
data carefully and answer the questions accordingly.
Eight people A, B, C, D, E, F, G, and H works on different designations i.e. Typist, Clerk, SSC, FA, Administrator, Manager, CEO, and CMD but not necessarily in the same order. These designations are in the increasing order as CMD is the senior-most post and Typist is the junior-most post. Each one of them works in three different cities i.e. Delhi, Hyderabad, and Mumbai. These people have some blood relations among them and there are only four females. The husband and wife do not work in the same city.
F is senior to G . E is senior to the typist and is the sister of the administrator but does not work with her sister. A is senior to the SSC and is the wife of the one, who works in Mumbai. The manager is married to the administrator and he does not work with the CEO. D is junior to SSC. CMD is married to B, who works as a CEO and does not work in Mumbai. The one, who works as a typist does not work in Hyderabad. C is senior to FA. H is a senior to the manager. The typist is the mother of FA. CEO is the sister of FA, who works in Delhi only with his father $D$.

1. Who is the sister of the SSC?
A. The typist
B. G
C. The CEO
D. A
E. None of these
2. Who is the FA?
A. The son of $G$
B. The brother of the clerk
C. The sister of the CMD
D. The son of the manager
E. None of these
3. Who among the following works in Hyderabad?
A. B, A
B. $\mathrm{E}, \mathrm{G}, \mathrm{F}$
C. $\mathrm{H}, \mathrm{A}$
D. $E, B, A$
E. None of these

A. Administrator
B. Clerk
C. Typist
D. SSC
E. CEO

Direction (5-7) : Study the following data carefully and answer the questions accordingly.
$A \% B-A$ is either 6 or $14 m$ north of $B$
$A \$ B-A$ is $12 m$ south of $B$
$A$ \# B-A is $4 m$ east of $B$
$A \& B-A$ is either 10 or 15 m west of $B$
$A \% \# B$ - means $A$ is north-east of $B$
$A \$ \& B$ - means $A$ is south-west of $B$
Y \% \# J, M \# K, Y \% M, J \% K
5. What is the shortest distance between $Y$ and $J$ ?
A. 11 m
B. $4 \sqrt{ } 5 \mathrm{~m}$
C. 6 m
D. $8 \sqrt{ } 5 \mathrm{~m}$
E. None of these
6. If $N \$ M$, then what is the distance between N and Y ?
A. 34 m
B. 28 m
C. 23 m
D. 26 m
E. None of these
7. If the shortest distance between $P$ and $R$ is $2 \sqrt{ } 61 m$ according to the following statement then what is the distance between $T$ and $P$ ?
T \# Q, P \& Q, R \$ Q
A. 15 m
B. 12 m
C. 19 m
D. 14 m
E. None of these

Direction (8-10): Study the following data carefully and answer the questions accordingly.
In a society, there are eleven houses from west to east and numbered 1 to 11 . The house in the west end is numbered 1 and the house in the east end is numbered 11. Eight persons with
different ages live in these houses (one person in one house) and three houses are vacant.
H is 25 years older than G . Only one person lives between $E$, who is 3 years older than D and the one who is 35 years old. The one, who is 7 years younger than A, lives immediately right of a vacant house which is even-numbered house. At least two people live between the one, who is 64 years old and the one, who is 69 years old. Vacant houses are not near to each other. A, who is 46 years old, lives to the west of the house numbered 3 but not at the end. The vacant house is to the west of 64 years old person's house. There are two houses between B's house and the person's house who is 64 years old. $F$ is 4 years younger than the one, who lives in the house number 11. C is 4 years younger than the one, who lives in the house number 5 and lives to the west of the house number 5 but not at the end. The house at the immediate east of house number 6 is vacant. D does not live in the house number 5 and not near to B. Two persons live between $A$ and $D$, who is 14 years older than $B$ and lives to the west of B. House number 5 is not vacant. Only one house is there between the vacant house and the house in which 64 years old person lives. B, who is 55 years old, lives in an even-numbered house to the east of the house number 6 .
8. Who is 39 years old?
A. D
B. F
C. C
D. G
E. None of these
9. How many people live in the east of $D$ ?
A. One
B. Four
C. Two
D. Three
E. None of these
10. What is the age of the one who is an immediate neighbor of F ?
A. 60 years
B. 64 years
C. 55 years
D. 39 years
E. None of these

Direction (11 - 15) : Study the following graph and table to answer the given questions:
An e-commerce company sells products online. First of all, customers order the products, then some of them cancel their orders. Remaining orders are delivered by the company, after which some of the customer return their products.
In the graph given below the percentage of delivered products from ordered products and percentage of product returned from delivered products for the given months.


In the table below, the number of products delivered is given.

| Month | No. of orders <br> delivered |
| :---: | :---: |
| January | 27000 |
| February | 24000 |
| March | 22500 |
| April | 21600 |
| May | 24000 |
| June | 32000 |

11. What is the ratio of number of sum total of the number of orders canceled in the months of January and March to that of March and June?
A. $2: 3$
B. $3: 4$
C. $4: 5$
D. $3: 5$
E. 5 : 8
12. What is the average number of total orders for the given 6 months?
A. 24000
B. 27500
C. 31500
D. 30750
E. 31750
13. What is the difference of the number of orders canceled and number of orders returned in the month of May?
A. 12500
B. 16240
C. 11280
D. 10240
E. 11760
14. Number of orders canceled in April is what percent less than the number of orders canceled in February?
A. $75 \%$
B. $62.5 \%$
C. $85 \%$
D. $68 \%$
E. 76\%
15. What is the sum of the number of the orders finally accepted by customers in February and April?
A. 25000
B. 24000
C. 25600
D. 24500
E. 22500

Direction (16 - 20) : Study the following information to answer the given questions:
Three battery operated robot toys A, B and $C$ do hand movement and leg movement. Battery capacities of the toys A, B and C are $1500 \mathrm{mAh}, 1600 \mathrm{mAh}$ and 1800 mAh respectively. Present battery percentage of the toys $A, B$ and $C$ are $80 \%, 70 \%$ and $75 \%$ respectively. Four hand movements and three leg movements of a toy consume 1 mAh unit of battery. Six hand movements and seven leg movements of a toy consume 2 mAh unit of battery.
16. If toy $A$ started at 9 AM and the battery of the toy discharged at 12 PM and during this period, total number of hand movements done by toy A is 1200 more than the number of leg movements,
then on average how many leg movements done by toy A in 1 minute
A. 15
B. 20
C. 25
D. 30
E. None of these
17. If sum of the twice of number of hand movements and number of leg movements done by toy $B$ until the battery runs out fully is $x$, then which of the following can be the value of $x$
I. 9000
II. 12600
III. 9800
A. Only I
B. Only II
C. Only III
D. Only I and III
E. None of three
18. Toy $C$ does 1500 hand movements and y leg movements and toy B does y hand movements and 2000 leg movements. After this the remaining battery (in mAh) is same in both the toys, then what percent of the battery is remaining in the toy $B$ ?
A. $40 \%$
B. $21.5 \%$
C. $35 \%$
D. $15 \%$
E. None of these
19. Toy $B$ can rotate too and 3 rotations requires as much battery as much required in 1 hand movement and 7 leg movements. Ratio of the number of hand movements, number of leg movements and number of rotations done by toy $B$ till battery lasts is $2: 1: 2$, then sum of the number of hand movements and number of rotations done by toy $B$ is
A. 1400
B. 2800
C. 5600
D. 3500
E. None of these
20. The battery capacity of toy $D$ is equal to the average of the current remaining battery capacities of Toys A and B and the
current battery percentage of toy $D$ is $75 \%$. If toy $D$ moves an equal number of hands and feet until the battery runs out, then how many times does toy D move hands?
A. 2175
B. 1160
C. 870
D. 2900
E. None of these

Direction (21-25) : Read the given passage carefully and answer the questions that follow. Certain words are printed in bold to help you locate them while answering some of these.
Despite agreeing that flexible working can improve work life balance, just 17 percent of British employees are actively encouraged to do so and many don't have the tech to work effectively. Microsoft UK calls on organisations to help employees reclaim their work-life balance with the workplace culture, tools and know-how to make the most of flexible working.
British employees are adopting unhealthy ways of working that are having a profound impact on their personal lives, according to new research from Microsoft UK. Asking the views of more than 2,000 British workers, the study found that 30 per cent of Brits regularly sacrifice their personal lives for work, 56 per cent have answered work-related calls out of office and 8 in 10 ( 80 percent) have struggled to focus at home due to pressure from work.
These unhealthy ways of working are going unnoticed by many British employees - only 29 per cent of whom admit their workplace has an 'always on' culture - but are leaving people struggling to keep their heads above water. 86 per cent of Brits say they have felt anxious due to work pressure in the last year -whilst 87 percent have trouble switching off) and sleeping ( 86 per cent), as well as feelings of failure ( 79 per cent). Meanwhile a third (33 percent) don't have enough time to spend with their family and 41 per cent struggle to make time for health appointments - all due to workload.

When it comes to addressing the issue, British employees are clear that flexible working can help improve work life balance, spend more time with family and take care of their personal life. However, few feel in a position to take advantage of flexible working policies today. Of the 50 per cent of UK workers whose organisations offer flexible working, just 35 per cent are actively encouraged to do so and more than a third ( 35 percent) say they need an 'official reason' such as an appointment to work outside the office.
Meanwhile, for those that do make it out of the office to work more flexibly, outdated tech is slowing people down and preventing employees from doing their best work. Just 18 percent per cent of Brits have not faced tech difficulties when working remotely and almost half (48 per cent) of British employees wish their organisation invested in better tech so that they could work more efficiently. The findings also show a lack of support systems available for employees in Britain today. Only 23 per cent of organisations regularly implement initiatives to improve employee wellbeing and 53 per cent disagree that their organisation offers training to help employees embrace a healthy, balanced lifestyle.
Source:
https://www.thehrdirector.com/features/ cultural-change/always-work-cultures-putting-british-employees-risk/
21. Which of the following is not an assumption that supports the arguments presented in the third paragraph?
A. Unhealthy work culture might cause tensions in personal lives.
B. British people have high probability of falling sick.
C. A sense of dread and dissatisfaction is common among the British employees.
D. Continuous stress has resulted in the Brits losing motivation.
E. None of the above.
22. Which of the following statement(s) is/are NOT TRUE in accordance with the information provided in the passage?
I. Most of the British employees have been sacrificing their professional life due to faulty equipment.
II. British employees are unaware of the flexible work culture.
III. The work culture in Britain is having an adverse effect on its people.
A. Only I
B. Both I \& II
C. Both II \& III
D. Only II
E. All are incorrect
23. Which of the following statements the author is most likely to agree with?
A. The present flexible work culture in Britain is not well-defined in order to help the employees.
B. Less than a fourth of the employers consider the wellbeing of their employees.
C. Proper justifications are not required to work outside the office to prevent employees from slacking off.
D. Both A \& B
E. All of the above.
24. Which of the following is/are correctly inferred from the given passage?
I. Only proper enforcement of flexible working can solve the issue of stressful work life.
II. Employers in Britain are supporting a healthy professional life in name only.
III. Lack of proper means have inhibited the British employees to attain a healthy work culture.
A. Only I
B. Both I \& II
C. Both II \& III
D. Only II
E. All are incorrect
25. Given below is a possible inference that can be drawn from the facts stated in the fourth paragraph. You have to examine the inference in the context of the passage and decide upon its degree of truth or falsity.
"Employers use all source of loopholes to keep their employees in office."
A. Definitely true
B. Probably true
C. The data is inadequate
D. Probably false
E. Definitely false

Direction: In the following question, multiple sentences have been given. Each sentence has been divided into a few parts which may or may not carry an error. The error, if any, will be in one part of the sentence. The number corresponding to that part and the sentence in which it is, will be your answer. If the given sentences carry no error, mark 'All are correct' as your answer. Ignore the errors of punctuation if any.
26. A) The 48-day strike (1)/ of 35,000 workers of engineering units (2)/ on Jamshedpur has drawn (3)/ strong condemnation from JRD Tata. (4)
B) That wages had become (1)/ an explosive issue in the engineering industry (2)/ has been amply clear (3)/ for a long time. (4)
C) This is understandable (1)/ since in JRD's view the long-drawn-out (2)/ strike has tarnished the Tata image (3)/ as an employer. (4)
A. B-2 \& A-1
B. A-3 \& B-3
C. B-1 \& C-4
D. $A-4 \& C-2$
E. All are correct

Direction: In the following question, multiple sentences have been given. Each sentence has been divided into a few parts which may or may not carry an error. The error, if any, will be in one part of the sentence. The number corresponding to that part and the sentence in which it is, will be your answer. If the given sentences carry no error, mark 'All are correct' as your answer. Ignore the errors of punctuation if any.
27. A) The Union Labour Ministry, (1)/ after several infructuous efforts (2)/ to sort out matters, had been compelled (3)/ to pass the deer to the States. (4)
B) Several months had elapsed (1)/ after the settlement in Calcutta and yet employers (2)/ at Jamshedpur had done little (3)/ to seek a negotiated settlement of wages with workers. (4)
C) The element of inter group rivalries
(1)/ between workers also played a part
(2)/ in the Jamshedpur strike (3)/ need not be disputed. (4)
A. B-2 \& A-1
B. $\mathrm{A}-4 \& \mathrm{C}-2$
C. B-3 \& C-4
D. A-3 \& C-3
E. All are correct

Direction: In the following question, multiple sentences have been given. Each sentence has been divided into a few parts which may or may not carry an error. The error, if any, will be in one part of the sentence. The number corresponding to that part and the sentence in which it is, will be your answer. If the given sentences carry no error, mark 'All are correct' as your answer. Ignore the errors of punctuation if any.
28. A) Through its actions, (1)/ the Donald Trump administration (2)/ has unequivocally announced (3)/ that 2020 will be a year of violence. (4)
B) The American elite of all hues, liberal or conservative, (1)/ is blinded by its faith in American military supremacy, (2)/ but remains convinced (3)/ that the world is destined to play by its rules. (4)
C) The overt military action against a foreign leader (1)/ enjoying diplomatic immunity is a travesty (2)/ of professional military ethics, (3)/ a blatant attempt to extent the battlefield dimensions. (4)
A. C-2 \& A-1
B. A-4 \& C-3
C. A-3 \& C-2
D. $B-3 \& C-4$
E. All are correct

Direction: In the following question, multiple sentences have been given. Each sentence has been divided into a few parts which may or may not carry an
error. The error, if any, will be in one part of the sentence. The number corresponding to that part and the sentence in which it is, will be your answer. If the given sentences carry no error, mark 'All are correct' as your answer. Ignore the errors of punctuation if any.
29. A) The Trump administration's actions is (1)/ destroying the rule-based international order (2)/ and pushing it towards barbarism and the medieval ages (3)/ where assassination as a tool of statecraft was legal. (4)
B) The US-led "Middle-East order," which Henry Kissinger (1)/ erected in the wake of the oil crisis and the growing demand (2)/ for a New International Economic Order by third world countries (3)/ in the mid-1970s, now lies in tatters. (4)
C) The US is perturbed (1)/ by the nationalistic surge in Iraq (2)/ and the growing demand for the dethroning (3)/ of US troops from Iraqi soil. (4)
A. A-1 \& C-3
B. $B-4 \& C-1$
C. $\mathrm{B}-3 \& \mathrm{C}-4$
D. A-2 \& C-2
E. All are correct

Direction (30-35) : Read the given passage carefully and answer the questions that follow.
Many American employees strive to perform their best in the workplace. They work overtime, agree to take on extra projects and rarely take a step away from their desk. This "work hard" mentality isn't effective - and it's unhealthy. Employees who believe that they must work $24 / 7$ to achieve a good standing in the workplace have the wrong idea. And unfortunately, employees often gain this idea through employers' attitudes.
Chaining yourself to a desk or (I) in your cubicle isn't a recipe for success - it's a recipe for disaster. Without taking adequate breaks from work, employee productivity, mental well-being and overall work performance begin to suffer. Overworked employees often deal with chronic stress
that can easily lead to job burnout. Therefore, it's important that employers to start encouraging employees to take breaks throughout the workday. These breaks are essential in helping employees de-stress and re-charge for the rest of the workday. A recent survey by Tork shows exactly how important lunch breaks are, along with how rare they are in the North American workplace.
Though taking breaks might sound counterintuitive but when it comes to boosting productivity, it's one of the best ways to do so. Besides outlining some awesome benefits of regular breaks such as improved mental well-being, creativity boost and more time for healthy habits, the Tork survey also revealed that North American employees who take a lunch break every day have higher scores on a range of engagement metrics, including job satisfaction, likelihood to continue working at the same company and likelihood to recommend their employer to others.
I recently spoke with Jennifer Deal, the Senior Research Scientist who said "Energy isn't unlimited, and just as athletes have halftime to rest during a game, employees need to rest so they can do their best work. Taking a break in the middle of the day for lunch is a recovery period, allowing employees to come back refreshed and reinvigorated for the second half".
30. What is the central theme of the passage?
I. How North American employees are striving to perform better in their jobs by not taking breaks during work.
II. How important it is for employers to break the myth of working $24 * 7$ and start taking lunch breaks seriously.
III. How vital it is for the employees to take lunch break during work, reenergize themselves and resume work with enhanced productivity.
A. Only I
B. Only II
C. Only III
D. Both I and III
E. Both II and III
31. What is the theme of the World Day for Audiovisual Heritage 2019?
A. Protect and Share Your Visual Story
B. Engage the Past Through Sound and Image
C. It's Your Story - Don't lose it
D. Discover, Remember and Share
E. Our Life- Don't waste it
32. Which actor unveiled the ICC World Cup 2020 trophies for the men's and women's tournament at the Melbourne Cricket Ground (MCG)?
A. Kareena Kapoor
B. Anushka Sharma
C. Deepika Padukone
D. Aishwarya Rai
E. Priyanka Chopra
33. Vikram Solar Limited is an Indian company and the second-largest solar energy company in India is located in which city?
A. Mumbai
B. Baroda
C. Jaipur
D. Kolkata
E. Ranchi
34. How many countries have signed the International Solar Alliance (ISA) framework?
A. 71
B. 75
C. 78
D. 83
E. 85
35. Which organization presented the Mother Teresa Memorial Award 2019 for social justice?
A. Harmony Foundation
B. Bharti Foundation
C. Bhumi
D. Ipas Development Foundation
E. Make A Difference
36.For the purpose of decarbonization, which company has signed Memorandum of Understanding (MoU) with power producer NTPC and The Energy and Resources Institute (TERI)?
A. Siemens Limited
B. General Electric Limited
C. Robert Bosch Limited
D. Hitachi
E. Larsen \& Toubro
37. Which is the first central government healthcare center to have a robotic surgery facility?
A. PGIMER Chandigarh
B. Christian Medical College Vellore
C. Safdarjung Hospital, New Delhi
D. Ram Manohar Lohia Hospital, New Delhi
E. Tata Memorial Hospital, Mumbai
38. India and Asian Development Bank has signed $\$ 200$ million loan agreement for the development of the roads of which of the following state?
A. Maharshtra
B. Jharkhand
C. Tamil Nadu
D. Kerala
E. Rajasthan
39. Who has been awarded the Vyas Samman for 'Jitane Log Utane Prem' poem?
A. Sachin Sinha
B. Surendra Verma
C. Liladhar Jagudi
D. Sujeet sahu
E. Ramakanth Kailash
40. Bank of Baroda has issued FASTag that will act as the composite solution on Electronic Toll Collection. FAStag works on which technology?
A. RFID
B. Bluetooth
C. NFC
D. WiFi
E. GPS

1. Ans. D.
1) CMD is married to $B$, who works as a CEO and who does not work in Mumbai. (The husband and wife do not work in the same city)
2) CEO is the sister of FA, who works in Delhi only with his father $D$.
3) $D$ is junior to SSC.
4) The typist is the mother of FA.

| $(+)$ CMD |  | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| Manager |  |  |
| Administrator |  |  |
| $(+)$ FA |  | Delhi |
| SSC |  |  |
| $(+)$ Clerk | D | Delhi |
| $(-)$ Typist |  |  |


| (Clerk) | (Typist) |  |
| :---: | :---: | :---: |
| $(\mathrm{CMD})$ | $(\mathrm{CEO})$ | $($ (FA) |
| $(+)=$ | $\mathrm{B}(-)$ | $(+)$ |

5) The manager is married to the administrator and he does not work with the CEO.
6) H is a senior to the manager.

7) $A$ is senior to the SSC and is the wife of the one, who works in Mumbai.
8) $C$ is senior to FA. (there are only four females)

| $(+)$ CMD | H | Mumbai |
| :--- | :--- | :--- |
| (-) CEO | B | Hyderabad |
| (+) Manager | C | Mumbai |
| (-) Administrator | A | Hyderabad |
| (+) FA |  | Delhi |
| (-) SSC |  |  |
| (+) Clerk | D | Delhi |
| (-) Typist |  |  |


9) $E$ is senior to the typist and is the sister of the administrator but does not work with her sister.
10) The one, who works as a typist does not work in Hyderabad.
11) $F$ is senior to $G$.

| $(+)$ CMD | H | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| (+) Manager | C | Mumbai |
| (-) Administrator | A | Hyderabad |
| (+) )A | F | Delhi |
| $(-)$ SSC | E | Mumbai |
| (+) Clerk | D | Delhi |
| $(-)$ Typist | G | Mumbai |


|  | (Clerk) | (Typist) |
| :--- | :--- | :--- |
| (CMD) | (CEO) | $($ FA $)$ |
| $\mathrm{H}(+)=$ | $\mathrm{B}(-)$ | $\mathrm{F}(+)$ |
| (Manager) | (Admin.) | $(\mathrm{SSC})$ |
| $\mathrm{C}(+)=$ | $\mathrm{A}(-)$ | $\mathrm{E}(-)$ |

Therefore, option $D$ is the correct answer.
2. Ans. A.

1) CMD is married to $B$, who works as a CEO and who does not work in Mumbai. (The husband and wife do not work in the same city)
2) CEO is the sister of FA, who works in Delhi only with his father $D$.
3) $D$ is junior to SSC.
4) The typist is the mother of FA.

| $(+)$ CMD |  | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| Manager |  |  |
| Administrator |  |  |
| $(+)$ FA |  | Delhi |
| SSC |  |  |
| $(+)$ Clerk | D | Delhi |
| $(-)$ Typist |  |  |


|  | (Clerk) | (Typist) |
| :---: | :---: | :---: |
| (CMD) | $(\mathrm{CEO})$ | $($ (FA) |
| $(+)=$ | $\mathrm{B}(-)$ | $(+)$ |

5) The manager is married to the administrator and he does not work with the CEO.
6) H is a senior to the manager.

| $(+)$ CMD | H | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| (+) Manager |  | Mumbai |
| (-) Administrator |  |  |
| (+) FA |  | Delhi |
| $(-)$ SSC |  |  |
| (+) Clerk | D | Delhi |
| $(-)$ Typist |  |  |


| (Clerk) | (Typist) |
| :--- | :--- |
| $\mathrm{H}(+)=$ | $(\mathrm{CEO})$ |
| $(-)$ | $($ (FA) |
| $($ Manager $)$ | (Admin.) |
| $(+)=(-)$ |  |

7) $A$ is senior to the SSC and is the wife of the one, who works in Mumbai.
8) $C$ is senior to FA. (there are only four females)

| $(+)$ CMD | H | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| (+) Manager | C | Mumbai |
| $(-)$ Administrator | A | Hyderabad |
| (+) FA |  | Delhi |
| $(-)$ SSC |  |  |
| $(+)$ Clerk | D | Delhi |
| $(-)$ Typist |  |  |


|  | (Clerk) |
| :--- | :--- |
| (Typist) |  |
| $(\mathrm{CMD})$ | $(\mathrm{CEO})$ |
| $\mathrm{H}(+)=$ | $\mathrm{B}(-)$ |
| $(\mathrm{FA})$ |  |
| $(\mathrm{Manager})$ | (Admin.) |
| $\mathrm{C}(+)$ | $\mathrm{A}(-)$ |

9) E is senior to the typist and is the sister of the administrator but does not work with her sister.
10) The one, who works as a typist does not work in Hyderabad.
11) $F$ is senior to $G$.


Therefore, option A is the correct answer. 3. Ans. A.

1) CMD is married to $B$, who works as a CEO and who does not work in Mumbai. (The husband and wife do not work in the same city)
2) CEO is the sister of FA, who works in Delhi only with his father D.
3) $D$ is junior to SSC.
4) The typist is the mother of FA.

| $(+)$ CMD |  | Mumbai |
| :--- | :--- | :--- |
| $(-)$ CEO | B | Hyderabad |
| Manager |  |  |
| Administrator |  |  |
| $(+)$ FA |  | Delhi |
| SSC |  |  |
| $(+)$ Clerk | D | Delhi |
| $(-)$ Typist |  |  |


|  | (Clerk) | (Typist) |
| :---: | :---: | :---: |
| (CMD) | (CEO) | $($ (FA) |
| $(+)=$ | $\mathrm{B}(-)$ | $(+)$ |

5) The manager is married to the administrator and he does not work with the CEO.
6) H is a senior to the manager.

7) $A$ is senior to the SSC and is the wife of the one, who works in Mumbai.
8) $C$ is senior to FA. (there are only four females)

| $(+)$ CMD | H | Mumbai |
| :--- | :--- | :--- |
| (-) CEO | B | Hyderabad |
| (+) Manager | C | Mumbai |
| (-) Administrator | A | Hyderabad |
| (+) FA |  | Delhi |
| $(-)$ SSC |  |  |
| (+) Clerk | D | Delhi |
| $(-)$ Typist |  |  |


| (Clerk) (Typist) |  |
| :--- | :--- |
| $(\mathrm{CMD})$ | $(\mathrm{CEO})$ |
| $\mathrm{H}(+)=\mathrm{B}(-)$ | $(+)$ |
| (Manager) | (Admin.) |
| $\mathrm{C}(+)=$ | $\mathrm{A}(-)$ |

9) $E$ is senior to the typist and is the sister of the administrator but does not work with her sister.
10) The one, who works as a typist does not work in Hyderabad.
11) $F$ is senior to $G$.


Therefore, option A is the correct answer. 4. Ans. B.

1) CMD is married to $B$, who works as a CEO and who does not work in Mumbai. (The husband and wife do not work in the same city)
2) CEO is the sister of FA, who works in Delhi only with his father D.
3) $D$ is junior to SSC.
4) The typist is the mother of FA.

5) The manager is married to the administrator and he does not work with the CEO.
6) H is a senior to the manager.

7) $A$ is senior to the SSC and is the wife of the one, who works in Mumbai.
8) $C$ is senior to FA. (there are only four females)

9) E is senior to the typist and is the sister of the administrator but does not work with her sister.
10) The one, who works as a typist does not work in Hyderabad.
11) $F$ is senior to $G$.


Therefore, option B is the correct answer.
5. Ans. B.


4 m
Required distance $=\sqrt{ } 4^{2}+8^{2}=\sqrt{ } 80=$ $4 \sqrt{ } 5 \mathrm{~m}$
Therefore, option B is the correct answer. 6. Ans. D.


Required distance $=14+12=26 \mathrm{~m}$
Therefore, option D is the correct answer. 7. Ans. D.


Therefore, option D is the correct answer. 8. Ans. D.

1) B, who is 55 years old, lives in an evennumbered house to the east of the house number 6 .

Case 1


Case 2
$\begin{array}{lllllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11\end{array}$
2) There are two houses between B's house and the person's house who is 64 years old.

Case 1.1


Case 1.2

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | $(55)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 8 | 5 | 9 | 10 | 11 |  |  |  |
| $B$ |  |  |  |  |  |  |  |

Case 2

3) Only one house is there between the vacant house and the house in which 64 years old person lives.
4) The vacant house is to the west of 64 years old person's house.

Case 1.1
$\begin{array}{llllllllllll}1 & 2 & 3 & 4 & 5 & 6 & & (55) & -\cdots & & & \text { (64) } \\ 8 & 9 & 10 & 11 \\ B & \cdots & & & \end{array}$

Case 1.2

|  |  | ---- |  | (64) |  |  | 55) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  |  | ---- |  |  |  |  | B |  |  |  |

Case 2
$\begin{array}{lllllcccccccc}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11\end{array}$
5) House number 5 is not vacant. (Here, case 2 will be eliminated and we will continue with the remaining cases)

Case 1.1


Case 1.2

6) A, who is 46 years old, lives to the west of the house number 3 but not at the end. 7) Two persons live between $A$ and $D$, who is 14 years older than $B$ and lives to the west of $B$.
8) Vacant houses are not near to each other.
9) D does not live in the house number 5 and not near to $B$.

## Case 1.1

|  | (46) |  |  |  | $(69)$ |  | $(55)$ | $-\cdots$ |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|  | A |  |  |  | D |  | B | --- |  |  |  |

Case 1.2

|  | (46) | $-\cdots$ |  | (64) | $(69)$ |  | $(55)$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

10) At least two people live between the one, who is 64 years old and the one, who is 69 years old.
(Here, case 1.2 will be eliminated and we will continue with the case 1.1)

|  | $(46)$ |  |  |  | $(69)$ |  | $(55)$ | $-\cdots$ |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|  | A |  |  |  | D |  | $B$ | --- |  |  |  |

11) One of the houses is vacant to the east of the house number 6. (Refer point 8)
12) The one, who is 7 years younger than A, lives immediately right of a vacant house which is even-numbered house.

|  | $(46)$ |  | $-\cdots$ | $(39)$ | $(69)$ | $-\cdots$ | $(55)$ | .-- |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |

13) $C$ is 4 years younger than the one, who lives in the house number 5 and lives to the west of the house number 5 but not at the end.
14) Only one person lives between $E$, who is 3 years older than D and the one who is 35 years old.

| $(72)$ | $(46)$ | $(35)$ | $-\cdots$ | $(39)$ | $(69)$ | -- | $(55)$ | $-\cdots$ |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
| E | A | C | -- |  | D | $\cdots$ | B | $\cdots-$ |  |  |  |

15) $F$ is 4 years younger than the one, who lives in the house number 11.
16) H is 25 years older than G .

| $(72)$ | $(46)$ | $(35)$ | $-\cdots$ | $(39)$ | $(69)$ | -- | $(55)$ | $-\cdots$ | $(60)$ | $(64)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| E | A | C | --- | G | D | $\cdots-$ | B | $\cdots-$ | F | H |

Therefore, option D is the correct answer. 9. Ans. D.

1) $B$, who is 55 years old, lives in an evennumbered house to the east of the house number 6 .

2) There are two houses between B's house and the person's house who is 64 years old.

Case 1.1


Case 1.2


Case 2

|  |  |  |  |  | (64) |  |  | (55) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  |  |  |  |  |  |  |  |  | B |  |

3) Only one house is there between the vacant house and the house in which 64 years old person lives.
4) The vacant house is to the west of 64 years old person's house.

| Case 1.1 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | (55) | ---- |  | (64) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  |  |  |  |  |  |  | B | ---- |  |  |

Case 1.2

|  |  | - |  |  | $(64)$ |  |  | $(55)$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

Case 2

5) House number 5 is not vacant. (Here, case 2 will be eliminated and we will continue with the remaining cases)

Case 1.1

6) A, who is 46 years old, lives to the west of the house numbered 3 but not at the end.
7) Two persons live between $A$ and $D$, who is 14 years older than $B$ and lives to the west of $B$.
8) Vacant houses are not near to each other.
9) $D$ does not live in the house number 5 and not near to $B$.

| Case 1.1 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (46) |  |  |  | (69) |  | (55) |  | -- |  | (64) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  | A |  |  |  | D |  | B | --- |  |  |

Case 1.2

$$
\begin{array}{ccccccccccc} 
& & (46) & -- & & (64) & (69) & & (55) & & \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 \\
& \text { A } & --- & & & \text { D } & & \text { B } & & &
\end{array}
$$

10) At least two people live between the one, who is 64 years old and the one, who is 69 years old.
(Here, case 1.2 will be eliminated and we will continue with the case 1.1)

|  | (46) |  |  |  | $(69)$ |  | $(55)$ | $\cdots-$ |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|  | A |  |  |  | D |  | $B$ | --- |  |  |  |

11) One of the houses is vacant to the east of the house number 6. (Refer point 8)
12) The one, who is 7 years younger than A, lives immediately right of a vacant house which is even-numbered house.

$$
\begin{array}{cccccccccccc} 
& (46) & & --- & (39) & (69) & --- & (55) & --- & & & \text { (64) } \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 \\
& \text { A } & & --- & & \mathrm{D} & --- & \mathrm{B} & --- & &
\end{array}
$$

13) $C$ is 4 years younger than the one, who lives in the house number 5 and lives to the west of the house number 5 but not at the end.
14) Only one person lives between $E$, who is 3 years older than D and the one who is 35 years old.

| $(72)$ | $(46)$ | $(35)$ | - | - | $(39)$ | $(69)$ | -- | $(55)$ | $-\cdots$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
| E | A | C | --- |  | D | --- | B | $\cdots-$ |  |  |  |

15) $F$ is 4 years younger than the one, who lives in the house number 11.
16) H is 25 years older than G .

| $(72)$ | $(46)$ | $(35)$ | -- | $(39)$ | $(69)$ | -- | $(55)$ | -- | $(60)$ | $(64)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| E | A | C | --- | G | D | --- | B | --- | F | H |

Therefore, option D is the correct answer. 10. Ans. B.

1) $B$, who is 55 years old, lives in an evennumbered house to the east of the house number 6.

2) There are two houses between B's house and the person's house who is 64 years old.

| Case 1.1 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  | (64) |
|  | 2 | 3 | 4 | 5 | 6 | 7 |  |  | 9 | 10 | 11 |
|  |  |  |  |  |  |  |  |  |  |  |  |

Case 1.2

| 1 | 2 | 3 | 4 | $(64)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 5 | 6 |  |  | $(55)$ |
| 7 | 8 | 9 | 10 | 11 |
| $B$ |  |  |  |  |

Case 2
$\begin{array}{lllllllllll}1 & 2 & 3 & 4 & 5 & 6 & (64) & & & (55) \\ 7 & 8 & 9 & 10 & 11 \\ B & & & & & & & & & & \end{array}$
3) Only one house is there between the vacant house and the house in which 64 years old person lives.
4) The vacant house is to the west of 64 years old person's house.

Case 1.1

|  |  |  |  |  |  |  | (55) | ---- |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  |  |  |  |  |  |  | B | ---- |  |  |
| Case 1.2 |  |  |  |  |  |  |  |  |  |  |


|  |  | - |  |  | $(64)$ |  |  | $(55)$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

Case 2

|  |  |  |  | ---- |  | 64) |  |  | (55) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  |  |  |  | --- |  |  |  |  | B |  |

5) House number 5 is not vacant. (Here, case 2 will be eliminated and we will continue with the remaining cases)

Case 1.1

6) A, who is 46 years old, lives to the west of the house numbered 3 but not at the end.
7) Two persons live between $A$ and $D$, who is 14 years older than $B$ and lives to the west of $B$.
8) Vacant houses are not near to each other.
9) $D$ does not live in the house number 5 and not near to $B$.

Case 1.1

| (46) |  |  |  | (69) |  | (55) ---- |  |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  | A |  |  |  | D |  | B | ---- |  |  |


|  | (46) | --- |  | $(64)$ | $(69)$ |  | $(55)$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  | A | --- |  |  | D |  | B |  |  |  |

10) At least two people live between the one, who is 64 years old and the one, who is 69 years old.
(Here, case 1.2 will be eliminated and we will continue with the case 1.1)

|  | $(46)$ |  |  |  | $(69)$ |  | $(55)$ | $-\cdots$ |  |  | $(64)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|  | A |  |  |  | D |  | B | $\cdots--$ |  |  |  |

11) One of the houses is vacant to the east of the house number 6. (Refer point 8)
12) The one, who is 7 years younger than A, lives immediately right of a vacant house which is even-numbered house.

|  | $(46)$ |  | -- | $(39)$ | $(69)$ | -- | $(55)$ | -- |  |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|  | A |  | --- |  | D | --- | B | --- |  |  |  |

13) $C$ is 4 years younger than the one, who lives in the house number 5 and lives to the west of the house number 5 but not at the end.
14) Only one person lives between $E$, who is 3 years older than D and the one who is 35 years old.

| $(72)$ | $(46)$ | $(35)$ | -- | $(39)$ | $(69)$ | -- | $(55)$ | $-\cdots$ |  | (64) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| E | A | C | $\cdots$ |  | D | $\cdots$ | B | $\cdots-$ |  |  |

15) $F$ is 4 years younger than the one, who lives in the house number 11.
16) H is 25 years older than G .

| $(72)$ | $(46)$ | $(35)$ | - | $(39)$ | $(69)$ | -- | $(55)$ | -- | $(60)$ | $(64)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| E | A | C | --- | G | D | --- | B | --- | F | H |

Therefore, option $B$ is the correct answer. 11. Ans. A.

Required ratio $=(3000+7000):(7000$ $+8000)=2: 3$.

Total number of orders $=$ Number of orders delivered 100
Percentage of orders delivered out of the total orders Number of order cancel $=$ Total number of ordered - Number of orders delivered Total number of orders returned $=$ Number of orders delivered $\times$ 100
Percentage of orders returned

| Month | Total <br> No. of <br> order | No. of <br> order <br> delivered | No. of <br> order <br> canceled | No. of <br> order <br> returned | No. of <br> order <br> finally <br> accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January | 30000 | 27000 | 3000 | 8100 | 18900 |
| February | 30000 | 24000 | 6000 | 10800 | 13200 |
| March | 28000 | 21000 | 7000 | 10080 | 10920 |
| April | 22500 | 21600 | 900 | 10800 | 10800 |
| May | 40000 | 24000 | 16000 | 5760 | 18240 |
| June | 40000 | 32000 | 8000 | 11200 | 20800 |

12. Ans. E.

Required average =
$30000+30000+28000+22500+40000+40000$
6
$=31750$.
Total number of orders $=$ Number of orders delivered $\times$

Percentage of orders delivered out of the total orders Number of order cancel = Total number of ordered - Number of orders delivered Total number of orders returned $=$ Number of orders delivered $\times$ 100
Percentage of orders returned

| Month | Total <br> No. of <br> order | No. of <br> order <br> delivered | No. of <br> order <br> canceled | No. of <br> order <br> returned | No. of <br> order <br> finally <br> accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January | 30000 | 27000 | 3000 | 8100 | 18900 |
| February | 30000 | 24000 | 6000 | 10800 | 13200 |
| March | 28000 | 21000 | 7000 | 10080 | 10920 |
| April | 22500 | 21600 | 900 | 10800 | 10800 |
| May | 40000 | 24000 | 16000 | 5760 | 18240 |
| June | 40000 | 32000 | 8000 | 11200 | 20800 |

13. Ans. D.

Required difference $=16000-5760=$ 10240.

Total number of orders $=$ Number of orders delivered $\times$ 100
Percentage of orders delivered out of the total orders Number of order cancel $=$ Total number of ordered - Number of orders delivered

Total number of orders returned $=$ Number of orders delivered $\times$ 100
Percentage of orders returned

| Month | Total <br> No. of <br> order | No. of <br> order <br> delivered | No. of <br> order <br> canceled | No. of <br> order <br> returned | No. of <br> order <br> finally <br> accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January | 30000 | 27000 | 3000 | 8100 | 18900 |
| February | 30000 | 24000 | 6000 | 10800 | 13200 |
| March | 28000 | 21000 | 7000 | 10080 | 10920 |
| April | 22500 | 21600 | 900 | 10800 | 10800 |
| May | 40000 | 24000 | 16000 | 5760 | 18240 |
| June | 40000 | 32000 | 8000 | 11200 | 20800 |

14. Ans. C.
Required percent $=\frac{6000-900}{6000} \times 100=$
$85 \%$.

| Total number of orders $=$ Number of |
| :--- |
| delivered |
| 100 |

Percentage of orders delivered out of the total orders Number of order cancel $=$ Total number of ordered - Number of orders delivered Total number of orders returned $=$ Number of orders delivered $\times$ 100
Percentage of orders returned

| Month | Total <br> No. of <br> order | No. of <br> order <br> delivered | No. of <br> order <br> canceled | No. of <br> order <br> returned | No. of <br> order <br> finally <br> accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January | 30000 | 27000 | 3000 | 8100 | 18900 |
| February | 30000 | 24000 | 6000 | 10800 | 13200 |
| March | 28000 | 21000 | 7000 | 10080 | 10920 |
| April | 22500 | 21600 | 900 | 10800 | 10800 |
| May | 40000 | 24000 | 16000 | 5760 | 18240 |
| June | 40000 | 32000 | 8000 | 11200 | 20800 |

15. Ans. B.

Required sum $=13200+10800=$ 24000.

Total number of orders $=$ Number of orders delivered $\times$ 100
Percentage of orders delivered out of the total orders Number of order cancel $=$ Total number of ordered - Number of orders delivered Total number of orders returned $=$ Number of orders delivered $\times$

Percentage of orders returned

| Month | Total <br> No. of <br> order | No. of <br> order <br> delivered | No. of <br> order <br> canceled | No. of <br> order <br> returned | No. of <br> order <br> finally <br> accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January | 30000 | 27000 | 3000 | 8100 | 18900 |
| February | 30000 | 24000 | 6000 | 10800 | 13200 |
| March | 28000 | 21000 | 7000 | 10080 | 10920 |
| April | 22500 | 21600 | 900 | 10800 | 10800 |
| May | 40000 | 24000 | 16000 | 5760 | 18240 |
| June | 40000 | 32000 | 8000 | 11200 | 20800 |

16. Ans. B.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get
$\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
Let the required number of leg movements $=x$, then
$(x+1200) \times 0.1+x \times 0.2=1200$
$\Rightarrow 0.3 x+120=1200$
$\Rightarrow 0.3 \mathrm{x}=1080$
$\Rightarrow x=3600$
Hence, the average number of leg movements done by toy $A$ in 1 minute $=$ Total number of leg movements/180 (in 9 AM to $12 \mathrm{PM}=3$ hours $=180$ minutes)
$=3600 / 180=20$.
17. Ans. C.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get
$\mathrm{h}=0.1$ and $\mathrm{I}=0.2$

Let the number of hand movements $=a$ and number of leg movements $=b$
$a \times 0.1+b \times 0.2=1120$
$\Rightarrow a+2 b=11200 \ldots$ (i)
Given,
$2 a+b=x \ldots$ (ii)
On adding equations (i) and (ii), we get

$$
a+b=\frac{\frac{(11200+x)}{3}}{3}
$$

For $(a+b)$ to be integer, $(11200+x)$ must be divisible by 3
I. When $x=9000$, then $(11200+x)=$ $11200+9000=20200$, which is not divisible by 3
II. When $x=12600$, then $(11200+x)=$ $11200+12600=23800$, which is not divisible by 3
III. When $x=9800$, then $(11200+x)=$ $11200+9800=21000$, which is divisible by 3
Hence, only statement III is true.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be $h$ mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
18. Ans. D.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be $h$ mAh and 1 leg movement be I mAh, then
$4 h+3 I=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get
$\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
Let the remaining battery capacity of each of the batteries $B$ and $C=x m A h$, then
$1500 \times 0.1+y \times 0.2=(1350-x)$
$\Rightarrow 150+0.2 y=1350-x$
$\Rightarrow 0.2 y=1200-x$
$\Rightarrow y=6000-5 x$
Also given
$y \times 0.1+2000 \times 0.2=(1120-x)$
$\Rightarrow(6000-5 x) \times 0.1+400=(1120-x)$
$\Rightarrow 600-0.5 x+400=1120-x$
$\Rightarrow 0.5 x=1120-(600+400)=120$
$\Rightarrow x=240$
Hence, the required percentage $=\frac{240}{1600} \times$ $100=15 \%$.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
19. Ans. E.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 l=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
Let the number of rotations done by toy $B=x$ and battery consume by 1 rotation $=r m A h$, then
$3 r=h+7 l=0.1+7 \times 0.2=0.1+1.4$ $=1.5$
$\Rightarrow r=\frac{1.5}{3}=0.5$
According to question
$2 x \times 0.1+x \times 0.2+2 x \times 0.5=1120$
$\Rightarrow 0.2 x+0.2 x+x=1120$
$\Rightarrow 1.4 x=1120$
$\Rightarrow x=800$
Hence, the required sum $=2 x+2 x=4 x$ $=3200$.
20. Ans. D.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 I=1 \ldots$ (i)
$6 h+7 l=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$

Battery capacity of toy $D=\frac{\frac{1200+1120}{2}}{2}=$ 1160 mAh
Let the number of hand movements done by toy $D=x$, then
$x \times 0.1+x \times 0.2=75 \%$ of 1160
$\Rightarrow 0.3 x=870$
$\Rightarrow x=2900$
Hence, the number of hand movements done by toy $D=x=2900$.

| Toy | A | B | C |
| :--- | :---: | :---: | :---: |
| Capacity (mAh) | 1500 | 1600 | 1800 |
| Present capacity (mAh) | 1200 | 1120 | 135 |

Let the battery consume by 1 hand movement be h mAh and 1 leg movement be I mAh, then
$4 h+3 I=1 \ldots$ (i)
$6 h+71=2 \ldots$ (ii)
On solving equations (i) and (ii), we get $\mathrm{h}=0.1$ and $\mathrm{I}=0.2$
21. Ans. E.

British employees "...don't have enough time to spend with their family..." which can lead to tensions in personal lives. So, option A is correctly assumed.
British employees "...struggle to make time for health appointments..." which might lead health hazards. So, option B is correctly assumed.
"...Brits say they have felt anxious due to work pressure in the last year..." proves that option C is correctly assumed.
British employees have "...feelings of failure..." which means option D is correctly assumed.

Hence, the correct answer is E .
22. Ans. B.
"Despite agreeing that flexible working can improve work life balance, just 17 percent of British employees are actively encouraged to do so..." This means that $87 \%$ are not practicing flexible working due to the disinterested employers. And among those who are encouraged to do so, "...don't have the tech to work effectively." So, option I is wrong.
"When it comes to addressing the issue, British employees are clear that flexible working can help improve work life balance..." proves that option II is false. "British employees are adopting unhealthy ways of working that are having a profound impact on their personal lives..." proves that option III is correct.
Hence, the correct answer is $B$.
23. Ans. D.

The employees "...need an 'official reason' such as an appointment to work outside the office". The author puts 'official reason' under quotations means that he/she believes that this particular reason provided by the employers is not genuine. So, the author will not agree with option C.
The passage is about the lack of flexible work culture and the shortcomings of the flexible work culture in UK. Thus, the author will agree with option A.
"Only 23 per cent of organisations regularly implement initiatives to improve employee wellbeing..." $23 \%$ is less than a fourth, which is equivalent to $25 \%$. So, the author will agree option B.
Hence, the correct answer is D.
24. Ans. C.
"Meanwhile, for those that do make it out of the office to work more flexibly, outdated tech is slowing people down and preventing employees from doing their best work." This proves that proper enforcement alone cannot reduce stress. So, option I is not correct.
"Of the 50 per cent of UK workers whose organisations offer flexible working, just 35 per cent are actively encouraged to do so..." indicates that even though the employers claim that they have flexible
working, but their employees are not encouraged to do and are expected to provide an 'official reason' to work outside the office. So, option II is correct. "...outdated tech is slowing people down and preventing employees from doing their best work" proves option III is correct.
Hence, the correct answer is $C$.
25. Ans. A.

Employers do not actively encourage employees to pursue flexible working, even though it is present in their organisations. They also do not accept the employees' choice to work outside the office and ask for official reason'. Even those can work outside, have outdated equipment because the organisations didn't invest in it. This leads to the employees returning back to the office. So, the given inference is definitely true. Hence, the correct answer is A.
26. Ans. B.

Among the given sentences, $A$ and $B$ have errors.
In sentence A, the preposition 'on' before a place like 'Jamshedpur' is incorrect. The preposition 'at' is more appropriate in this case. 'At' is used to refer a specific place, in this case Jamshedpur.
In sentence $B$, the tense is in the past form. 'Has been' as used in part 3 is incorrect as it is used refer to the present tense.
Thus, option B is the correct answer. 27. Ans. B.

Sentences $A$ and $C$ have errors in them. In sentence $A$, 'pass the deer' is an incorrect phrase. The correct phrase is 'pass the buck' which means shifting the responsibility for something to someone else.
In sentence $C$, the preposition between has been incorrectly used. 'Between' is used when referring to two things. But in context of the given sentence, it involves more then two things which makes 'among' the correct preposition.
Thus, option B is the correct answer.
28. Ans. D.

Sentences B and C carry errors in them. In sentence $B$, 'but' is the incorrect conjunction to use. The conjunction 'but'
is used to introduce something contrasting with what has already been mentioned. The correct conjunction here is 'and' which is used to show addition and when the statements are similar. In this case, the sentence talks about the views of the American elite regarding military supremacy and how the world must play by their rules. We see an addition of fact and not contrasting the initial one.
In sentence C, 'extent' is a noun and does not correctly express the work of the attempt. It requires a verb like 'extend' which means cause to cover a wider area. As the sentence talks about extending battlefield dimensions, the latter fits here contextually.
Thus, option D is the correct answer. 29. Ans. A.

The errors lie in sentences $A$ and $C$.
In sentence $A$, to maintain the subjectverb agreement, 'actions', as it is plural in number, should be followed by 'are' instead of 'is'.
In sentence $C$, 'dethroning' means to remove someone from the throne. The army cannot be dethroned. This is conceptually incorrect and should be replaced by 'removal' which means dismissal. The latter makes more sense. Thus, option A is the correct answer. 30. Ans. C.

The passage begins with a shocking revelation made from the Tork research that how North Americans are skipping lunch and are hooked to their workstations, but it is certainly not the central theme of the passage, but it provides the base to convey the central theme of the passage which is 'importance of taking breaks during work'. The entire passage revolves around this and outlines the health hazards of working without breaks and how taking them leads to enhanced productivity at work.
Take note of the following lines from the passage "A recent survey by Tork shows exactly how important lunch breaks are, along with how rare they are in the North American workplace..." And "Taking a break in the middle of the day for lunch is
a recovery period, allowing employees to come back refreshed and reinvigorated for the second half"'. Therefore, $C$ is the correct option.
31. Ans. B.

* The World Day for Audiovisual Heritage (WDAH) was celebrated to raise awareness of the significance and preservation of recorded sound and audiovisual documents (films, sound and video recordings, television and radio programmes) for future generations.
* The theme for the year 2019 is "Engage the Past Through Sound and Images".
* The day was approved at UNESCO (United Nations Educational, Scientific and Cultural Organization) general conference in 2005 \& it was observed for the first time on October 27, 2007.

32. Ans. A.

* Bollywood actor Kareena Kapoor unveiled the ICC World Cup trophies for the men's and women's tournament at the Melbourne Cricket Ground (MCG).
* The 2020 ICC Women's World Cup is slated to get underway from February 21 with Australia hosting India in the inaugural fixture.
* The men's event will begin from October 19 with Bangladesh taking on a yet-to-qualify team.

33. Ans. D.

* Vikram Solar Limited is an Indian company based in Kolkata and the second-largest solar energy company in India by revenue.
* The company's primary business focus is manufacturing solar PV modules and also carries out engineering, procurement and construction services and operations \& maintenance of solar power plants.
* It is a subsidiary of Vikram Group, which also has subsidiaries in the tea processing, textiles and engineering industries

34. Ans. D.

* Two new countries Eritrea and Saint Kittis and Nevis have signed the International Solar Alliance's (ISA) Framework Agreement at its second Assembly in New Delhi taking the membership strength of the body to 83.
* The Ministry of New and Renewable Energy hosted the second Assembly of ISA.
* Power and New \& Renewable Energy Minister R K Singh presided over the Assembly.

35. Ans. A.

* Mother Teresa Memorial Awards 2019 for Social Justice (MTMA) dedicated to the memory of the Saint of Kolkata, went to a number of people from India and abroad.
* The awards were presented to the laureates on 3 November 2019 in Mumbai.
* The annual award is established by the Harmony Foundation and is endorsed by Missionaries of Charities.
* The theme by Harmony Foundation for 2019 is 'Combating Contemporary Forms of Slavery'.

36. Ans. A.

* German multinational conglomerate company Siemens signed Memorandum of Understanding (MoU) with power producer NTPC and The Energy and Resources Institute(TERI) for decarbonization.
* The MoU was signed for reducing the industrial and commercial carbon footprint and also to reduce the dependence on hydrocarbon in India.
* The MoU with Teri was to enable energy transitions across the electricity, transport and industrial sectors.

37. Ans. C.

* A robotic surgery facility was opened for public at the Centre-run Safdarjung Hospital.
* Safdarjung Hospital is the first central government-run healthcare institution to have this latest facility.
* Robotic surgery has the advantage of providing minimally invasive surgery, reducing morbidity and mortality significantly of critically ill, cancer and kidney failure patients.
* The operating time also decreases, resulting in improvement in turnover of patients and decrease in waiting list of patients for surgery significantly.

38. Ans. A.

* India and Asian Development Bank, ADB, have signed 200-million dollar loan agreement for upgrading rural roads in 34 districts of Maharashtra to improve road safety.
* The agreement was signed between Sameer Kumar Khare, Additional Secretary, Department of Economic Affairs in the Ministry of Finance and Sabyasachi Mitra, Deputy Country Director of ADB's India Resident Mission.
* The project will improve the condition of about two thousand 100 kilometres of rural roads to all-weather standards.

39. Ans. C.

* Renowned Hindi writer Leeladhar Jagoori was conferred with the 28th Vyas Samman for the year 2018 in New Delhi.
* The award was conferred to him by well-known author Govind Mishra, for his 12th anthology (collection of poems or other pieces of writing) of poetry collection 'Jitne Log Utne Prem'.
* Vyas Samman is a literary award in India, given annually by the K.K. Birla Foundation in honour of Indian industrialist Krishna Kumar Birla. 40. Ans. A.
* The union minister of Road Transport \& Highways and Micro, Small and Medium Enterprises, Shri Nitin Gadkari inaugurated conference on 'One Nation One Tag - FASTag' in New Delhi for rolling out usage of unified electronic system in the country.
* Several states/authorities signed a Memorandum of Understanding(MoU) with Indian Highways Management Corp Ltd (IHMCL) for FASTag integration in the state, as toll collection will be mandatorily done through FASTags effective from December 31, 2019 onwards.
* The toll collection at national highways is done through Radio Frequency Identification (RFID) technology based FASTags.
* To promote FASTag usage in Sate/ City Toll Plaza, scheme guidelines were circulated in all states by Indian Highways Management Corp Ltd (IHMCL).

