt or inappropriate, if any. If all the words are correctly spelt and appropriate in the context of the sentence, mark (e) as your answer.

Aircraft can be told to bomb infrastructure, attack ground enforces, or take out ports.

A) told

B) attack

C) enforces

D) ports

E) All are correct

Question 23: In the question below, a sentence is given with four words highlighted in bold. From the options, choose the pair of words that should be interchanged in order to make the sentence grammatically and meaningfully correct.

The survival of the trees is affecting locals, who rely on the forest for loss.

A) survival -- rely

B) survival -- loss

C) affecting -- rely

D) affecting -- loss

E) No interchange required

Question 24: In the question below, a sentence is given with four words highlighted in bold. From the options, choose the pair of words that should be interchanged in order to make the sentence grammatically and meaningfully correct.

Since penicillin was saved in 1928, antibacterial drugs have discovered millions of lives and laid the foundations for all sorts of other treatments.

A) saved -- discovered

B) discovered -- foundations

C) discovered -- treatments

D) foundations -- treatments

E) No interchange required

Question 25: In the question below, a sentence is given with four words highlighted in bold. From the options, choose the pair of words that should be interchanged in order to make the sentence grammatically and meaningfully correct.

Fungal infections are especially weak for people with dangerous immune systems, such as those who are undergoing treatment for cancer or HIV/AIDS.

A) weak -- dangerous

B) dangerous -- undergoing

C) weak -- treatment

D) undergoing -- treatment

E) No interchange required

Question 26: In the question below, a sentence is given with four words highlighted in bold. From the options, choose the pair of words that should be interchanged in order to make the sentence grammatically and meaningfully correct.

One thing a lot of businesses are allowing is doing employees to work from home once a week.

A) thing -- businesses

B) allowing -- doing

C) businesses -- doing

D) allowing -- thing

E) No interchange required

Question 27: In the question given below, a sentence is given, broken into parts that are jumbled in any random order. Choose the option that provides the correct rearrangement of the sentence.

symptoms of ulcerative colitis, a disease (A)/ some probiotics can also reduce the (B)/ with an unknown cause that produces inflammation (C)/ and ulcers in the colon and rectum (D)

A) ADCB

B) ABDC

C) BDCA

D) BACD

E) No rearrangement required

Question 28: In the question given below, a sentence is given, broken into parts that are jumbled in any random order. Choose the option that provides the correct rearrangement of the sentence.

one of the most common (A)/ used by diabetics is (B)/ synthetic human insulin (C)/ products of biotechnology (D)

A) CBAD

B) CDBA

C) BDCA

D) BADC

E) No rearrangement required

Question 29: In the question given below, a sentence is given, broken into parts that are jumbled in any random order. Choose the option that provides the correct rearrangement of the sentence.

the researchers believe that (A)/ economically viable aviation biofuels (B)/ could be produced (C)/ in the next five years (D)

A) DCBA

B) DBAC

C) ADBC

D) CDAB

E) No rearrangement required

Question 30: In the question given below, a sentence is given, broken into parts that are jumbled in any random order. Choose the option that provides the correct rearrangement of the sentence.

thrive in very harsh environments (A)/ dormant for extraordinary lengths of time, (B)/ and some microbe species can (C)/ bacterial spores can remain (D)

A) CDAB

B) CBAD

C) DBCA

D) DACB

E) No rearrangement required

Directions: In the following passage, some of the words have been left out and replaced by a blank represented by a letter. First read the passage and try to understand what it is about. Then fill in the blanks as per the questions given.

Ukraine gained independence 30 years ago, after the ___(A)___ of the Soviet Union. It has since struggled to ___(B)___ corruption and bridge deep internal divisions. Ukraine's western region generally supported integration with Western Europe. The country's eastern side, meanwhile, favored closer ___(C)___ with Russia. Tensions between Russia and Ukraine peaked in February 2014, when violent protesters ___(D)___ Ukraine's pro-Russian president, Viktor Yanukovych, in what is now known as the Revolution of Dignity. Around the same time, Russia forcibly annexed Crimea. Ukraine was in a ___(E)___ position for self-defense, with a temporary government and unprepared military.

प्रश्न 1: None

A) fear

B) fall

C) hold

D) entry

E) rear

प्रश्न 2: None

A) combat

B) conclude

C) adhere

D) aid

E) insult

प्रश्न 3: None

A) turmoil

B) benefits

C) kin

D) ties

E) analysis

प्रश्न 4: None

A) addressed

B) scolded

C) ousted

D) hunted

E) pursued

प्रश्न 5: None

A) novel

B) vulnerable

C) opulent

D) hasty

E) ubiquitous

प्रश्न 6: None

A) When members of the public

B) make a complaint, they are classed

C) as low priority and have to wait until

D) more serious crimes is dealt with.

E) No error

प्रश्न 7: None

A) Young people need to have

B) clear aware of the wide range

C) of worthwhile and remunerative careers

D) to which STEM subjects can lead.

E) No error

प्रश्न 8: None

A) People have argued that

B) Einstein grew up as a

C) scientist while he was

D) developing the general theory.

E) No error

प्रश्न 9: None

A) We have to assure

B) us that others are not

C) committing similar offenses

D) and getting away with it.

E) No error

प्रश्न 10: None

A) The desks have damaged the

B) walls, whereas a more

C) appropriately choice could

D) have prevented such damage.

E) No error

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Directions: Read the following passage carefully and answer the questions.

The Black Death was an epidemic of bubonic plague, a disease caused by the bacterium *Yersinia pestis* that circulates among wild rodents where they live in great numbers and density. Such an area is called a 'plague focus' or a 'plague reservoir'. Plague among humans arises when rodents in human habitation, normally black rats, become infected. The black rat, also called the 'house rat' and the 'ship rat', likes to live close to people, the very quality that makes it dangerous. In contrast, the brown or grey rat prefers to keep its distance in sewers and cellars. Normally, it takes ten to fourteen days before plague has killed off most of a contaminated rat colony, making it difficult for great numbers of fleas gathered on the remaining, but soon-dying, rats to find new hosts. After three days of fasting, hungry rat fleas turn on humans. From the bite site, the contagion drains to a lymph node that consequently swells to form a painful bubo, most often in the groin, on the thigh, in an armpit or on the neck. Hence the name bubonic plague. The infection takes three–five days to incubate in people before they fall ill, and another three–five days before, in 80 per cent of the cases, the victims die. Thus, from the introduction of plague contagion among rats in a human community it takes, on average, twenty-three days before the first person dies.

In order to become an epidemic the disease must be spread to other rat colonies in the locality and transmitted to inhabitants in the same way. Plague bacteria can break out of the buboes and be carried by the bloodstream to the lungs and cause a variant of plague that is spread by contaminated droplets from the cough of patients, called pneumonic plague. However, contrary to what is sometimes believed, this form is not contracted easily, spreads only episodically or incidentally and constitutes therefore only a small fraction of plague cases. The bloodstream of humans is not invaded by plague bacteria from the buboes, or people die with so few bacteria in the blood that bloodsucking human parasites become insufficiently infected to become infective and spread the disease: the blood of plague-infected rats contains 500-1,000 times more bacteria per unit of measurement than the blood of plague-infected humans.

Another very characteristic feature of the Black Death and plague epidemics in general, both in the past and in the great outbreaks in the early twentieth century, reflects their basis in rats and rat fleas: a much higher number of inhabitants contract plague and die from it in the countryside than in urban centres. In the case of English plague history, this feature has been underlined by Oxford historian Paul Slack. All diseases spread by cross-infection between humans, on the contrary, gain increasing powers of spread with increasing density of population and cause highest mortality rates in urban centres. Lastly it could be mentioned that scholars have succeeded in extracting genetic evidence of the causal agent of bubonic plague, the DNA-code of *Yersinia pestis*, from several plague burials in French cemeteries from the period 1348-1590.

Two contemporary chroniclers identify the estuary of the river Don where it flows into the Sea of Azov as the area of the original outbreak, but this could be mere hearsay, and it is possible that it started elsewhere, perhaps in the area of the estuary of the river Volga on the Caspian Sea. At the time, this area was under the rule of the Mongols of the Golden Horde. Some decades

earlier, the area had been converted to Islam and trade with Christians was no longer tolerated. As a result the Silk Road caravan routes between China and Europe were cut off. For this reason, the Black Death did not spread from the east through Russia towards western Europe, but stopped abruptly on the Mongol border with the Russian principalities. As a result, Russia which might have become the Black Death's first European conquest, in fact was its last, and was invaded by the disease not from the east but from the west.

प्रश्न 11: None

A) The part of the body that is first affected by plague.

B) The area where plague originated.

C) A region where wild rodents live in great numbers.

D) The country where the highest number of people are infected by plague.

E) The country where the highest number of plague-related deaths have occured.

प्रश्न 12: None

A) It lives close to humans.

B) It lives in sewers.

C) It has a long lifespan.

D) It can contaminate water by drinking.

E) It is the fastest reproducing rodent.

प्रश्न 13: None

A) They die of starvation.

B) They turn to humans.

C) They move to a different rat colony.

D) They move to other rodents in the vicinity.

E) None of the above

प्रश्न 14: None

A) a herbal remedy

B) a town in England

C) the first infected animal

D) a swollen lymph node

E) the goddess of diseases

प्रश्न 15: None

A) It is contracted very easily.

B) It has no cure.

C) It constitutes a large fraction of plague cases.

D) It is spread by contaminated droplets.

E) Both (c) and (d)

प्रश्न 16: None

A) patients who have been cured of plague

B) plague burials in cemeteries

C) rats infected by plague

D) rat fleas feeding on infected rats

E) bacteria cultured in the laboratory

प्रश्न 17: None

A) Because western Europe was medically advanced.

B) Because of the warm weather in western Europe.

C) Because caravan routes on the Silk Road were cut off.

D) Both (a) and (b)

E) (a), (b) and (c)

प्रश्न 18: None

A) typical

B) accessible

C) attribute

D) restrained

E) scarce

प्रश्न 19: None

A) endangers

B) encourage

C) part

D) clashes

E) All are correct

प्रश्न 20: None

A) critically

B) evaluate

C) steps

D) endure

E) All are correct

प्रश्न 21: None

A) process

B) teams

C) inspect

D) account

E) All are correct

प्रश्न 22: None

A) told

B) attack

C) enforces

D) ports

E) All are correct

प्रश्न 23: None

A) survival -- rely

B) survival -- loss

C) affecting -- rely

D) affecting -- loss

E) No interchange required

प्रश्न 24: None

A) saved -- discovered

B) discovered -- foundations

C) discovered -- treatments

D) foundations -- treatments

E) No interchange required

प्रश्न 25: None

A) weak -- dangerous

B) dangerous -- undergoing

C) weak -- treatment

D) undergoing -- treatment

E) No interchange required

प्रश्न 26: None

A) thing -- businesses

B) allowing -- doing

C) businesses -- doing

D) allowing -- thing

E) No interchange required

प्रश्न 27: None

A) ADCB

B) ABDC

C) BDCA

D) BACD

E) No rearrangement required

प्रश्न 28: None

A) CBAD

B) CDBA

C) BDCA

D) BADC

E) No rearrangement required

प्रश्न 29: None

A) DCBA

B) DBAC

C) ADBC

D) CDAB

E) No rearrangement required

प्रश्न 30: None

A) CDAB

B) CBAD

C) DBCA

D) DACB

E) No rearrangement required

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ANSWER KEYS and SOLUTIONS:

1) - B)	2) - A)	3) - D)	4) - C)	5) - B)	6) - D)
7) - B)	8) - E)	9) - B)	10) - C)	11) - C)	12) - A)
13) - B)	14) - D)	15) - D)	16) - B)	17) - C)	18) - A)
19) - A)	20) - D)	21) - E)	22) - C)	23) - B)	24) - A)
25) - A)	26) - B)	27) - D)	28) - A)	29) - E)	30) - C)

Solution 1: B)

We need a noun to be modified by the definite article THE. FALL (collapse) will fit here as the sentence tells us how Ukraine gained independence after the collapse of the Soviet Union. Thus, B is the right answer.

Fear - worry. Hold - control. Entry - influx. Rear - back; hind.

Solution 2: A)

We need a base form verb to fit in the TO + VERB infinitive construction. COMBAT (address) will fit here as the sentence tells us Ukraine has struggled to address corruption and improve internal divisions. Thus, A is the right answer.

Conclude - deduce. Adhere - cater. Aid - assist; help. Insult - offend.

Solution 3: D)

We need a noun to be modified by the adjective CLOSER. TIES (relations) will fit here as the sentence tells us how the country's eastern side favoured closer relations with Russia. Thus, D is the right answer.

Turmoil - conflict. Benefits - favours. Kin - relatives. Analysis - evaluation; study.

Solution 4: C)

We need a verb to agree with the subject PROTESTORS. OUSTED (removed forcefully from office) will fit here as the sentence tells us how the protestors removed the president from office by force. Thus, C is the right answer.

Addressed - tackled. Scolded - rebuked. Hunted - preyed. Pursued - chased; followed.

Solution 5: B)

We need an adjective to describe the noun POSITION. VULNERABLE (weak) will fit here as the sentence tells us how Ukraine was a weak position for self-defense. Thus, B is the right answer.

Novel - new. Opulent - wealthy. Hasty - rushed. Ubiquitous - present or commonly occurring everywhere.

Solution 6: D)

In D, replace the singular verb IS with the plural verb ARE as the subject CRIMES is plural. Thus, (d) is the right answer.

Solution 7: B)

In B, replace the adjective AWARE with the noun AWARENESS as we need a noun to be modified by the adjective CLEAR. Thus, (b) is the right answer.

Solution 8: E)

The sentence is grammatically correct and free of error. Thus, (e) is the right answer.

Solution 9: B)

In B, replace the personal pronoun US with the reflexive pronoun OURSELVES as the subject and object of the verb ASSURE are the same. Thus, (b) is the right answer.

Solution 10: C)

In C, replace the adverb APPROPRIATELY with the adjective APPROPRIATE as it is being used to modify the noun CHOICE. Thus, (c) is the right answer.

Solution 11: C)

Refer to the lines: "*The Black Death was an epidemic of bubonic plague, a disease caused by the bacterium Yersinia pestis that circulates among wild rodents where they live in great numbers and density. Such an area is called a 'plague focus' or a 'plague reservoir'.*" According to the passage, a plague focus is a region where wild rodents live in great numbers. Thus, (c) is the right answer.

(a), (b), (d) and (e) are incorrect as they do not correspond to the definition of 'plague focus' given in the passage.

Solution 12: A)

The black rat is considered dangerous because it lives close to humans. Refer to the line: "*The black rat, also called the 'house rat' and the 'ship rat', likes to live close to people, the very quality that makes it dangerous.*" Thus, (a) is the right answer.

(b), (c), (d) and (e) are incorrect as the passage does not provide any information to support those facts.

Solution 13: B)

When a rat colony has been wiped out by plague, rat fleas turn to humans. Refer to the lines: "*Normally, it takes ten to fourteen days before plague has killed off most of a contaminated rat colony, making it difficult for great numbers of fleas gathered on the remaining, but soon-dying, rats to find new hosts. After three days of fasting, hungry rat fleas turn on humans.*" Thus, (b) is the right answer.

(a), (c) and (d) do not accurately describe how rat fleas react to the wiping out of a certain rat colony.

Solution 14: D)

The bubonic plague is called so because when infected by it, a lymph node of the patient swells into a bubo. Refer to the lines: "*From the bite site, the contagion drains to a lymph node that consequently swells to form a painful bubo, most often in the groin, on the thigh, in an armpit or on the neck. Hence the name bubonic plague.*" Thus, (d) is the right answer.

(a), (b), (c) and (e) do not correctly state the source of the name 'bubonic'.

Solution 15: D)

It is true that pneumonic plague is spread by contaminated droplets. Refer to the lines: "*Plague bacteria can break out of the buboes and be carried by the bloodstream to the lungs and cause a*

variant of plague that is spread by contaminated droplets from the cough of patients, called pneumonic plague. However, contrary to what is sometimes believed, this form is not contracted easily, spreads only episodically or incidentally and constitutes therefore only a small fraction of plague cases." Thus, (d) is the right answer. From the lines quoted above it is also clear that (a) and (c) are incorrect. The passage does not tell us whether or not there is a cure for pneumonic plague, which makes (b) incorrect as well.

Solution 16: B)

Scholars have been able to extract the DNA-code of *Yersinia pestis* from plague burials in cemeteries. Refer to the line: "*Lastly it could be mentioned that scholars have succeeded in extracting genetic evidence of the causal agent of bubonic plague, the DNA-code of Yersinia pestis, from several plague burials in French cemeteries from the period 1348-1590.*" Thus, (b) is the right answer.

(a), (c), (d) and (e) are incorrect as they do not state the correct source of the DNA-code of *Yersinia pestis.*

Solution 17: C)

The Black death did not spread from the east through Russia towards western Europe because caravan routes on the Silk Road were cut off under the Mongol rule. Refer to the lines: "*Some decades earlier, the area had been converted to Islam and trade with Christians was no longer tolerated. As a result the Silk Road caravan routes between China and Europe were cut off. For this reason, the Black Death did not spread from the east through Russia towards western Europe, but stopped abruptly on the Mongol border with the Russian principalities.*" Thus, (c) is the right answer.

(a) and (b) do not correctly explain why the Black death did not spread from the east through Russia towards western Europe.

Solution 18: A)

CHARACTERISTIC has been used as an adjective to modify the noun FEATURE. It means something that is distinctive or a person, place or thing. TYPICAL is the closest in meaning to the word as used in the passage. Thus, (a) is the right answer.

ACCESSIBLE - reachable

ATTRIBUTE (noun) - quality or trait; synonymous with CHARACTERISTIC when used as a noun

RESTRAINED - controlled

SCARCE - in short supply

Solution 19: A)

The sentence tells us how despite the threats, some parents actively encourage (coax) their children to take part (participate) in street clashes (fights). The verb ENDANGERS (to put someone in danger) will not be apt here, and should be replaced with the noun DANGERS (threats). Thus, (a) is the right answer.

Solution 20: D)

The sentence tells us how one must critically (analytically) evaluate (assess) the steps (measures) that companies can take to make sure that their direct mail does not go into junk mail. ENDURE (tolerate) will not be apt here, and should be replaced with ENSURE (make sure). Thus, (d) is the right answer.

Solution 21: E)

The sentence tells us how the process (method) involves large teams (groups) of ground staff that inspect (study) the aircraft and taker weather conditions into account (consideration). All the words are contextually apt and correctly spelled. Thus, (e) is the right answer.

Solution 22: C)

The sentence tells us how aircraft can be told (ordered) to bomb infrastructure, attack (assault) ground forces (armies), or take out ports (harbours). The verb ENFORCES (imposes) is contextually inapt and should be replaced with FORCES (armies). Thus, (c) is the right answer.

Solution 23: B)

The sentence tells us how the loss (lack) of trees is affecting (impacting) local communities, who rely (depend) on the forest for their survival (living). We need to replace SURVIVAL with LOSS, as it is clear that the absence of trees can impact the locals, not the survival. Thus, (b) is the right answer.

Solution 24: A)

The sentence tells us how since penicillin was discovered (found), antibacterial drugs have saved (protected from dying) millions of people, and laid the foundations (basis) for all kinds of other treatments (cures). We need to interchange SAVED and DISCOVERED, as the sentence tells us about the discovery of penicillin which saved lives. Thus, (a) is the right answer.

Solution 25: A)

The sentence tells us how fungal infections are especially dangerous (harmful) for people who have weak (compromised) immune systems, such as those who are undergoing (taking) treatment (medications) for cancer or HIV/AIDS. We need to interchange WEAK and DANGEROUS, as the former is more suitable to modify the noun phrase IMMUNE SYSTEMS,

while the latter is apt for modifying the noun phrase FUNGAL INFECTIONS. Thus, (a) is the right answer.

Solution 26: B)

(b) is the right answer. We need to interchange ALLOWING with DOING. The sentence seeks to convey that a practice (thing) that many companies (businesses) have started (doing) includes providing freedom (allowing) to employees to work from home once a week.

Solution 27: D)

BACD is the final order. B begins the sentence by establishing the subject - some probiotics. A follows by telling us how these probiotics can reduce the symptoms of a disease. CD concludes as a pair, by telling us more about the details: C tells us how the cause of the disease is not known. D tells us the symptoms of the disease - inflammation and ulcers. Thus, (d) is the right answer.

Solution 28: A)

CBAD is the final order. C begins the sentence by establishing the subject - synthetic human insulin. B follows by telling us the people it is useful for - diabetics. AD concludes as a pair, by telling us how it is one of the most common products of biotechnology. Thus, (a) is the right answer.

Solution 29: E)

ABCD is the final order. A begins the sentence by establishing the subject - researchers. B follows by telling us what their belief is regarding - economically viable aviation biofuels. CD concludes as a pair, by telling us how it could be produced in the next five years. Thus, (e) is the right answer.

Solution 30: C)

DBCA is the final order. D begins the sentence by establishing the subject - bacterial spores. B follows by telling us how they can remain dormant for long periods of time. C follows by introducing a new subject - some microbe species. A concludes by telling us how they can thrive in harsh environments. Thus, (c) is the right answer.

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NIACL AO Reasoning

Directions (1–5): Answer the questions based on the information given below.

Seven boxes A, B, C, D, E, F and G are kept above one another such that the bottommost box is numbered as 1 and the topmost box is numbered as 7 but not necessarily in the same order. The boxes contain mobile phone of seven different brands viz. LG, Samsung, Karbon, Nokia, HTC, Apple, and VIVO.

Box B is kept 3rd from the top and it contains VIVO mobile. One box is kept between Box B and Box A, which does not contain Nokia or Apple mobile. Box E does not contain Nokia mobile but it is kept above Box F. Three boxes are kept between Box A and Box D, which contains LG mobile. One box is kept between Box D and Box G. Box C contains Samsung mobile and it is kept just above Box G, which does not contain Nokia, Karbon or Apple mobile.

Question 1: Which box contains HTC mobile?
A) Box E

B) Box A

C) Box G

D) Box F

E) Cannot be determined

Ans: C)

Solution:

Box G contains HTC mobile.

Hence, option c.

Question 2: The box, which is kept just below Box F, contains which mobile?
A) Samsung

B) Nokia

C) LG

D) HTC

E) None of the above

Ans: C)

Solution:

Box D is kept just below Box F and contains LG mobile.

Hence, option c.

Question 3: How many boxes are kept between Box A and the Box, which contains Nokia mobile?
A) Three

B) One

C) Two

D) Four

E) None of the above

Ans: C)

Solution:

Two boxes are kept between Box A and the Box which contain Nokia mobile.

Hence, option c.

Question 4: What is the position of Box C from the bottom?
A) First

B) Second

C) Third

D) Fourth

E) None of the above

Ans: B)

Solution:

Box C is kept second from the bottom.

Hence, option b.

Question 5: Four of the following five are alike in a certain way based on a group, which among the following does not belong to that group?
A) Box A- Karbon

B) Box E- Apple

C) Box F- Apple

D) Box F- Nokia

E) Box G- HTC

Ans: C)

Solution:

All are correct combination of Box and mobile except for 'Box F- Apple'.

Hence, option c.

Common solution:

Starting Point: Start with placing Box B and Box A.

Clues:

1. Box B is kept 3rd from the top and it contains VIVO mobile.

2. One box is kept between Box B and Box A, which does not contain Nokia or Apple mobile.

3. Three boxes are kept between Box A and Box D which contains LG mobile.

Inferences:

From clue 1 and clue 2, Box A is either 3rd box or 7th box.

From clue 3, Box D is either 7th box or 3rd box.

Case I: Box A is 3rd box:

Box Number	Boxes	Mobiles
7	D	LG
6		
5	B	VIVO
4		
3	A	
2		
1		

Case II: Box A is 7th box:

Box Number	Boxes	Mobiles

7	A	
6		
5	B	VIVO
4		
3	D	LG
2		
1		

Clues:

4. One box is kept between Box D and Box G.

Inference:

From clue 4, case I is rejected as G can't be placed. Box G is 1st box.

Box Number	Boxes	Mobiles
7	A	
6		
5	B	VIVO
4		
3	D	LG
2		
1	G	

Clues:

5. Box C contains Samsung mobile and it is kept just above Box G, which does not contain Nokia, Karbon or Apple mobile.

6. Box E does not contain Nokia mobile but it is kept above Box F.

Inferences:

From clue 5, Box C is 2nd box. Box G contain HTC mobile.

From clue 6, Box E is 6th box. Box F is 4th box and contains Nokia Mobile. Box A contains Karbon mobile. Box E contain Apple mobile.

The final arrangement is as follows:

Box Number	Boxes	Mobiles
7	A	Karbon
6	E	Apple

5	B	VIVO
4	F	Nokia
3	D	LG
2	C	Samsung
1	G	HTC

Question 6: In the question below there are three statements followed by two conclusions I and II. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly known facts.
Statements

Only a few tree are earn

At least some earn are price

All price are intel

Conclusions

I. All tree being earn is a possibility

II. No intel is a tree

A) Only conclusion I follows

B) Both the conclusions I and II follow

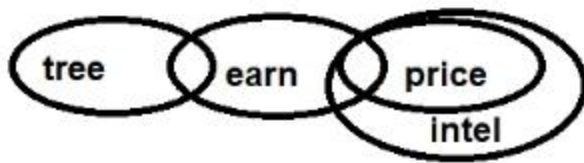C) Neither conclusion I nor II follows

D) Only conclusion II follows

E) Either conclusion I or II follows

Ans: C)

Solution:

The following figure can be drawn from the statements
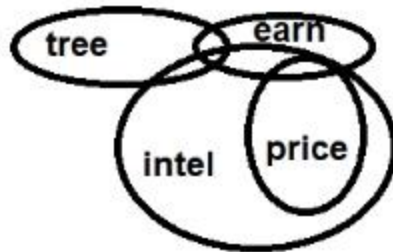
Neither conclusion I nor II follows.

Hence, option c.

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Question 7: In the question below there are three statements followed by two conclusions I and II. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly known facts.
Statements

All NKK are CKK

All CKK are KKK

No KKK is DKK

Conclusions

I. Some KKK are NKK

II. No CKK is DKK

A) Only conclusion I follows

B) Both the conclusions I and II follow

C) Neither conclusion I nor II follow

D) Only conclusion II follows

E) Either conclusion I or II follows

Ans: B)

Solution:

Following figure can be drawn from the statements.

Both the conclusions I and II follow.

Hence, option b.

Question 8: In the question below there are three statements followed by two conclusions I and II. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly known facts.
Statements

Some last are date

All date are rare

Some rare are not tough

Conclusions:

I. Some tough are not date

II. Some rare are not last

A) Only conclusion I follows

B) Both the conclusions I and II follow

C) Neither conclusion I nor II follows

D) Only conclusion II follows

E) Either conclusion I or II follows

Ans: C)

Solution:

Following figure can be drawn from the statements.

Neither conclusion I nor II follows.

Hence, option c.

Question 9: In the question below there are three statements followed by two conclusions I and II. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly known facts.
Statements

At least some hectic are busy

All busy are across

No across is zodiac

Conclusions

I. No busy is zodiac

II. All hectic being across is a possibility

A) Only conclusion I follows

B) Both the conclusions I and II follow

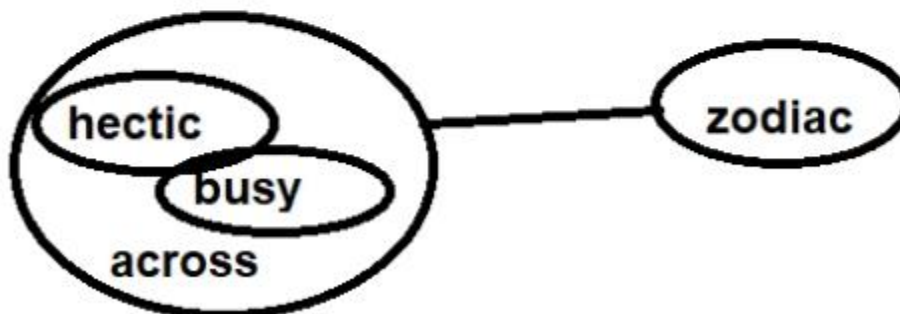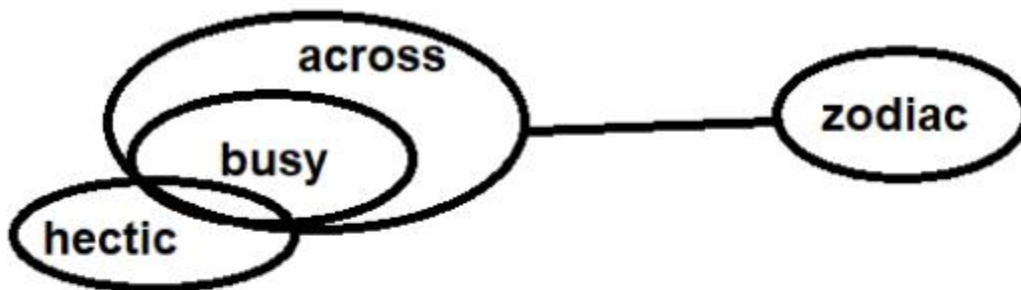C) Neither conclusion I nor II follow

D) Only conclusion II follows

E) Either conclusion I or II follows

Ans: B)

Solution:

Following figure is drawn from the statement.

Both the conclusions I and II follow

Hence, option b.

Directions (10–14): Answer the questions based on the information given below.

Eight banking aspirants I, J, K, L, M, N, O and P are sitting around the circular table in such a way that some of them are facing away from the table and some are facing towards the center of the table.

P is an immediate neighbor of both L and N, who faces towards the center. K sits third to the right of N. Neither O nor M is an immediate neighbor of K. Number of persons sitting between K and O is same as the number of persons sitting between P and M (counting from either direction). J sits 3rd to the left of K. I and N face the same direction. L and J face the opposite directions. Immediate neighbors of N face the opposite direction with respect to I. M does not sit immediate right of J. Immediate neighbors of I face the same direction. I sits second to the left of J.

Question 10: Who sits second to the left of I?
A) K

B) L

C) P

D) M

E) None of the above

Ans: B)

Solution:

L sits second to the left of I.

Hence, option b.

Question 11: Who sits opposite to the person, who sits to the immediate left of L?
A) I

B) M

C) P

D) O

E) J

Ans: D)

Solution:

O sits opposite to K, who sits to the immediate left of L.

Hence, option d.

Question 12: Who sits third to the left of P?
A) I

B) K

C) L

D) J

E) None of the above

Ans: A)

Solution:

I sits third to the left of P.

Hence, option a.

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Question 13: How many persons are facing away from the center?
A) Four

B) Six

C) Five

D) Three

E) Two

Ans: C)

Solution:

Five persons are facing away from the center.

Hence, option c.

Question 14: Which of the following statements is correct about M?
A) M faces towards the center

B) M and K are immediate neighbors of each other

C) N and J are immediate neighbors of M

D) J and M face the opposite direction with respect to each other

E) None is correct

Ans: D)

Solution:

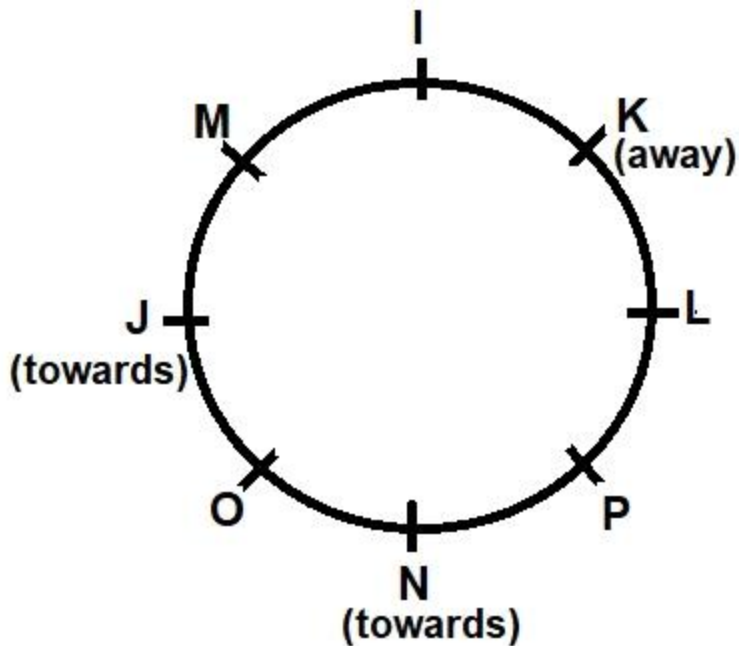J and M faces the opposite direction with respect to each other.

Hence, option d.

Common solution:

Starting Point: Start with fixing the position of N, P and L as N faces the centre and P is an immediate neighbor of N and L.

Clues: K sits third to the right of N. J sits 3rd to the left of K. I sits second to the left of J. M does not sit immediate right of J. Number of persons sitting between K and O is same as the number of persons sitting between P and M.

Inference: So, P either sits to immediate right or immediate left of N but J sits 3rd to the left of K which means K must be facing away from the centre and P must be sitting immediate right of N. Also, M does not sit immediate right of J which means M must be sitting immediate left of J so, the number of persons sitting P and M is equals to the number of persons sitting between K and O.

Clues: I and N faces the same direction. L and J faces the opposite direction. Immediate neighbors of N face the opposite direction as I. Immediate neighbors of I faces the same direction.

Inference: So, I and N faces the same direction which means I is facing towards the centre. L must be facing away from the centre as L and J faces opposite direction. Also, O and P must be facing away from the centre as both immediate neighbors of N faces opposite direction to I.

The final arrangement is as follows:
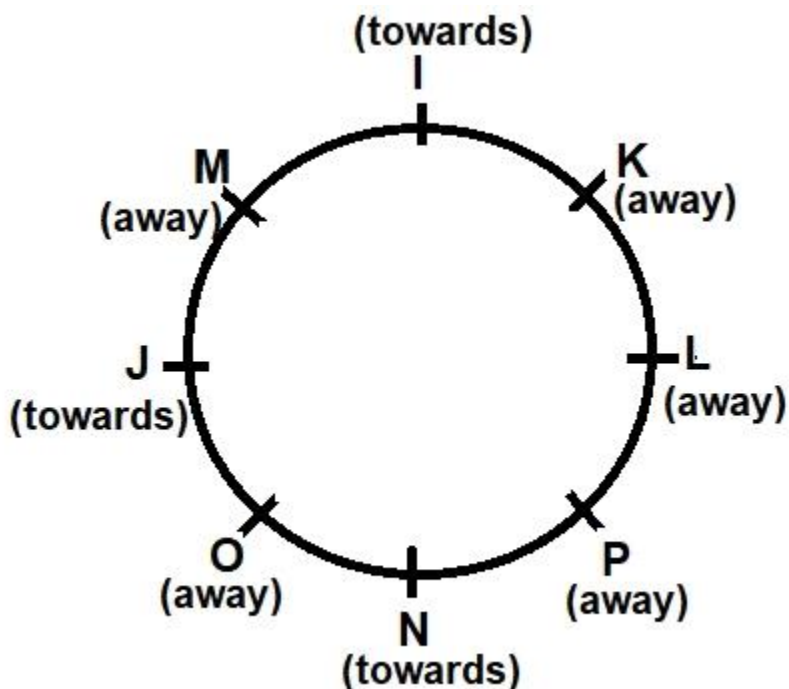
Directions (15–17): Answer the questions based on the information given below.

There are nine people in a family of three generations. No single person is a parent in the family. U and H are children of S. A is the father of K. Q, who is the only son of B, is married to X. E, who is the only sister of K, is not married. S, who has only one daughter, is the son-in-law of B. H is a male member in the family.

Question 15: How is H related to B?
A) Grandson

B) Son

C) Brother-in-law

D) Son-in-law

E) None of the above

Ans: A)

Solution:

H is the grandson of B.

Hence, option a.

Question 16: How is X related to K?
A) Daughter-in-law

B) Sister

C) Sister-in-law

D) Granddaughter

E) None of the above

Ans: C)

Solution:

X is the sister-in-law of K.

Hence, option c.

Question 17: How is son of B related to U?
A) Maternal Uncle

B) Paternal Uncle

C) Brother

D) Father

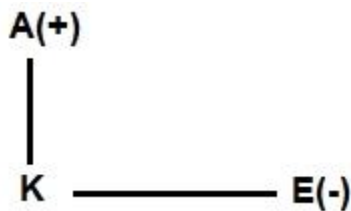E) Can't be determined

Ans: A)

Solution:
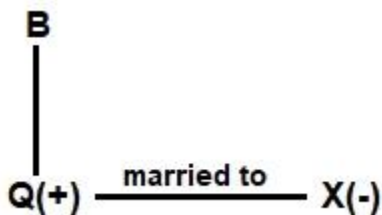Q is the son of B. Q is the maternal uncle of U.

Hence, option a.

Common solution:

Clues:

1. A is the father of K

2. E, who is the only sister of K, is not married.

A(+)
|
|
K ———— E(-)

Clues: Q, who is the only son of B, is married to X.

B
|
|
Q(+) —— married to —— X(-)

Clues: S, who has only one daughter, is the son-in-law of B. U and H are children of S. H is a male member in the family.

Inference: S has only one daughter. H is the male which means U must be the daughter of S. S must be married to K.

The final family tree is as follows:

```
                    married to
        A(+) ——————————— B(-)
          |
          |
S(+)—— married to ——K(-)—— sister of ——E(-)—— sister of ——Q(+)—— married to ——X(-)
          |
          |
        U(-)—— sister of ——H(+)
```
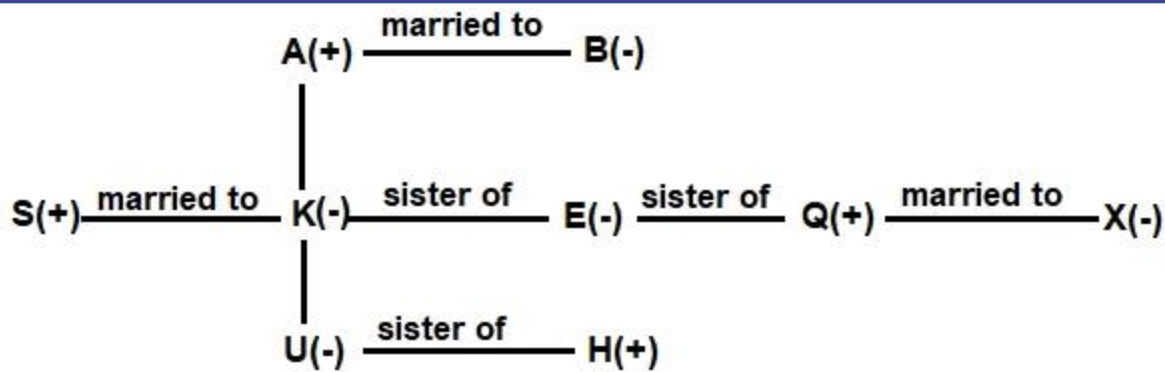
Directions (18–22): Answer the questions based on the information given below.

Six persons A, B, C, D, E, and F are sitting in Row 1 facing north whereas P, Q, R, S, T, and U are sitting in Row 2 facing south such that both rows are parallel and equidistant from each other. The persons sitting in Row 1 sits opposite to the persons sitting in Row 2.

Two persons sit between C and E and neither C nor E sit at the ends of the row. Two persons sit between R and S, who does not sit the ends of the row. D sits 3rd to the left of B, who does not sit opposite to Q. A does not sit adjacent to C and U does not sit adjacent to S or Q. T does not sit adjacent to S. The one, who sits opposite to C, sits immediate left of Q. One person sits between Q and R, who does not sit at the end of the row.

Question 18: Which of the following statements is/are correct?
A) Q sits opposite to F

B) A sits 2nd to the left of D

C) R sits immediate right of T

D) All are correct

E) Only (a) and (b)

Ans: D)

Solution:

All are correct statements.

Hence, option d.

Question 19: Who sits diagonally opposite to B?
A) T

B) P

C) U

D) Q

E) None of the above

Ans: C)

Solution:

U sits diagonally opposite to B.

Hence, option c.

Question 20: How many persons sit between the one, who sits opposite to T and the one who sits opposite to P?
A) Three

B) One

C) Two

D) Four

E) None of the above

Ans: C)

Solution:

Two persons sit between the one, who sits opposite to T and the one, who sits opposite to P.

Hence, option c.

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Question 21: What is the position of B with respect to E?
A) 3rd to the right

B) 4th to the right

C) 2nd to the left

D) Immediate right

E) None of the above

Ans: B)

Solution 21:
B sits 4th to the right of E.

Hence, option b.

Question 22: Four of the following five are alike in a certain way based on a group, which among the following does not belong to that group?
A) C

B) S

C) E

D) R

E) P

Ans: E)

Solution:

All sit second from the extreme end except P.

Hence, option e.

Common solution:

Starting Point: Start with placing C and E.

Clues:

1. Two persons sit between C and E and neither C nor E sit at the ends of the row.

2. The one who sits opposite to C sits immediate left of Q.

3. Only one person sits between Q and R, who does not at the end of the row.

Inferences:

From clue 1 we get either C or E sits second from either side of the Row 1.

Case I: When E sits at second from the extreme left end of Row 1.

Case II: When C sits at second from the extreme left end of Row 1.

From clue 2 we get Q sits either first or fourth from the extreme left end of Row 2.

From clue 3, we get R sits second to the left of Q.

Case I: When E sits at second from the extreme left end of Row 1.

	R		Q		
	E			C	

Case II: When C sits at second from the extreme left end of Row 1.

Q		R			
	C			E	

Clues:

4. Two persons sits between R and S, who does not sit at any of the ends of the row.

5. D sits 3rd to the left of B, who does not sit opposite to Q.

6. A does not sit adjacent to C and U does not sit adjacent to S or Q.

7. T does not sit adjacent to S.

Inferences:

From clue 4 we reject Case II as we can't place S. S sits second from the extreme right end of Row 1.

From clue 5, we get D sits second to the left of C and B sits at the extreme right the end of Row 2.

From clue 6 we get F sits adjacent to C and A sits adjacent to E.

From clue 6 and clue 7 we get T sits opposite to D, U sits opposite to A, and P sits opposite to B.

The final arrangement is as follows:

Row 2	U	R	T	Q	S	P
Row 1	A	E	D	F	C	B

Directions (23–25): Answer the questions based on the information given below.

Arun started walking from point A in south direction. After walking 5m he turns left from point B and walks for 8m till point C. He then turns right and walks for 6m till point D. He then turns left

and walks for 4m till point E and then turns left and walks for 9m till point F. He then turns left and walks for 4m till point G and then turns right and walks for 2m till point H.

Question 23: In which direction is point A with respect to point H?
A) West

B) South

C) East

D) North

E) None of the above

Ans: A)

Solution:

Point A is in west of point H.

Hence, option a.

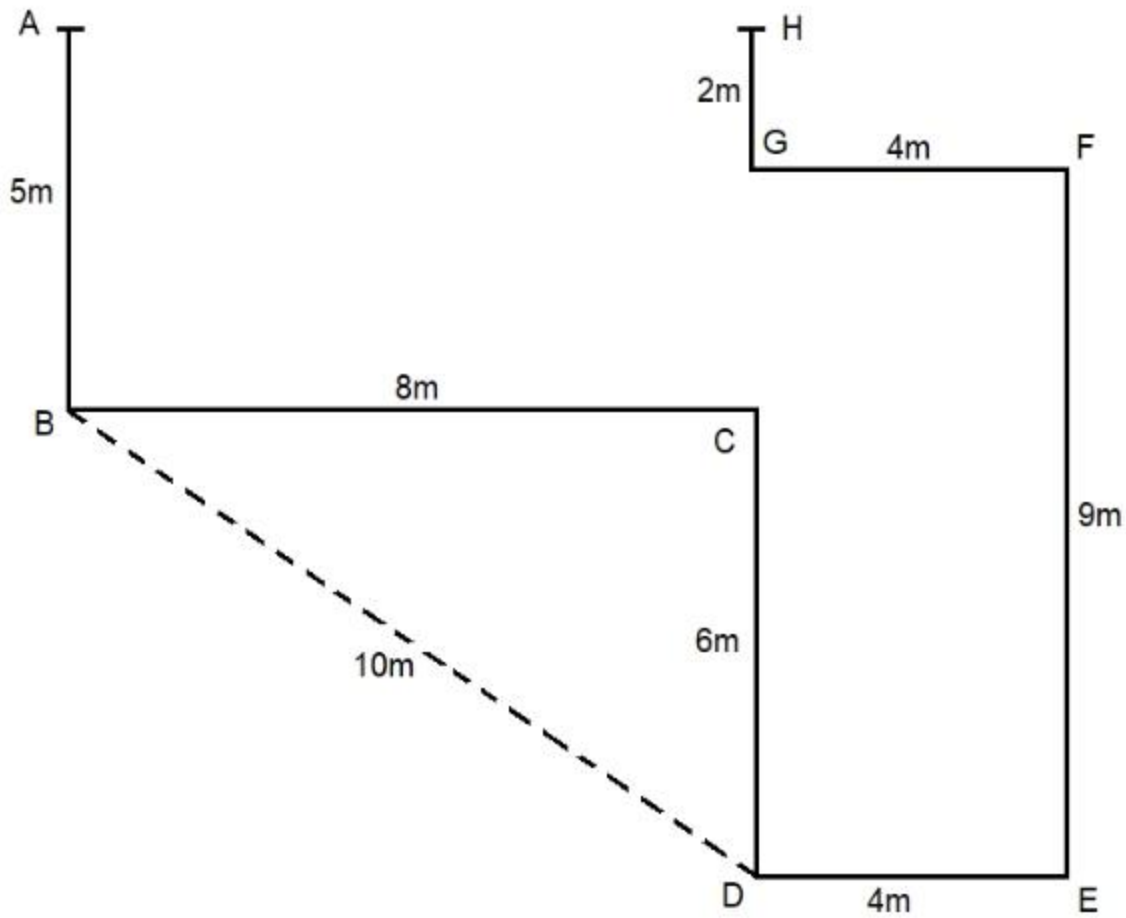Question 24: What is the shortest distance between point B and point D?
A) 5m

B) 9m

C) 10m

D) 11m

E) 15m

Ans: C)

Solution:

Figure:

The shortest distance between point B and point D = $\sqrt{8^2 + 6^2} = \sqrt{64 + 36} = \sqrt{100} = 10m$

Hence, option c.

Question 25: Point D is _____m south of point H.
A) 10

B) 8

C) 6
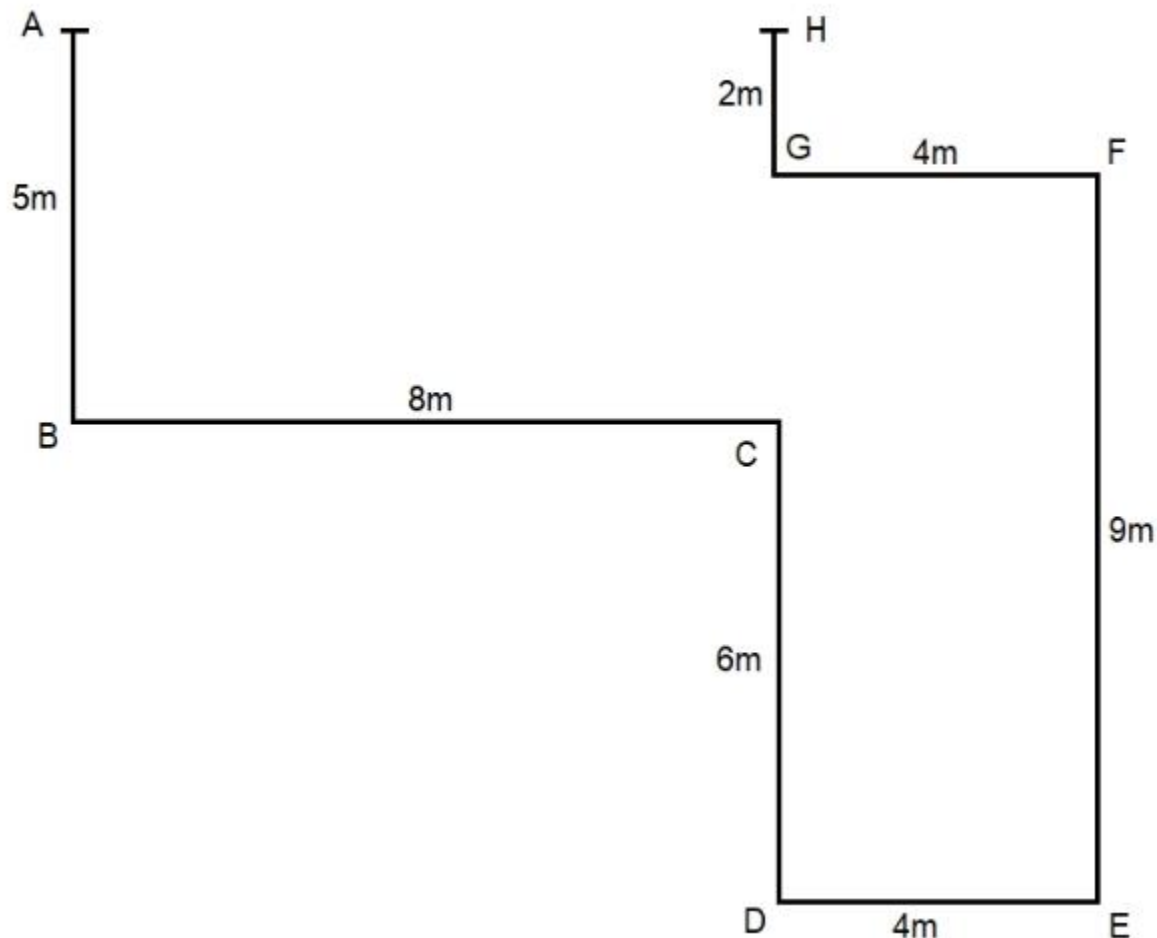
D) 11

E) 12

Ans: D)

Solution:

Point D is 11m south of point H.

Hence, option d.

Common solution:

Figure:

Directions (26–30): Answer the questions based on the information given below.

Seven students I, J, K, L, M, N and O live on 7 floors of the same building such that ground floor is numbered as 1 and the floor above the ground floor is numbered 2 and so on. Each one has different number of prizes i.e. 1, 2, 3, 4, 5, 7 and 8 (assume that all the students are of same school and same class) but not in same order.

I lives on third floor and has 4 prizes. There is only one floor in between the floors of J and I. The one, who has 5 prizes, lives three floors above I's floor. Prizes of K and floor number of K is same. Three students live between J and N, who has the maximum number of prizes. Two students live between K and M. Number of students who live above the one, who has 3 prizes, is one more than the number of students, who live below O, who has lowest number of prizes. M does not have 3 prizes.

Question 26: L has ___ prizes.
A) 7

B) 8

C) 2

D) 5

E) None of the above

Ans: D)

Solution:

L has 5 prizes.

Hence, option d.

Question 27: What is the absolute difference in number of prizes of M and J?
A) 1

B) 2

C) 4

D) 5

E) 3

Ans: A)

Solution:

J has 3 prizes and M has 2 prizes.

Difference = 3 – 2 = 1

Hence, option a.

Question 28: Who lives on the topmost and bottommost floors of the building respectively?
A) The one who has 7 prizes and J

B) The one who has 8 prizes and K

C) K and the one who has 8 prizes

D) O and the one who has 2 prizes

E) None of the above

Ans: C)

Solution:

K, who has 7 prizes, lives on the topmost floor and N, who has 8 prizes, lives on the ground floor.

Hence, option c.

Question 29: Who lives immediately below I's floor?
A) K

B) L

C) N

D) M

E) O

Ans: E)

Solution:

O lives immediately below I's floor.

Hence, option e.

Question 30: Which of the following statements is true?
A) K lives on 6th floor

B) M lives immediately below N's floor

C) L lives immediately above J's floor

D) O lives on an odd numbered floor

E) All are true

Ans: C)

Solution:

L lives immediately above J's floor.

Hence, option c.

Starting Point: Start with direct information we have i.e. I lives on third floor and has 4 prizes and then fix the position of J as there is only one floor in between the floor of J and I.

Clues: The one, who has 5 prizes, lives three floors above the I's floor. Three students live between J and N, who has the maximum number of prizes. Two students live between K and M. Prizes of K and floor number of K is same.

Inference: So, J either lives above or below the I. Also, K must have 7 prizes and also lives on 7th floor.

Case I: When J lives on 5th floor:

Floors	Students	Prizes
7	K	7
6		5
5	J	
4	M	
3	I	4
2		
1	N	8

Case II: When J lives on 1st floor:

Floors	Students	Prizes
7	K	7
6		5
5	N	8
4	M	
3	I	4
2		
1	J	

Clues: Number of students who live above the one, who has 3 prizes, is one more than the number of students, who live below O, who has lowest number of prizes. M does not have 3 prizes.

Inference: We cannot fix the one who has 3 prizes in case II as number of students who live above the one, who has 3 prizes, is one more than the number of students lives below O. So, case II is rejected.

The final arrangement is as follows:

Floors	Students	Prizes
7	K	7
6	L	5
5	J	3
4	M	2
3	I	4
2	O	1
1	N	8

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Question 31: If all the vowels in the word "DEPARTMENT" are replaced by their second preceding letter (in the alphabetical series) and then the letters are arranged in alphabetical order from the left end, then which among the following letter will be sixth from the left end of the word after rearrangement?

A) D

B) Y

C) P

D) T

E) None of the Above.

Ans: C)

Solution:
Given word: DEPARTMENT

After replacing the vowels: DCPYRTMCNT

After re-arrangement: CCDMNPRTTY

Therefore, the letter, which is sixth from the left end after rearrangement, is P.

Hence, option c.

Question 32: How many pairs of letters are there in the word 'CREMATING', each of which has as many letters between them in the word (in both forward and backward direction), as they have between them in English alphabetical series?
A) Five

B) Four

C) Three

D) Two

E) None of the above

Ans: B)

Solution:

Given: CREMATING

There are four pair of letters (CE, CI, EI, and IG), which has as many letters between them in the word (in both forward and backward direction) as they have between them in English alphabetical series.

Hence, option b.

Question 33: Four of the following five are related to each other in some way and thus formed a group. Choose the one which does not belong to that group?
A) KMPR

B) QSVX

C) CEHJ

D) IJKM

E) FHKM

Ans: D)

Solution:

Given options,

a.) KMPR: K + 2 = M + 3 = P + 2 = R

b.) QSVX: Q + 2 = S + 3 = V + 2 = X

c.) CEHJ: C + 2 = E + 3 = E + 2 = G

d.) IJKM: I + 1 = J + 1 = K + 2 = M

e.) FHKM: F + 2 = H + 3 = K + 2 = M

Hence, option d.

Directions (34–35): Answer the questions based on the information given below.

Seven players P, Q, R, S, T, U and V scored different runs in the cricket match. P scored more than Q but lesser than R. R scored 68 runs. S scored lesser than only T. The one who scored the minimum runs scored 30 runs and the one who scored the highest scored 80 runs. V scored 43 runs. U scored more than R.

Question 34: If P scores 45 runs, then how many players scored more than V?
A) Five

B) Three

C) Four

D) Two

E) Six

Ans: A)

Solution:

If P scores 45 runs which means V scores second lowest so, 5 players scored more than V.

Hence, option a.

Question 35: If total scores of T and U is 150, then, what may be the possible score of S?
A) 70

B) 69

C) 75

D) 65

E) 45

Ans: C)

Solution:

Total score scored by T and U is 150 i.e., T scored 80 runs and U scored 70 runs which means S scored less than T and more than U.

Hence, option c.

Common solution:

Clues:

1. P scored more than Q but less than R. R scored 68 runs.

Inferences:

R > P > Q

Clues:

1. S scored less score than only T.

2. V scored 43 runs.

3. U scored more than R.

Inferences:

So, S scored second highest runs. Also, V scored more than Q.

So, the final arrangement is as follows:

T(80) > S > U > R (68) > P/V > V/P > Q(30)

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