

BOB LBO Sample Paper

Directions (1-8): Read the following passage carefully and answer the questions given below them.

E-governance is the utilization of information and communication technology to enhance and streamline the functioning of government systems and processes. It encompasses various aspects, including the use of digital platforms, internet-based applications, and electronic services to deliver government information, engage with citizens, and facilitate efficient decision-making. E-governance plays a **pertinent** role in transforming traditional government operations into more transparent, accountable, and citizen-centric systems. One fundamental aspect of e-governance is the provision of online services. Through web portals and mobile applications, citizens can access a wide range of government services anytime, anywhere. Another important aspect of e-governance is digital participation and engagement. This empowers citizens to monitor and scrutinize government actions, fostering a culture of openness and trust. Additionally, e-governance also helps in data-driven decision-making. With the availability of large volumes of digital data, governments can employ data analytics and artificial intelligence to gain insights and make informed policy decisions.

While e-governance offers numerous benefits, it also poses several challenges that need to be addressed for its successful implementation. One of the primary challenges is bridging the digital divide, which refers to the gap between individuals and communities with access to technology and those without. E-governance relies heavily on digital infrastructure and internet connectivity, and lack of access can exclude marginalized populations, rural areas, and economically disadvantaged groups. Governments must ensure equitable access to technology and invest in initiatives that promote digital literacy to overcome this challenge. Additionally, e-governance involves the collection, storage, and exchange of vast amounts of **sensitive** data. This poses significant cybersecurity and privacy risks. Governments must implement robust security measures to safeguard citizens' personal information and protect against cyber threats. Strengthening data protection laws, implementing secure authentication mechanisms, and conducting regular security audits are essential steps in mitigating these challenges. Furthermore, shifting from traditional governance practices to e-governance requires a cultural and mindset change among government officials, employees, and citizens. Also, resistance to change, fear of job loss, and lack of awareness about the benefits of e-governance can hinder its adoption. Therefore, governments must invest in comprehensive training programs to build digital skills and educate stakeholders about the advantages of e-governance. However, the future scope of e-governance is promising, with several potential advancements and opportunities. The Internet of Things (IoT) can play a significant role in e-governance by connecting devices, sensors, and infrastructure to improve service delivery and decision-making. Smart governance involves the _____ of various technologies, such as IoT, AI, and data analytics, to create interconnected and efficient systems. Smart cities, smart transportation, and smart infrastructure will become key components of e-governance, resulting in improved urban planning, resource management, and citizen engagement.

Q1. How can the Internet of Things (IoT) contribute to the advancement of e-governance based on the information given in the passage?

- (I) IoT-generated data can be leveraged for predictive analytics and modeling, enabling governments to make data-driven decisions.
- (II) IoT technology can assist in monitoring environmental conditions, such as air quality, water levels, and energy consumption.
- (III) IoT can enhance regulatory compliance by increasing transparency in governance and promoting economic outputs as a result.

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- (a) Only (I)
 - (b) Only (II)
 - (c) Only (I) and (III)
 - (d) Only (I) and (II)
 - (e) All (I), (II) and (III)

Q2. What is/are the potential risk(s) associated with the collection and storage of sensitive data in e-governance?

- (I) Data retention and disposal policies that are insufficient can lead to unnecessary prolongation of data retention periods.
- (II) Collecting and storing sensitive data raises concerns about the privacy and confidentiality of individuals' information.
- (III) Cybercriminals can attempt to gain unauthorized access to e-governance systems, compromising sensitive data and disrupting government operations.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (II) and (III)
- (e) All (I), (II) and (III)

Q3. Based on the information given in the passage, what is/are the factor(s) that can hinder the adoption of e-governance?

- (I) Insufficient digital skills and literacy among citizens and government personnel can limit their ability to effectively use and benefit from e-governance services.
- (II) Resistance from government officials, employees, or citizens who are accustomed to traditional governance processes can impede the adoption of e-governance.
- (III) Bureaucratic processes, rigid hierarchies, and entrenched administrative procedures can hinder the agility required for successful e-governance implementation.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (I) and (II)
- (e) All (I), (II) and (III)

Q4. How would you describe the author's approach after reading the passage comprehensively?

- (a) invidious
- (b) expository
- (c) preferential
- (d) mordant
- (e) indistinct

Q5. Which of the following words can fit grammatically and contextually into the blank given in the passage?

- (a) tempering
- (b) palliating
- (c) rescinding
- (d) coalescing
- (e) ordaining

Q6. What is digital participation and engagement in the context of e-governance as mentioned in the given passage?

- (a) Governments can conduct surveys and polls to gather public opinion on specific issues, facilitating citizen engagement in decision-making processes.
- (b) Governments may seek public input and involvement in drafting policies, laws, and regulations through online platforms, ensuring diversity of perspectives.
- (c) Digital platforms allow citizens to monitor government actions, access public records and track progress on projects as well.
- (d) It enables citizens to collaborate and participate in discussions, forums, and online communities to share ideas and address concerns.
- (e) None of these

Q7. Which of the following words is similar in meaning to the word “pertinent” as per the given passage?

- (a) strenuous
- (b) pregnable
- (c) felicitous
- (d) contented
- (e) None of these

Q8. Which of the following words is opposite in meaning to the word “sensitive” as per the given passage?

- (a) precarious
- (b) impervious
- (c) inimical
- (d) malignant
- (e) None of these

Directions (9-13): In the following paragraph, some words are missing, and for each blank, five options are given. Select the correct option that is both grammatically and contextually accurate.

Waste management is _____ **(A)** _____ for fostering environmental sustainability and ensuring the well-being of humans. Proper waste management offers numerous benefits to society. Firstly, it helps minimize pollution by preventing _____ **(B)** _____ substances from contaminating air, water, and soil. This protects both the ecosystem and human health. Additionally, effective waste management _____ **(C)** _____ the consumption of resources through recycling and reusing materials, conserving energy and reducing greenhouse gas emissions. It also creates economic opportunities by promoting the growth of recycling industries and generating employment. Moreover, proper waste disposal reduces the _____ **(D)** _____ of disease transmission and enhances public health by preventing the proliferation of harmful bacteria and pests. Overall, investing in waste management leads to cleaner environments, resource conservation, improved public health, and a _____ **(E)** _____ future for generations to come.

Q9. (a) vestigial
(b) cardinal
(c) rambling
(d) vagrant
(e) primeval

Q10. (a) wretched
(b) dolorous
(c) exuberant
(d) perilous
(e) instigated

Q11. (a) abridges
(b) mitigates
(c) deciphers
(d) prolongs
(e) expounds

Q12. (a) delectation
(b) euphoria
(c) rapture
(d) menace
(e) chagrin

Q13. (a) repugnant
(b) giveaway
(c) salubrious
(d) contemptible
(e) vexatious

Directions (14-17): Each question consists three sentences which may or may not have errors. Mark the correct sentence(s) as your answer. If there is no correct sentence, then mark "All sentences are incorrect" as the correct answer.

Q14. (I) The ethereal beauty of the moonlit night cast a magical aura over the quiet forest.
(II) If I were to experience the exhilaration of winning the lottery, I used the money to fulfill my dream.
(III) Technology has become so ubiquitous that it's hard to imagine a world without smartphones.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (III)
(e) All sentences are incorrect

Q15. (I) Would faced with adversity, true resilience is displayed by those who rise above challenges.

(II) By sheer serendipity, I stumbled up an old diary that revealed long-forgotten family secrets.

(III) The mysterious puzzle posed an enigma that require keen intellect and critical thinking to solve.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (I) and (II)
- (e) All sentences are incorrect

Q16. (I) Despite facing adversity, her resilience allowed her to bounce back and rebuild her life.

(II) Should you embarked on a quixotic quest, be prepared to face challenges and setbacks.

(III) The elation of winning the championship filled the team with an overwhelming sense of joy.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (I) and (III)
- (e) All sentences are incorrect

Q17. (I) The politician delivered an eloquent speech that resonate the hearts and minds of the listeners.

(II) His quixotic pursuit of impossible dreams often led to disappointment, but he never gave up.

(III) If I were to possess the eloquence of a poet, my words would flow like a gentle stream.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (II) and (III)
- (e) All sentences are incorrect

Directions (18-22): In each sentence, some portion is in bold, which may or may not need improvement. Choose the correct replacement for that portion that makes the sentence grammatically and contextually correct. If the sentence is correct as it is, then mark "No improvement required".

Q18. Given the circumstances, it might have prudent to seek legal advice before making any decisions.

- (a) it might get prudent to seek
- (b) it has been prudent to seek
- (c) it might be prudent to seek
- (d) it caused to prudent to seek
- (e) No improvement required

Q19. Unless you practice regularly, **it will not be challenging to** improve your skills in playing the piano.

- (a) it can't be challenging to
- (b) it will be challenging to
- (c) it could have challenged to
- (d) it is not to be challenging
- (e) No improvement required

Q20. **If he were to apologize** sincerely, I might consider giving him a second chance.

- (a) If he is to apologize
- (b) If he have to apologize
- (c) If he made to apologize
- (d) If he seem to apologize
- (e) No improvement required

Q21. Assuming the traffic is light, **we can be arrived at the airport** in less than an hour.

- (a) we should be arriving the airport
- (b) we would arrive into the airport
- (c) we might be arrive to the airport
- (d) we should arrive at the airport
- (e) No improvement required

Q22. Unless you take the first step, **you will ever know what** amazing opportunities lie ahead.

- (a) you will ever know while
- (b) you will never know what
- (c) you will never know when
- (d) you will ever know for
- (e) No improvement required

Directions (23-25): In each of the following questions, a word is given in bold, and correspondent to it, three sentences are given using that word. Choose the sentence(s) where the correct usage of the word is done.

Q23. Ineffable

- (I) The beauty of the sunset over the ocean was **ineffable**, leaving us speechless in its breathtaking grandeur.
- (II) The novel contained an **ineffable** sense of mystery and wonder, drawing readers into a world of enchantment.
- (III) Words seemed insufficient to describe the **ineffable** joy that filled her heart when she held her newborn baby for the first time.

- (a) Only (I)
- (b) Only (II)
- (c) Only (III)
- (d) Only (I) and (II)
- (e) All (I), (II) and (III)

Q24. Euphonious

(I) The wind rustling through the leaves of the trees produced a **euphonious** whisper, creating a peaceful atmosphere.

(II) The singer's **euphonious** voice filled the concert hall, captivating the audience with its melodious tones.

(III) She surprised her friends with her **euphonious** visit, showing up at their doorstep unannounced and bringing smiles to their faces.

(a) Only (I)

(b) Only (II)

(c) Only (III)

(d) Only (I) and (II)

(e) All (I), (II) and (III)

Q25. Soporific

(I) The gentle rocking motion of the train had a **soporific** effect, lulling the tired passengers into a deep sleep.

(II) The monotony of the professor's lecture had a **soporific** effect on the students, making it hard for them to stay awake.

(III) The soft, ambient music playing in the spa had a **soporific** quality, helping clients relax and unwind.

(a) Only (I)

(b) Only (II)

(c) Only (III)

(d) Only (I) and (II)

(e) All (I), (II) and (III)

Directions (26-30): In each question, four words are given in bold, in which one of them might be misspelt or grammatically incorrect. Choose the incorrect word as your answer. If all the words are correct, mark (e) i.e. No correction required.

Q26. Despite knowing the **magnitude (A)** of prompt action, he **succumbed (B)** to the irresistible temptation of **procrastination (C)**, leading to the unfortunate **consequence (D)** of a missed opportunity.

(a) A

(b) B

(c) C

(d) D

(e) No correction required

Q27. The CEO's **ostentatious (A)** display of wealth masked his **clandestine (B)** efforts to **disseminate (C)** information about the company's **impending (D)** merger.

(a) A

(b) B

(c) C

(d) D

(e) No correction required

Q28. The team faced a **conundrum (A)**, struggling to find a **congent (B)** solution to the **myriad (C)** of challenges they **encountered (D)** during the project.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No correction required

Q29. The lecturer presented an **abstruse (A)** theory to the students, **challenging (B)** them to have an **epiphany (C)** and **unravel (D)** its complexities.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No correction required

Q30. With **alarcity (A)**, the reticent scientist **purveyed (B)** his **nebulous (C)** findings to the scientific community, **prompting (D)** further exploration and analysis.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No correction required

Directions (31-35): Study the following information carefully and answer the questions given below:

Eight persons of a family sit around circular table, in such a way some are facing inside some are facing outside the table. There are of three generations and three married couples in this family.

V's son sits third to the left of V. R is the son-in-law of T and sits third to the left of T who is an immediate neighbour of V. R is not an immediate neighbour of V's son. Two persons sit between T and the grandmother of U. Z is the niece of W who is the son of X. As many persons sit between W and V as same as sit W and W's sister. V is the sister-in-law of S who has only one daughter. T sits second to the right of Z who is not the sibling of U. W's mother and his wife face each other. There is no single parent in the family. R's wife sits immediate left of U. S and R facing same direction as V but opposite to W. R is not the husband of V.

Q31. Who among the following sits opposite to R's daughter?

- (a) S's husband
- (b) T's wife
- (c) V's husband
- (d) Z's cousin
- (e) None of these

Q32. How many persons sit between T and his wife?

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) Either two or Four

Q33. If K is daughter-in-law of W, then how many persons sit between K's husband and R, when counted left of R?

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) None of these

Q34. Which of the following information is true?

- I.** W is brother-in-law of R.
 - II.** Three persons sit between V and her mother-in-law
 - III.** T's daughter sit opposite to T
- (a) Only II and III
 - (b) Only I and II
 - (c) Only II
 - (d) Only I and III
 - (e) All are true

Q35. Who among the following sits second to the right of the one who sits opposite to T's granddaughter?

- (a) W
- (b) X
- (c) S
- (d) R
- (e) None of these

Directions (36-37): In each of the questions given below some statements are followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which conclusions logically follow from the given statements, disregarding commonly known facts.

Q36. Statements:

Only a few Donut is Pizza
No Pizza is Cake
Only Cake is Burger
Some Fries is Cake

Conclusion:

- I. Some Burger is Donut is a possibility
- II. All Donut can be Fries
- III. Some Cake is Donut
- (a) Only I follows
- (b) Only II follows
- (c) Only II and III follow
- (d) All follow
- (e) None follows

Q37. Statements:

- Only a few Flower is Fruit
- Some Fruit are Leaves
- Only a few Leaves is Tree
- No Tree is Root

Conclusion:

- I. All Flower being Tree is a possibility
- II. All Fruit is Root
- III. Some Fruit is not Root
- (a) Only I and II follows
- (b) Only I and either II or III follows
- (c) Only III follows
- (d) Only II and III follows
- (e) None follows

Directions (38-40): Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement are sufficient to answer the question. Read both the statements and give answer:

- (a) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
- (b) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
- (c) If the data either in statement I alone or in statement II alone are sufficient to answer the question.
- (d) If the data even in both statements I and II together are not sufficient to answer the question.
- (e) If the data in both statement I and II together are necessary to answer the question.

Q38. Six persons are sitting around a circular table, some are facing inside while some are facing outside the table. Who among the following sits third to the right of C?

- I. E sits two persons away from D. F is neither an immediate neighbour of E nor C. A sits second to the left of F. C and F face inside.
- II. E sits three persons right of F and immediate left of A. C sits immediate left of B. E sits second to the right of D and faces same direction as D. F facing inside.

Q39. Seven persons purchase watches one after the other. How many persons purchase watches between R and U?

- I. P purchases watch either first or last number. Three persons purchase watches between R and P. S purchase watch immediate before V but after U.
II. Q is the fourth person who purchase the watch. Only two persons purchase watches between Q and V. R purchases watch after Q but before S. Three persons purchase watches between S and U. U purchases watch neither immediate after nor immediate before Q.

Q40. What does the code 'cd' stand for in the given coded language?

- I. In a language, 'Fish shark danger' is coded as 'am nl or' and 'sea water creature' is coded as 'st pa od'
II. In the language, 'whale water fish' is coded as 'pa am cd' and 'sea ship pirates' is coded as 'az od er'

Q41. Statement: In the wake of a recent railway accident, the railway minister announced that an inquiry committee has been set up to investigate the cause of the accident. He also stated that new safety measures would be implemented to prevent such incidents in the future.

Which of the following can be assumed from the above statement?

- (I) The recent railway accident was due to the negligence of railway staff.
(II) The government is concerned about railway safety.
(III) Implementation of new safety measures will prevent all future railway accidents.
(a) Only I and II
(b) Only II
(c) Only I and III
(d) Only III
(e) Only I

Directions (42-43): Read the given information carefully and answer the following questions.

X&Y (10)- X is 13m in north of Y

X%Y (13)- X is 16m in south of Y

X@Y (6)- X is 9m in east of Y

X#Y (21)- X is 24m in west of Y

S@R (7), W&T (9), I%L (6), L#R (2), T@I (6)

Q42. What is the direction and shortest distance of point W with respect to point S?

- (a) 5m, South-west
(b) $\sqrt{45}$ m, North-east
(c) 7m, South-East
(d) 6m, North
(e) None of these

Q43. If Point A is 12m west of point W then what is the direction of A with respect to I?

- (a) South-east
(b) North-west
(c) North-east
(d) South-west
(e) None of these

Directions (44-45): In the following questions, the symbols #, *, ^, @ and \$ are used with the following meaning as illustrated below-

'P#Q' means 'P is not greater than Q'

'P*Q' means 'P is neither equal to nor smaller than Q'

'P^Q' means 'P is not smaller than Q'

'P@Q' means 'P is neither smaller than nor greater than Q'

'P\$Q' means 'P is neither greater than nor equal to Q'

Now in each of the following questions assuming the given statement to be true, find which of the conclusions given below them is/are definitely true and give your answer accordingly.

Q44. Statements: K # H @ G ^ D * F \$ C

Conclusions:

I. K \$ F

II. D * K

(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.

Q45. Statements: Z # X @ U * Q @ R \$ Y

Conclusions:

I. Q * Z

II. Y * Q

(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.

Directions (46-47): Find the wrong number in the following number series.

Q46. 3, 5, 18, 72, 360, 2160, 15120

(a) 3

(b) 5

(c) 18

(d) 2160

(e) 360

Q47. 80, 81, 82, 86, 95, 111, 136

(a) 80

(b) 81

(c) 82

(d) 86

(e) 111

Directions (48-52): Read the table carefully and answer the following questions.

In coming elections there are five parties going for election in UP state in 2021. following the table shows percentage distribution number of voters vote for different parties and ratio of male to female who vote for different parties.

Total number of voters	Percentage of voters given their vote	Male: Female
BJP	9X%	2:1
Congress	8X%	5:3
AAP	20%	1:1
Shiv Sena	X%	3:1
Samajwadi party	2X%	15:1

Note: Total population = 100000

Ratio of total male and total female = 129:71

Q48. The voters vote for BJP party is how much percent more than the voters vote for shiv sena and samajvadi party together.

- (a) 200%
- (b) 20%
- (c) 2%
- (d) 10%
- (e) 5%

Q49. Find the ratio of female voters vote for BJP and AAP together to the male voters vote for Samajvadi party and Shiv Sena.

- (a) 21:44
- (b) 44:21
- (c) 55:1
- (d) 11:9
- (e) 21:23

Q50. Find two-third number of voters vote for BJP is how much percent of 40% of male voters vote for congress.

- (a) 10%
- (b) 30%
- (c) 300%
- (d) 50%
- (e) 55%

Q51. In 2020 the number of female voters from UP is 20% less than number of female voters in 2021. Find the female voters voted in 2020 is how much more than the voters for AAP party in 2021.

- (a) 1234
- (b) 2204
- (c) 2200
- (d) 8400
- (e) 8000

Q52. 5% and 6% voters vote for AAP and BJP declared invalid Because of the EDM machine than find the no. of valid vote voted by the voters to same parties.

- (a) 76577
- (b) 57649
- (c) 76543
- (d) 58240
- (e) 52840

Q53. There was 189 liters pure milk in a container. $\frac{3}{7}$ th of milk was replaced with water in the container. Again $\frac{2}{9}$ th of the mixture is extracted and equal amount of water is added. What is the ratio of water and milk in the final mixture?

- (a) 4:5
- (b) 5:4
- (c) 7:6
- (d) 6:7
- (e) None of these

Q54. The ratio of the length to breadth of a rectangle is 5:4 and the perimeter of the rectangle is 108 cm. find the area of the rectangle.

- (a) 720 cm^2
- (b) 640 cm^2
- (c) 167 cm^2
- (d) 290 cm^2
- (e) 567 cm^2

Q55. 3 years ago, the average age of A, B and C is 36 years and the sum of ages of A and B after 2 years is 76 years. If C is 6 years younger than A, find the age of B.

- (a) 8 years
- (b) 10 years
- (c) 17 years
- (d) 21 years
- (e) 22 years

Q56. A man invested Rs. Q in scheme Z at the rate of 10% p.a. on compound annually for two years. Man invested total amount received from scheme Z in another scheme K at the rate of 12% p.a. on simple interest for 2 years. Find interest received from scheme K is what percent of interest received from scheme Z?

- (a) 144%
- (b) 122%
- (c) 189%
- (d) 162%
- (e) 138%

Q57. 14 men and 10 women can complete 80% of work in 20 days. If six men joined and 3 women left the work, then they could finish 60% of the same work in 15 days, then find the time taken by 25 women to complete the four times of the same work?

- (a) 40 days
- (b) 55 days
- (c) 25 days
- (d) 68 days
- (e) 120 days

Q58. A shopkeeper marked up of article A at 40% above its cost price and sold it at the discount of 20%. Profit made by shopkeeper on article A is Rs.216. If the cost price of article B is 60% more than that of article A and profit on both articles is same, then find the selling price of article B?

- (a) Rs.4200
- (b) Rs.1270
- (c) Rs.2890
- (d) Rs.1100
- (e) Rs.3096

Directions (59-60): Find the value of question mark(?) in the following questions below. You are not expected to find the exact value.

Q59. $159.87\% \text{ of } 150.05 - ?^2 + 299.99 = 10.90$

- (a) 45
- (b) 56
- (c) 23
- (d) 31
- (e) none of these

Q60. $\sqrt{3.79 \times 13.09 \times 12.88} - 35\% \text{ of } 119.98 + ? = 330.03$

- (a) 346
- (b) 443
- (c) 243
- (d) 534
- (e) 222

Solutions

S1. Ans.(a)

Sol. Based on the information given in the sixth line of the third paragraph, **only statement (I) is correct.** The passage states that IoT can contribute to the advancement of e-governance by providing valuable data that can be used for making informed decisions. This suggests that IoT-generated data can be leveraged for predictive analytics and modeling, enabling governments to make data-driven decisions.

However, there is no specific mention of IoT technology assisting in monitoring environmental conditions or enhancing regulatory compliance and promoting economic outputs, as stated in statements (II) and (III) respectively. Therefore, only statement (I) is coherent with the information provided.

S2. Ans.(d)

Sol. Based on the information given in the seventh line of the second paragraph, **option (d) is correct.** E-governance, which involves the collection, storage, and exchange of large volumes of sensitive data, presents significant cybersecurity and privacy risks. The vast amount of data being handled increases the potential attack surface for cybercriminals, making e-governance systems attractive targets. The sensitive nature of the data, which may include personal information, government records, or financial details, raises concerns about privacy and confidentiality.

The passage states that collecting and storing sensitive data in e-governance raises concerns about privacy and confidentiality (**statement II**) and that cybercriminals can attempt to gain unauthorized access, compromising sensitive data and disrupting government operations (**statement III**). These two statements are coherent with the information provided.

However, statement (I) is not supported by the given information. The passage does not mention anything about data retention and disposal policies being insufficient or leading to unnecessary prolongation of data retention periods. Therefore, option (d) is the correct choice.

S3. Ans.(d)

Sol. Among the given alternatives, **option (d) is correct** based on the information given in the starting lines of the third paragraph. The passage explains that the adoption of e-governance requires a cultural and mindset change among government officials, employees, and citizens. This implies that there may be resistance to this change due to people being accustomed to traditional governance practices, leading to **option (II)** being a factor that can hinder e-governance adoption.

Additionally, the passage mentions that resistance to change, fear of job loss, and lack of awareness about the benefits of e-governance can also hinder its adoption. This aligns with **option (I)**, as insufficient digital skills and literacy among citizens and government personnel can contribute to a lack of awareness and ability to effectively use and benefit from e-governance services.

Regarding statement (III), the passage does not explicitly mention bureaucratic processes, rigid hierarchies, and entrenched administrative procedures as factors that can hinder the adoption of e-governance. Therefore, statement (III) is not supported by the given information and is incoherent.

S4. Ans.(b)

Sol. The author's approach, after reading the passage comprehensively, can be described as **expository**. The term "expository" means presenting facts, describing concepts, and offering a comprehensive overview without expressing personal opinions or biases. The passage provides an objective and informative description of e-governance, its benefits, challenges, and future prospects. The author presents a balanced view of the subject matter, explaining the various aspects of e-governance and highlighting both its advantages and potential obstacles.

While the other options are incorrect due to the following reasons:

(a) Invidious: The author's approach is not invidious because he does not unfairly criticize or attack any specific group or viewpoint. The passage focuses on presenting information rather than making negative judgments or comparisons.

(c) Preferential: The author's approach is not preferential because he does not show a bias towards a specific viewpoint or favor one approach over another. In fact, he presents a comprehensive overview of e-governance without promoting any particular agenda.

(d) Mordant: The author's approach is not mordant because it does not display a biting or sarcastic tone. The tone is informative and objective throughout the passage.

(e) Indistinct: The author's approach is not indistinct because he provides clear explanations and examples to convey the concepts of e-governance, its benefits, challenges, and future scope. The passage is structured and organized, allowing the reader to understand the main points being discussed.

S5. Ans.(d)

Sol. The word that can fit both grammatically and contextually into the blank in the passage is **(d) coalescing**. This word means to come together or unite to form a whole. In the context of the passage, it accurately conveys the idea of combining various technologies like IoT, AI, and data analytics to create interconnected and efficient systems for smart governance.

(a) tempering: This word means to modify or adjust something to achieve a desired outcome or to make it less extreme. In the context of the passage, it does not fit well because it does not accurately convey the idea of combining technologies.

(b) palliating: This word means to alleviate or ease the severity of something, typically a problem or symptom. It does not fit in the context of the passage because it does not convey the idea of combining technologies to create interconnected systems.

(c) rescinding: This word means to revoke, cancel, or repeal something, typically a law, order, or decision. It does not fit in the context of the passage because it does not relate to combining technologies for smart governance.

(e) ordaining: This word means to officially establish or decree something, typically in a religious or formal context. It does not fit in the context of the passage because it does not convey the idea of combining technologies for smart governance.

S6. Ans.(c)

Sol. Among the given alternatives, **option (c) is the right answer choice** based on the information given in the eighth line of the first paragraph. In the given passage, it is stated that digital participation and engagement empower citizens to monitor and scrutinize government actions, fostering a culture of openness and trust. This implies that digital platforms allow citizens to monitor government actions, access public records, and track progress on projects. Therefore, option (c) accurately reflects the statement made in the passage and describes the concept of digital participation and engagement in the context of e-governance.

On the other hand, the rest of the statements are incoherent based on the information provided in the given passage.

S7. Ans.(c)

Sol. Based on the given options, the word that is most similar in meaning to "pertinent" is **(c) felicitous**. "Pertinent" means relevant or applicable to a particular matter, and "felicitous" means well-suited or appropriate. Both words convey the idea of something being fitting or applicable in a given context. The other options, (a) strenuous, (b) pregnable, and (d) contented, do not have similar meanings to "pertinent."

(a) Strenuous: Involving or requiring great effort, energy, or exertion.

(b) Pregnable: Capable of being penetrated, breached, or entered; vulnerable to attack or invasion.

(d) Contented: Feeling or showing satisfaction, happiness, or fulfillment.

S8. Ans.(b)

Sol. The word that is the opposite of "sensitive" as per the given passage is **(b) impervious**. "Sensitive" refers to being easily affected, influenced, or responsive to something, while "impervious" means not allowing passage or not capable of being affected or influenced by something. Therefore, if something is impervious, it is not sensitive. The other options, (a) precarious, (c) inimical, and (d) malignant, do not have opposite meanings to "sensitive."

(a) Precarious: Dependent on uncertain or unstable circumstances; characterized by a lack of security or stability.

(c) Inimical: Tending to obstruct, harm, or act against; unfriendly, hostile, or antagonistic in nature.

(d) Malignant: Having an evil or harmful nature; tending to cause harm, damage, or illness.

S9. Ans.(b)

Sol. Waste management is **cardinal** for fostering environmental sustainability and ensuring the well-being of humans.

Explanation: The word "cardinal" means essential or fundamental. In the context of waste management, it emphasizes the importance of proper waste management in achieving environmental sustainability and protecting human well-being.

Vestigial: Remaining as a small or insignificant part, no longer serving a purpose.

Rambling: Moving or talking in a lengthy and unfocused way.

Vagrant: A person without a settled home or regular work.

Primeval: Relating to the earliest ages or periods.

S10. Ans.(d)

Sol. Proper waste management offers numerous benefits to society, firstly, it helps minimize pollution by preventing **perilous** substances from contaminating air, water, and soil.

Explanation: The word "perilous" means dangerous or risky. In the context of waste management, it highlights the importance of preventing hazardous substances from polluting the environment.

Wretched: Extremely unhappy or of poor quality.

Dolorous: Expressing or causing sorrow or pain.

Exuberant: Full of energy, excitement, or enthusiasm.

Instigated: Started or initiated an action.

S11. Ans.(b)

Sol. Additionally, effective waste management **mitigates** the consumption of resources through recycling and reusing materials, conserving energy and reducing greenhouse gas emissions.

Explanation: The word "mitigates" means reduces or lessens. In the context of waste management, it emphasizes how proper waste management helps to decrease the use of resources and contribute to resource conservation.

Abridges: Shortens or reduces in duration.

Deciphers: Converts something into a form that can be understood or interpreted.

Prolongs: Extends the duration or existence of something.

Expounds: Explains or presents in detail.

S12. Ans.(d)

Sol. Moreover, proper waste disposal reduces the **menace** of disease transmission and enhances public health by preventing the proliferation of harmful bacteria and pests.

Explanation: The word "menace" refers to a threat or danger. In the context of waste management, it highlights the role of proper waste disposal in reducing the risk of disease transmission and promoting public health.

Delectation: Delight or enjoyment.

Euphoria: A feeling of intense happiness or excitement.

Rapture: A state of intense joy or pleasure.

Chagrin: Distress or embarrassment caused by failure or disappointment.

S13. Ans.(c)

Sol. Overall, investing in waste management leads to cleaner environments, resource conservation, improved public health, and a **salubrious** future for generations to come.

Explanation: The word "salubrious" means health-giving or beneficial. In the context of waste management, it suggests that investing in proper waste management contributes to a healthy and beneficial future for future generations.

Repugnant: Extremely distasteful or unacceptable.

Giveaway: Something given free or with little effort.

Contemptible: Deserving of scorn or disrespect.

Vexatious: Annoying or causing irritation.

S14. Ans.(d)

Sol. The correct answer is (d) Only (I) and (III) are correct, while (II) is incorrect.

In sentence (I), "The ethereal beauty of the moonlit night cast a magical aura over the quiet forest," there are no apparent errors. The sentence effectively conveys the idea of the moonlit night adding a magical aura to the quiet forest.

In sentence (II), "If I were to experience the exhilaration of winning the lottery, I used the money to fulfill my dream," there is an error in verb tense consistency. The correct form of the verb should be "I would use" instead of "I used" to maintain the conditional structure of the sentence. So, this sentence is incorrect.

In sentence (III), "Technology has become so ubiquitous that it's hard to imagine a world without smartphones," there are no apparent errors. The sentence effectively expresses the idea that technology, particularly smartphones, is so prevalent in today's world that it's difficult to envision a world without them.

Therefore, only sentences (I) and (III) are correct, while sentence (II) is incorrect due to the incorrect verb tense usage.

Explanation for Sentence (II):

The grammatical rule that applies to sentence (II) is the rule of verb tense consistency in conditional statements. In conditional sentences, such as the one in sentence (II), there needs to be proper agreement between the verb forms used in the "if" clause and the main clause.

In this case, the verb form "were" is used in the "if" clause, which indicates a hypothetical or unreal situation. However, the verb form "used" is used in the main clause, which is in the simple past tense. This creates a mismatch in verb tense, making the sentence grammatically incorrect.

To maintain verb tense consistency in conditional statements, the correct form of the verb in the main clause should be in the conditional mood. In this case, it should be "I would use" instead of "I used." This maintains the hypothetical nature of the statement and ensures grammatical accuracy.

S15. Ans.(e)

Sol. All three sentences are incorrect. Here's an explanation for each sentence:

Sentence (I): This sentence contains grammatical errors and does not convey the intended meaning clearly. It seems to be a conditional statement, but the usage of "would faced" is incorrect. A correct version could be "When faced with adversity, true resilience is displayed by those who rise above challenges."

Sentence (II): The phrase "stumbled up" is incorrect. The correct phrase is "stumbled upon." Here, "stumbled upon" is a phrase that means to unexpectedly discover or come across something, often by chance or accident. It implies finding something unexpectedly while not actively searching for it.

In sentence (III), "required" would be the correct verb form to maintain tense consistency with "posed." However, the sentence mistakenly uses the verb form "require" instead of "required," which is incorrect. Furthermore, the past tense verb "required" matches the past tense context of the sentence, indicating that the puzzle demanded keen intellect and critical thinking to solve.

S16. Ans.(d)

Sol. Among the given alternatives, only sentences (I) and (III) are correct, while sentence (II) is incorrect. Here's an explanation for each sentence:

Sentence (I): This sentence is correct. It effectively communicates the idea that despite encountering challenges, the person demonstrated resilience and was able to recover and reconstruct her life. The sentence structure and grammar are appropriate, conveying the intended meaning clearly.

Sentence (II): This sentence is incorrect due to the use of "embarked" instead of "embark." Here's the grammatical explanation:

In conditional sentences where "should" is used to express a hypothetical or advisable situation, the verb that follows "should" should be in its base form (infinitive form without "to"). In this case, the correct form should be "Should you embark on a quixotic quest, be prepared to face challenges and setbacks."

In short, the sentence "Should you embark on a quixotic quest, be prepared to face challenges and setbacks" conveys the idea that if someone decides to pursue an idealistic or impractical quest, they should be ready to encounter difficulties and obstacles along the way. It emphasizes the need for preparedness and resilience in the face of challenging endeavors.

Sentence (III): This sentence is correct. It conveys the idea that the team experienced intense joy and a profound feeling of happiness after winning the championship. The sentence structure, vocabulary, and grammar are appropriate, effectively expressing the intended meaning.

Therefore, only sentences (I) and (III) are correct, while sentence (II) contains a verb inconsistency.

S17. Ans.(d)

Sol. Among the given alternatives, only sentences (II) and (III) are correct, while sentence (I) is incorrect.

In sentence (I), the verb "resonate" should be changed to "resonated with" to maintain grammatical accuracy. The sentence should read, "The politician delivered an eloquent speech that resonated with the hearts and minds of the listeners."

By using "resonated with," the sentence correctly conveys that the speech had an impact and created a connection or resonance with the listeners. The past tense form "resonated" is appropriate as it indicates that the resonance occurred in the past.

On the other hand, both sentences (II) and (III) are correct. Their sentence structure, vocabulary and grammar are appropriate, conveying the intended meanings clearly.

Therefore, only sentences (II) and (III) are correct, while sentence (I) contains an error.

S18. Ans.(c)

Sol. The highlighted part in the given sentence, "it might have prudent to seek," is incorrect because it lacks the appropriate verb form and does not convey the intended meaning. The correct replacement for this part is option (c), "it might be prudent to seek."

Option (a) "it might get prudent to seek" is grammatically incorrect. The phrase "get prudent" does not make sense in this context.

Option (b) "it has been prudent to seek" suggests that seeking legal advice was prudent in the past, but it does not convey the sense of possibility or uncertainty as implied.

Option (d) "it caused to prudent to seek" is grammatically incorrect. The word "caused" does not fit the context, and the phrase "to prudent to seek" is not a correct construction.

Therefore, **the correct replacement is option (c)** "it might be prudent to seek" because it conveys the appropriate meaning of possibility or uncertainty and maintains the grammatical integrity of the sentence.

S19. Ans.(b)

Sol. The highlighted part in the given sentence, "it will not be challenging to," is incorrect because it negates the intended meaning. The correct replacement for this part is option (b), "it will be challenging to."

Option (a) "it can't be challenging to" also negates the meaning and contradicts the context. The sentence intends to convey that improving piano skills will be challenging without regular practice, so using "can't" contradicts this idea.

Option (c) "it could have challenged to" is grammatically incorrect and does not convey the intended meaning. The phrase "could have challenged to" does not fit logically in the sentence and is not a valid construction.

Option (d) "it is not to be challenging" changes the meaning of the sentence. The original sentence suggests that without regular practice, improving piano skills will indeed be challenging. However, option (d) suggests that it is not supposed to be challenging, which contradicts the intended meaning. Therefore, **the correct replacement is option (b)** "it will be challenging to" because it maintains the intended meaning that without regular practice, improving piano skills will be difficult.

S20. Ans.(e)

Sol. The highlighted part in the given sentence, "**If he were to apologize sincerely,**" is correct. Therefore, no improvement is required. The use of "were" in the subjunctive mood is appropriate in this context. It suggests a hypothetical or contrary-to-fact condition, indicating that the speaker is imagining a scenario that has not actually happened. This construction is commonly used to express conditional statements.

Detailed Explanation:

In the sentence "If he were to apologize sincerely, I might consider giving him a second chance," the use of "were" is in the subjunctive mood and is correct for expressing a hypothetical or contrary-to-fact condition.

In English, the subjunctive mood is used to express hypothetical or unreal conditions, wishes, or suggestions. It often appears in conditional sentences, where the condition being discussed is not a fact or reality. The subjunctive form of the verb "to be" in the past tense is "were" for all persons (I, he, she, it, we, they).

In this specific sentence, "were" is used to indicate a hypothetical scenario or condition. It suggests that the person apologizing sincerely is not a current or factual situation but a hypothetical one. The speaker is imagining a situation in which the person apologizes sincerely, but it has not actually happened yet.

S21. Ans.(d)

Sol. The highlighted part in the given sentence, "we can be arrived at the airport," is incorrect because it uses an incorrect verb form and does not convey the intended meaning. The correct replacement for this part is option (d), "we should arrive at the airport."

Option (a) "we should be arriving the airport" is grammatically incorrect. The correct preposition to use with "arriving" is "at," so it should be "arriving at the airport." Additionally, the verb form "arriving" does not fit the context of the sentence.

Option (b) "we would arrive into the airport" is also incorrect. The correct preposition to use with "arrive" is "at," not "into."

Option (c) "we might be arrive to the airport" is grammatically incorrect. The correct preposition to use with "arrive" is "at," not "to."

Therefore, **the correct replacement is option (d)** "we should arrive at the airport" because it uses the correct verb form and accurately conveys the nature of the sentence. It suggests that if the traffic is light, the speaker believes it would be appropriate or advisable to arrive at the airport in less than an hour.

S22. Ans.(b)

Sol. The highlighted part in the given sentence, "you will ever know what," is incorrect because it lacks the word "never," which is necessary to convey the intended meaning. The correct replacement for this part is option (b), "you will never know what."

Option (a) "you will ever know while" does not convey the intended meaning. The word "while" suggests a concurrent or simultaneous action, which does not fit the context of the sentence.

Option (c) "you will never know when" changes the meaning of the sentence. The original sentence implies that without taking the first step, the person will never know about the opportunities that lie ahead. Option (c) suggests that the person will never know the timing or specific instances when those opportunities might arise.

Option (d) "you will ever know for" does not convey the intended meaning.

Therefore, **the correct replacement is option (b)** "you will never know what" because it accurately conveys the meaning that without taking the first step, the person will never know about the amazing opportunities that lie ahead.

S23. Ans.(e)

Sol. Among the given choices, option (e) is correct because all three sentences demonstrate the correct usage of the word "ineffable."

Sentence (I) states that the beauty of the sunset over the ocean was ineffable, meaning it was indescribable or unable to be expressed in words. This shows the correct usage of the word.

Sentence (II) mentions that the novel contained an ineffable sense of mystery and wonder. Again, this indicates that the sense of mystery and wonder in the novel was beyond description, aligning with the correct usage of "ineffable."

Sentence (III) describes the ineffable joy that filled the person's heart when they held their newborn baby for the first time. Here, "ineffable" is used to convey that the joy they experienced was beyond words, unable to be adequately described.

Since all three sentences use the word "ineffable" correctly to convey something that is beyond description or unable to be expressed in words, the correct option is (e) All (I), (II), and (III).

S24. Ans.(d)

Sol. In this case, the correct option is (d) Only (I) and (II).

Sentence (I) uses the word "euphonious" correctly to describe the whisper produced by the wind rustling through the leaves of the trees. The word "euphonious" means pleasing to the ear, and in this sentence, it is used to convey that the whisper has a melodious and soothing quality.

Sentence (II) correctly uses "euphonious" to describe the singer's voice, indicating that it is melodious and pleasant to listen to. This aligns with the definition of the word.

However, **sentence (III)** does not use the word "euphonious" correctly. Instead, it introduces the word "spontaneous," which means happening or done without planning or premeditation. Thus, the correct word to replace "euphonious" in sentence (III) would indeed be "spontaneous."

S25. Ans.(e)

Sol. Among the given choices, option (e) is correct because all three sentences demonstrate the correct usage of the word "soporific."

Sentence (I) states that the gentle rocking motion of the train had a soporific effect, meaning it caused the tired passengers to feel drowsy or sleepy. This aligns with the definition of "soporific," which refers to something that induces sleep or has a sleep-inducing effect.

Sentence (II) mentions that the monotony of the professor's lecture had a soporific effect on the students, making it hard for them to stay awake. Here, "soporific" is used to describe the lecture's boring and sleep-inducing nature, accurately reflecting the intended meaning of the word.

Sentence (III) describes how the soft, ambient music playing in the spa had a soporific quality. It implies that the music had a calming and sleep-inducing effect, helping clients relax and unwind. This demonstrates the correct usage of "soporific."

Since all three sentences use the word "soporific" correctly to describe something that induces sleep or has a sleep-inducing effect, the correct option is (e) All (I), (II), and (III).

S26. Ans.(e)

Sol. All the words in the given sentence are used correctly.

Magnitude (A): Refers to the great importance or significance of prompt action. It emphasizes the scale or extent of the impact that prompt action can have.

Succumbed (B): It means to yield or give in to a powerful force or temptation. In this context, it indicates that despite being aware of the importance of prompt action, the person gave in to the strong temptation of procrastination.

Procrastination (C): Refers to the act of delaying or postponing tasks or actions that need to be accomplished. It implies that the person chose to delay taking prompt action and instead indulged in procrastination.

Consequence (D): Denotes a result or outcome that follows from a particular action or event. In this sentence, it suggests that due to succumbing to procrastination, the person faced an unfortunate outcome, namely a missed opportunity.

S27. Ans.(b)

Sol. The word "clandistine" is incorrect and should be replaced with "clandestine." "Clandestine" means secretive or concealed. The other words in the question are used correctly: "ostentatious" means showy or extravagant, "disseminate" means to distribute or spread information, and "impending" means about to happen or forthcoming.

S28. Ans.(b)

Sol. The word "congent" is incorrect and should be replaced with "cogent." "Cogent" means clear, logical, and convincing. The other words in the question are used correctly: "conundrum" means a difficult or confusing problem, "myriad" means a large number or variety of something, and "encountered" means faced or come across.

S29. Ans.(e)

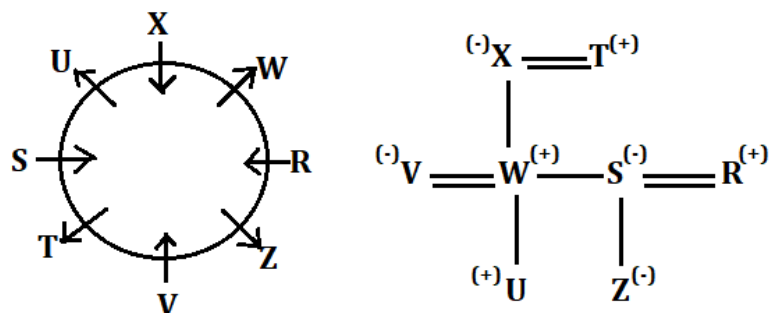
Sol. All the words in this sentence are used correctly. "Abstruse" means difficult to understand, "challenging" means presenting a difficulty or test, "epiphany" means a sudden realization or understanding, and "unravel" means to solve or decipher something complex.

S30. Ans.(a)

Sol. The word "alarcity" is incorrect and should be replaced with "alacrity." "Alacrity" means promptness or eagerness. The other words in the question are used correctly: "reticent" means reserved or quiet, "nebulous" means vague or unclear, and "prompting" means causing or inciting.

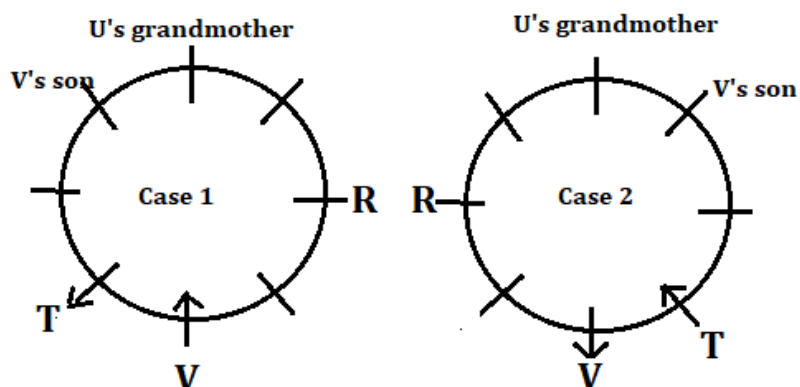
Directions (31-35):

Sol.



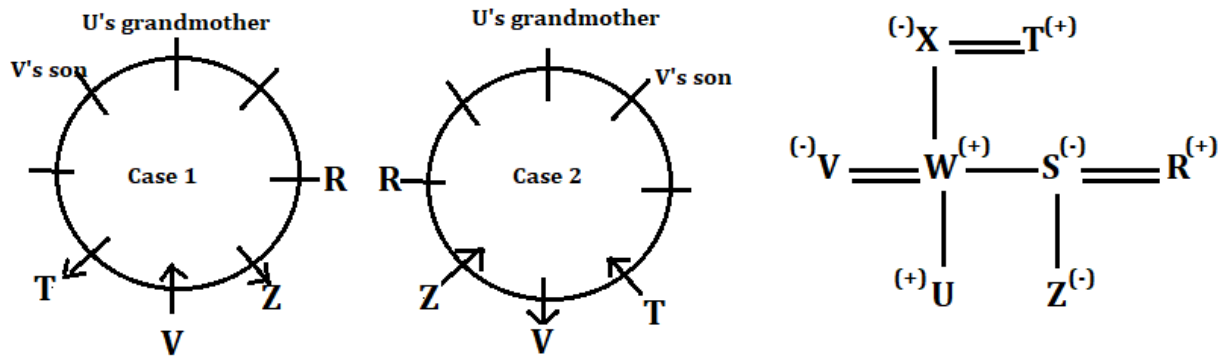
Clues: V's son sits third to the left of V. R is the son-in-law of T and sits third to the left of T who is an immediate neighbour of V. R is not an immediate neighbour of V's son. Two persons sit between T and the grandmother of U.

Inferences: There are two possibilities:



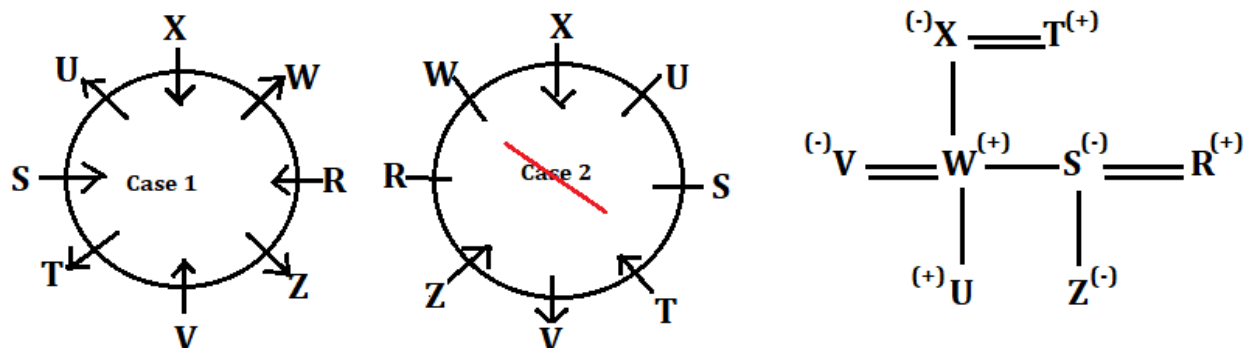
Clues: Z is the niece of W who is the son of X. V is the sister-in-law of S who has only one daughter. T sits second to the right of Z who is not the sibling of U. R is not the husband of V. There is no single parent in the family.

Inferences: From these conditions, first we create a family tree, then solve further.

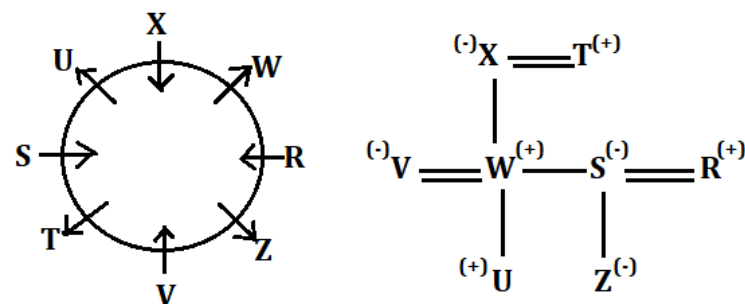


Clues: As many persons sit between W and V as same as sit W and W's sister. W's mother and his wife face each other. R's wife sits immediate left of U. S and R facing same direction as V but opposite to W.

Inferences: From these conditions case 2 will be eliminated.



Inferences: The final arrangement is-



S31. Ans.(d)

Sol. Z is R's daughter and U who is cousin of Z, sits opposite to Z.

S32. Ans.(e)

Sol. Either two or Four persons sit between T and X who is wife of T.

S33. Ans.(d)

Sol. Four persons sit between U and R.

S34. Ans.(b)

Sol. Only I and II are true.

S35. Ans.(a)

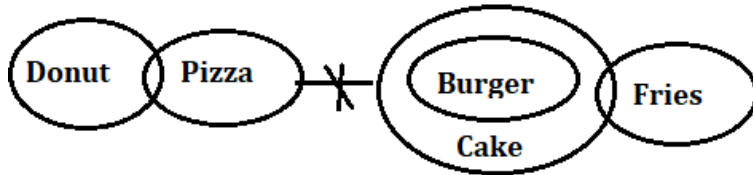
Sol. W sits second to the right of U who sits opposite to Z.

S36. Ans.(b)

Sol. I. Not Follow: In 'only' case burger is not related to any other element except cake.

II. Follow: No direct relation between donut and fries, hence in case of possibility it follows.

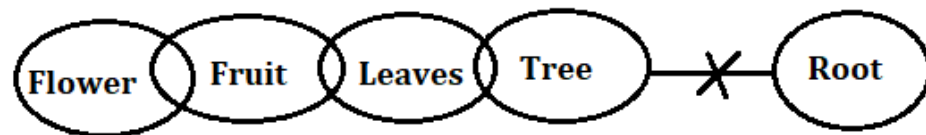
III. Not Follow: No direct relation between donut and cake.



S37. Ans.(b)

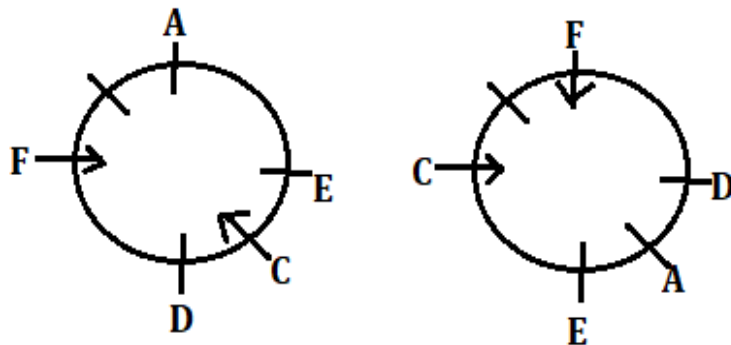
Sol. I. Follow: No direct relation between flower and tree, hence in case of possibility it follows.

II and III: No direct relation between fruit and root, so conclusion II and III not follow individually, but they made a complimentary pair, hence condition of either-or follow.

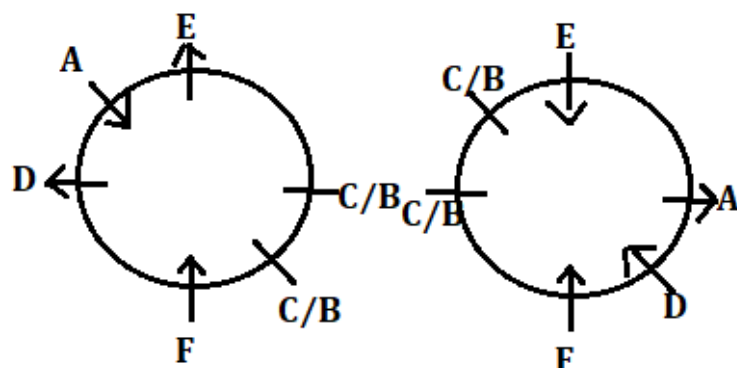


S38. Ans.(e)

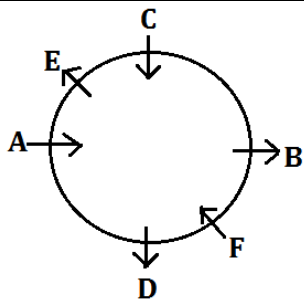
Sol. From statement I:



From Statement II:



By using both the statements we can conclude, D sits third to the right of C.



S39. Ans.(b)

Sol. From statement I:

Case 1	Case 2
Persons	Persons
P	
	R
R	
	P

From statement II:

Case 1	Case 2
Persons	Persons
V	
U	U
Q	Q
R	R
S	S
	V

From statement II we can find two persons purchase watches between U and R.

S40. Ans.(e)

Sol. From statements I and II:

Words	Code
Fish	am
Shark/danger	nl/or
water	pa
Sea	od
creature	st
whale	cd
Ship/pirates	az/er

We can find, whale is coded as 'cd'.

S41. Ans.(b)

Sol. Only II can be assumed as the Railway Minister's statement indicates the government's concern about railway safety. There is no information given that confirms negligence of staff, so I cannot be assumed. III is overly optimistic and cannot be assumed based on the given statement.

S42. Ans.(e)

Sol. Logic: 3 is added in the distance given in the bracket.

For e.g. A&B (4) means A is 7m in north of B, which means $4+3=7$

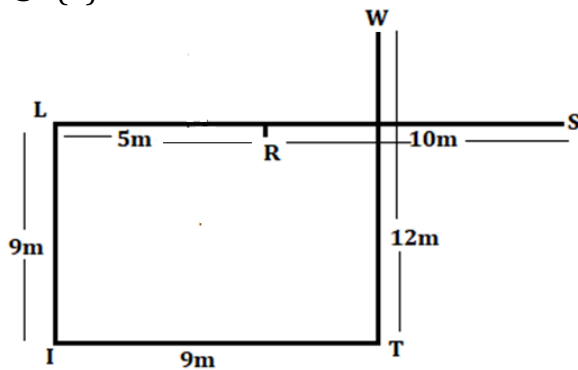
S@R (7) - S is 10m in east of R

W&T (9) - W is 12m in north of T

I%L (6) - I is 9m in south of L

L#R (2) - L is 5m in west of R

T@I (6) - T is 9m in east of I



From the above diagram, W is the northwest direction of S and the shortest distance between W and S
 $= \sqrt{\{(15-9)^2\} + \{(12-9)^2\}}$
 $= \sqrt{\{(6)^2 + (3)^2\}}$
 $= \sqrt{36+9} = \sqrt{45} = 3\sqrt{5}\text{m}$

S43. Ans.(b)

Logic: 3 is added in the given distance in the bracket.

For e.g. A&B (4) means A is 7m in north of B, which means $4+3=7$

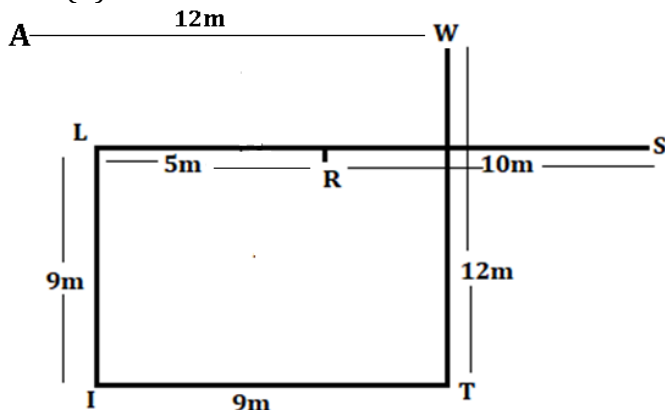
S@R (7) - S is 10m in east of R

W&T (9) - W is 12m in north of T

I%L (6) - I is 9m in south of L

L#R (2) - L is 5m in west of R

T@I (6) - T is 9m in east of I



From the above diagram, A is the north-west direction of I.

S44. Ans.(d)

Sol. I. $K < F$ – False

II. $D > K$ – False

S45. Ans.(b)

Sol. I. $Q > Z$ – False

II. $Y > Q$ – True

S46. Ans.(b)

Sol. Wrong number= 5

$$3 \times 2 = 6$$

$$6 \times 3 = 18$$

$$18 \times 4 = 72$$

$$72 \times 5 = 360$$

$$360 \times 6 = 2160$$

$$2160 \times 7 = 15120$$

S47. Ans.(a)

Sol. Wrong number= 80

$$81 + (0)^2 = 81$$

$$81 + (1)^2 = 82$$

$$82 + (2)^2 = 86$$

$$86 + (3)^2 = 95$$

$$95 + (4)^2 = 111$$

$$111 + (5)^2 = 136$$

Solutions (48-52):

Total percentage of voters = 100%

$$(9X + 8X + X + 2X) \% + 20\% = 100\%$$

$$= X = 4\%$$

Percentage of voters vote for BJP, Congress, Shiv sena, Samajwadi party are 36%, 32%, 4%, 8% respectively.

S48. Ans.(a)

Sol. Total number of voters vote for BJP = 36% of 100000 = 36000

Total number of voters vote for Shiv Sena = 4% of 100000 = 4000

Total number of voters vote for Samajwadi party = 8% of 100000 = 8000

$$\text{Required percentage} = \frac{36000 - 12000}{12000} \times 100 = 200\%$$

S49. Ans.(b)

Sol. Female voters vote for BJP = $(36\% \text{ of } 100000) \times \frac{1}{3} = 12000$

Female voters vote for AAP = $(20\% \text{ of } 100000) \times \frac{1}{2} = 10000$

Male voters vote for Samajwadi party = $(8\% \text{ of } 100000) \times \frac{15}{16} = 7500$

Male voters vote for Shiv Sena party = $(4\% \text{ of } 100000) \times \frac{3}{4} = 3000$

Required ratio = $(12000 + 10000 : 7500 + 3000) = 44:21$

S50. Ans.(c)

Sol. Two-third number of voters vote for BJP = $(36\% \text{ of } 100000) \times \frac{2}{3} = 24000$

40% of male voters vote for congress = $40\% \times (32\% \text{ of } 100000) \times \frac{5}{8} = 8000$

Required percentage = $\frac{24000}{8000} \times 100 = 300\%$

S51. Ans.(d)

Sol. It is given that the ratio of male to female in 2021 is 129x & 71x respectively

So,

$$200x = 100000$$

$$x = 500$$

Total no. of female voted in 2021 = 35500

Total no. of female voted in 2020 = $\frac{80}{100} \times 35500 = 28400$

No. of voters vote for AAP party in 2021 = (20% of 100000) = 20000

required difference = 28400 - 20000 = 8400

S52. Ans.(e)

Sol. No. of voters vote for AAP party = (20% of 100000) = 20000

No. of voters vote for BJP = 36% of 100000 = 36000

Total valid votes = $\frac{95}{100} \times 20000 + \frac{94}{100} \times 36000 = 52840$

S53. Ans.(b)

Sol. Quantity of water in a mixture = $189 \times \frac{3}{7} = 81 \text{ liters}$

Quantity of milk in a mixture = $189 - 81 = 108 \text{ liters}$

Ratio of milk to water in the mixture = 108:81 = 4:3

Again $\frac{2}{9}$ th of the mixture is taken out and equal amount of water is added

So,

Quantity of a mixture is taken out = $(108 + 81) \times \frac{2}{9} = 42 \text{ liters}$

Quantity of milk in a final mixture = $108 - 42 \times \frac{4}{7} = 108 - 24 = 84 \text{ liters}$

Quantity of water in a final mixture = $81 - 42 \times \frac{3}{7} + 42 = 105 \text{ liters}$

Req. ratio = 105:84 = 5:4

S54. Ans.(a)

Sol. Let the length and the breadth of a rectangle be $5x$ & $4x$

Perimeter of the rectangle = 108 cm

$$2(5x + 4x) = 108$$

$$9x = 54$$

$$x = 6 \text{ cm}$$

So, length of a rectangle = $5x = 5 \times 6 = 30 \text{ cm}$

And breadth of a rectangle = $4x = 4 \times 6 = 24 \text{ cm}$

Area of the rectangle = $30 \times 24 = 720 \text{ cm}^2$

S55. Ans.(d)

Sol. Sum of the present ages of A, B and C = $36 \times 3 + 3 \times 3 = 117$ years(i)

Sum of the present ages of A and B = $76 - 4 = 72$ years (ii)

From (i) & (ii)

Present age of C = 45 years

Present age of A = $45 + 6 = 51$ years

So, present age of B = $72 - 51 = 21$ years

S56. Ans.(e)

Sol. Equivalent interest received by man from scheme Z at the rate of 10% p.a. for two years = $10 + 10 + \frac{10 \times 10}{100} = 21\%$

So, total interest received by man from scheme Z = $Q \times \frac{21}{100} = 0.21Q$

Total amount received by man from scheme Z = $Q + 0.21Q = 1.21Q$

Total interest received by man from scheme K = $1.21Q \times \frac{12 \times 2}{100} = 0.2904Q$

Required percentage = $\frac{0.2904Q}{0.21Q} \times 100 = 138.28\% \approx 138\%$

S57. Ans.(d)

Sol. Let the efficiency of a man and a woman be 'x' units/day and 'y' units/day respectively.

ATQ,

$$\frac{(14x+10y) \times 20}{\frac{80}{100}} = \frac{(20x+7y) \times 15}{\frac{60}{100}}$$

$$3y = 6x$$

$$\frac{x}{y} = \frac{1}{2}$$

$$\text{Total work} = (14 \times 1 + 10 \times 2) \times 20 \times \frac{100}{80} = 34 \times 20 \times \frac{100}{80} = 850 \text{ units}$$

$$\text{Required days} = \frac{4 \times 850}{25 \times 2} = 68 \text{ days}$$

S58. Ans.(e)

Sol. Let the cost price of article A = $100a$

Marked price of article A = $100a \times \frac{140}{100} = 140a$

Selling price of article, A = $140a \times \frac{(100-20)}{100} = 112a$

ATQ –

$$112a - 100a = 216$$

$$a = 18$$

Since, *Selling price = cost price + profit*

So, selling price of article B = $100 \times \frac{160}{100} \times 18 + 216 = \text{Rs. } 3096$

S59. Ans.(c)

$$\text{Sol. } \frac{160}{100} \times 150 - ?^2 + 300 = 11$$

$$240 + 300 - 11 = ?^2$$

$$? = 23$$

S60. Ans.(a)

Sol. $\sqrt{4 \times 13 \times 13} - \frac{35}{100} \times 120 + ? = 330$

$$26 - 42 + ? = 330$$

$$? = 346$$