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## IBP <br>  <br> 2018 paper with solutions

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Direction: Read the given information and answer the given question
Few people are sitting in a row facing North. 3 persons are sitting between M and $\mathrm{N} . \mathrm{K}$ is third to the right of $\mathrm{N} . \mathrm{K}$ is second to the left of $P$. Number of people between $M$ and $P$ is same as the number of people between M and L. Only three people sit to the left of L . Six persons sit between $L$ and J. Two people sit between $P$ and $R$. $R$ is sitting at the second position from one of the ends.

1. How many persons are sitting in the row?
A. 27
B. 28
C. 19
D. 18
E. 26
2. What is the position of J with respect to M ?
A. $2^{\text {nd }}$ to left
B. $3^{\text {rd }}$ to right
C. $2^{\text {nd }}$ to right
D. $3^{\text {rd }}$ to left
E. Immediate left
3. Direction: Read the given information and answer the given question
Few people are sitting in a row facing North. 3 persons are sitting between M and $\mathrm{N} . \mathrm{K}$ is third to the right of $\mathrm{N} . \mathrm{K}$ is second to the left of $P$. Number of people between $M$ and $P$ is same as the number of people between M and L. Only three people sit to the left of L . Six persons sit between $L$ and J. Two people sit between $P$ and $R$. $R$ is sitting at the second position from one of the ends.
How many persons are sitting between $M$ and $P$ ?
A. 9
B. 12
C. 8
D. 7
E. 10
4. Which of the following statements is true?
A. J sits to the right of K .
B. Seven people are sitting between N and R .
C. Less than 10 people sit between $P$ and L .
D. 9 people sit between $J$ and $P$.
$E$. None of the statements is correct.
5. Direction : Read the given information and answer the given question
Few people are sitting in a row facing North. 3 persons are sitting between M and $\mathrm{N} . \mathrm{K}$ is third to the right of $\mathrm{N} . \mathrm{K}$ is second to the left of $P$. Number of people between $M$ and $P$ is same as the number of people between M and L. Only three people sit to the left of L. Six persons sit between $L$ and J. Two people sit between $P$ and $R$. $R$ is sitting at the second position from one of the ends.
How many people are sitting to the left of $K$ ?
A. 19
B. 8
C. 9
D. 15
E. 12
6. Direction: Read the given information and answer the given question.
8 people D, E, F, G, H, I, J and K are sitting around a square table in such a way that four of them sit at the corners while four of them sit in the middle of each of the four sides. The ones sitting in the middle of the sides are facing the centre and the ones sitting at the corners are facing outside.
$F$ sits second to the right of $G$ and only 3 people sit between $F$ and J. Only 1 person sits between J and I (either from left or right). D sits second to the left of K and is neither an immediate neighbour of I nor of J. Only 3 people sit between $D$ and $E$. $E$ does not sit at any of the corners of the table.
Who sits 3rd to the right of H ?
A. D
B. E
C. J
D. G
E. F
7. What is the position of I with respect to E?
A. $2^{\text {nd }}$ to the right
B. $3^{\text {rd }}$ to the left
C. immediate right
D. immediate left
E. $2^{\text {nd }}$ to the left
8. Direction: Read the given information and answer the given question.

8 people D, E, F, G, H, I, J and K are sitting around a square table in such a way that four of them sit at the corners while four of them sit in the middle of each of the four sides. The ones sitting in the middle of the sides are facing the centre and the ones sitting at the corners are facing outside.
$F$ sits second to the right of $G$ and only 3 people sit between F and J. Only 1 person sits between J and I (either from left or right). D sits second to the left of K and is neither an immediate neighbour of I nor of J. Only 3 people sit between $D$ and $E$. $E$ does not sit at any of the corners of the table.
Which of the following statements is/are true as per the given arrangement?
I. $G$ is facing inside.
II. H is an immediate neighbour of J .
III. $G$ is sitting to the immediate left of K.
A. Only I follow.
B. Only II follow.
C. Only III follow.
D. Both I and II follow.
E. Both II and III follows.
9. Four of the following five are alike in a certain way. Which of the following does not belong to the group?
A. F
B. J
C. G
D. I
E. K
10. Direction: Read the given information and answer the given question.
8 people D, E, F, G, H, I, J and K are sitting around a square table in such a way that four of them sit at the corners while four of them sit in the middle of each of the four sides. The ones sitting in the middle of the sides are facing the centre and the ones sitting at the corners are facing outside.
$F$ sits second to the right of $G$ and only 3 people sit between F and J. Only 1 person sits between J and I (either from left or right). D sits second to the left of K and is neither an immediate neighbour of I nor of J. Only 3 people sit between

D and E. E does not sit at any of the corners of the table.
How many people sit between K and J when counted from the right of $J$ ?
A. Four
B. Five
C. Six
D. None
E. Two
11. Direction: Read the given information and answer the given question. $C, D, H, N, P, S$ and $U$ are seven members of a family. $D$ is the mother of $\mathrm{F}, \mathrm{N}$ is the son of $\mathrm{F} . \mathrm{H}$ is the only sister of $N$ and $U, S$ is the father of $U . S$ is the son of $C$.
If $P$ is the father-in-law of $F$, then how
is $C$ related to $U$ ?
A. Grandmother
B. Grandfather
C. Father
D. Mother
E. Can't be determined
12. How is H related to F ?
A. Son
B. Daughter
C. Husband
D. Wife
E. Father
13. Direction: Read the given information and answer the given question. $C, D, H, N, P, S$ and $U$ are seven members of a family. $D$ is the mother of $\mathrm{F}, \mathrm{N}$ is the son of $\mathrm{F} . \mathrm{H}$ is the only sister of $N$ and $U, S$ is the father of $U . S$ is the son of C .
How is $N$ related to $D$ ?
A. Grandson
B. Wife
C. Daughter
D. Granddaughter
E. Son
14. In each question below three statement followed by two conclusions numbered I and II. You have to take the two given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

## Statement:

$A \geq B>F ; B>M>O ; F>S ; R<S$

## Conclusion:

I. $\mathrm{S}<\mathrm{A}$
II. $\mathrm{F}<\mathrm{O}$
A. Only conclusion I follows.
B. Only conclusion II follows.
C. Either conclusion I or II follows.
D. Both conclusions I and II follow.
E. Neither conclusion I nor II follows.

## 15. Statement: <br> $D \leq R>E \leq B ; S \leq M=E>D ; G>B$ Conclusion:

I. $\mathrm{D}>\mathrm{G}$
II. $B<R$
A. Only conclusion I follows.
B. Only conclusion II follows.
C. Either conclusion I or II follows.
D. Both conclusion I and II follows.
E. Neither conclusion I nor II follows.
16. Statement:
$\mathrm{E} \leq \mathrm{S}>\mathrm{F} \leq \mathrm{C} ; \mathrm{T} \leq \mathrm{N}=\mathrm{F}>\mathrm{E} ; \mathrm{H}>\mathrm{C}$ Conclusion:
I. $\mathrm{T}<\mathrm{C}$
II. $\mathrm{C}=\mathrm{T}$
A. Only conclusion I follows.
B. Only conclusion II follows.
C. Either conclusion I or II follows.
D. Both conclusion I and II follows.
E. Neither conclusion I nor II follows.
17. In the question below three statements are given followed by two conclusions numbered I and II. You have to take the two given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

## Statement:

$M=L \geq N \geq Q<P<V \geq S ; Q>G$

## Conclusion:

I. $G \geq S$
II. $M>G$
A. Only conclusion I follows.
B. Only conclusion II follows.
C. Either conclusion I or II follows.
D. Both conclusion I and II follows.
E. Neither conclusion I nor II follows.
18. In the question below three statements are given followed by two conclusions numbered I and II. You have to take the two given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.
18. Statement:
$\mathrm{Q}>\mathrm{A} \geq \mathrm{Z} \leq \mathrm{X} \leq \mathrm{C} ; \mathrm{Z} \geq \mathrm{H}$
Conclusion:
I. $\mathrm{Q}>\mathrm{H}$
II. $Z \leq C$
A. Only conclusion I follows.
B. Only conclusion II follows.
C. Either conclusion I or II follows.
D. Both conclusions I and II follow.
E. Neither conclusion I nor II follows.
19. Direction: Read the given information and answer the given question There are 9 boxes kept one above the other. There are 5 boxes between box $P$ and box R. Box $T$ is kept immediately above R. 3 boxes are kept between box $T$ and box $S$. Number of boxes between $P$ and $S$ is same as the number of boxes between T and Q . Box U is kept below box Q . Box W is kept somewhere below $X$. There is only one box kept between $U$ and V . U is above V .
Which of the following statements is not true?
I. There are two boxes between T and Q .
II. S is kept below W .
III. U is kept immediately above P .
A. Only I
B. Only II
C. Only III
D. Both II and III
E. All I, II and III
20. V is related P and Q is related to X in certain manner. To which of the following is $U$ related in the same manner?
A. W
B. $R$
C. S
D. T
E. X
21. How many boxes are kept between $X$ and $P$ ?
A. Five
B. Two
C. Three
D. Four
E. None
22. Which of the following pair of box is kept immediately above and below box Q respectively?
A. XS
B. SX
C. RW
D. WR
E. None of these
23. What is the position of box $W$ in the given arrangement?
A. Between $P$ and $V$
B. Fourth from the top.
C. Sixth form the bottom.
D. Fourth from the bottom.

E . Between R and Q .
24. If it is possible to make a meaningful word from the first, fourth, sixth and the ninth letters of the word UNDERNEATH, then what will be the first letter of that word? Mark $X$ if no such word can be formed, mark $M$ if more than one such word can be formed.
A. T
B. U
C. M
D. X
E. N
25. How many such pairs of letters are there in the word TRANSPORT which has as many letters between them in the word as in the English alphabetical series in both forward and backward direction?
A. Four
B. One
C. Three
D. Two
E. More than four
26. Direction: Read the given information and answer the given question
8 persons- $P, Q, R, S, T, U, V$ and $W$ were born in different years viz. 1945, 1956, 1961, 1973, 1978, 1989, 1996 and 2007 but not necessarily in the same order. It is assumed that all of them were born on the same date of different years. All the age calculations are done assuming the present year as 2018.
S was born in an odd number year. The difference between the present age of $S$
and V is 5 . Only 3 people were born between V and T . The present age of W is twice the present age of Q . The number of people born between T and Q is the same as the number of people born between T and P. R was born in one of the years before $P$.
26. What will be the age of $S$ after 4 years?
A. 50 years
B. 61 years
C. 78 years
D. 16 years
E. 34 years
27. Who was born before $W$ but after $U$ ?
A. R
B. V
C. S
D. $P$
E. T
28. What is the difference between the ages of $S$ and $R$ ?
A. 16 years
B. 11 years
C. 17 years
D. 5 years
E. 12 years
29. Direction: Read the given information and answer the given question
8 persons- $\mathrm{P}, \mathrm{Q}, \mathrm{R}, \mathrm{S}, \mathrm{T}, \mathrm{U}, \mathrm{V}$ and W were born in different years viz. 1945, 1956, 1961, 1973, 1978, 1989, 1996 and 2007 but not necessarily in the same order. It is assumed that all of them were born on the same date of different years. All the age calculations are done assuming the present year as 2018.
$S$ was born in an odd number year. The difference between the present age of $S$ and $V$ is 5 . Only 3 people were born between V and T . The present age of W is twice the present age of Q . The number of people born between T and Q is the same as the number of people born between $T$ and $P$. R was born in one of the years before $P$.
29. What is the age of $U$ ?
A. 57 Years
B. 22 Years
C. 40 Years
D. 45 Years
E. 73 Years
30. Direction: Read the given information and answer the given question
8 persons- $P, Q, R, S, T, U, V$ and $W$ were born in different years viz. 1945, 1956, 1961, 1973, 1978, 1989, 1996 and 2007 but not necessarily in the same order. It
is assumed that all of them were born on the same date of different years. All the age calculations are done assuming the present year as 2018.
$S$ was born in an odd number year. The difference between the present age of $S$ and V is 5 . Only 3 people were born between V and T . The present age of W is twice the present age of Q . The number of people born between T and Q is the same as the number of people born between T and P. R was born in one of the years before $P$.
30. In which year was $R$ born?
A. 1961
B. 1973
C. 1978
D. 1996
E. 1945
31. Direction: The question below consists of a question and two statements numbered I and II given. You have to decide whether the data provided in which of the statements are sufficient to answer the question. Choose your answer from the options based on this.
Six persons A, B, C, D, E and F are sitting in a circle. Some of them are facing the centre and some of them are facing away from the centre. How many of them are facing the centre?
I. $F$ is $2^{\text {nd }}$ to the left of $D . C$ is $2^{\text {nd }}$ to the left of $F$. C is to the immediate left of $B$. $E$ is $2^{\text {nd }}$ to the left of $B$ and $B$ is facing away from the centre.
II. $B$ is $2^{\text {nd }}$ to the right of $A . E$ is $2^{\text {nd }}$ to the left of $B$. C's neighbors are facing opposite directions to each other. $B$ is not a neighbor of $F$ and $F$ is $2^{\text {nd }}$ to the right of $C$.
A. 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. 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. The data either in statement I alone or in statement II alone are sufficient to answer the question.
D. The data in both the statements I and II together are not sufficient to answer the question.
$E$. The data in both the statements I and II together are necessary to answer the question.
32. Direction: The question consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in which of the statements are sufficient to answer the question. Choose your answer from the options based on this. Six persons A, B, C, D, E and F were born in a different month starting from March to August of the same year, not necessarily in the same order. How many persons were born between D and C?
I. A was born in a month which has 30 days. Two persons were born between A and $D$. One person was born between $D$ and $E$.
II. One person was born between E and C. The number of people born before $C$ is the same as after $F$.
A. 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. 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. The data either in statement I alone or in statement II alone are sufficient to answer the question.
D. The data in both the statements I and II together are not sufficient to answer the question.
$E$. The data in both the statements I and II together are necessary to answer the question.
33. Direction: A question and two statements numbered I and II are given below. You have to decide whether the data provided in the statements are sufficient to answer the question or not.

Six persons Abhay, Deepak, Neha, Manik, Poorvi and Hitesh are sitting in a straight line facing north. Who are sitting at the extreme ends?
I. Poorvi is sitting fourth to the right of Deepak. Abhay is sitting third to the left of Neha. Either Abhay or Neha is sitting at an extreme end.
II. Only one person sits between Poorvi and Abhay. Poorvi is third to the right of Manik. Neha is sitting to the immediate right of Poorvi. Neither Abhay nor Poorvi is sitting on the extreme end.
A. If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.
B. If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question. C. If the data in either Statement I alone or Statement II alone is sufficient to answer the question.
D. If the data in both the statements I and II together are necessary to answer the question.
$E$. If the data in both the statements I and II together are not necessary to answer the question.
34. Direction: 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 statements are sufficient to answer the questions. Read both the statements and answer.
Five persons A, B, C, D and E are of different weights. Who is the heaviest?
I. B is heavier than C and D but lighter than $E$ who is not the heaviest.
II. $E$ is heavier than $B$ and $C$ but lighter than A.
A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient in answer the question.
B. The data in statement II alone is sufficient to answer the question, while
the data in statement I alone is not sufficient to answer the question. C. The data in either in statement I alone or in statement II alone is sufficient to answer the question. D. The data in both the statements I and II together is not sufficient to answer the question.
$E$. The data in both the statements I and II is together necessary to answer the question.
35. Direction: The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in which of the statements are sufficient to answer the question. Choose your answer from the options based on this.
What is the direction of point $M$ with respect to point T?
I. Point $N$ is 6 m to the west of point $M$. Point $O$ is $3 m$ to the west of point $P$. Point N is 5 m to the north of point O . Point $T$ is 11 m to the east of point $S$.
II. Point $P$ is 4 m to the north of point Q . Point $S$ is $2 m$ to the north of point $R$. Point $R$ is 8 m to the west of point Q .
A. 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. 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. The data either in statement I alone or in statement II alone are sufficient to answer the question.
D. The data in both the statements I and II together are not sufficient to answer the question.
$E$. The data in both the statements I and II together are necessary to answer the question.
36. Rs. 7000 is divided unequally in two parts and invested in scheme A, which offer $10 \%$ p.a. compound interest which compounded annually and in scheme $B$,
which offer $15 \%$ p.a. simple interest for 2 years and 3 years respectively. If the interest earned from scheme A is $84 \%$ of that earned from scheme $B$. Find the sum invested in scheme $A$.
A. Rs. 4200
B. Rs. 2700
C. Rs. 3000
D. Rs. 4000
E. Rs. 4500
37. A bag contains $X$ red balls and 5 green balls. 2 balls are picked up randomly one after the other without replacement from the bag, then the probability of both balls being red is $3 / 7$. What will be the value of $X$ ?
A. 10
B. 15
C. 13
D. 20
E. 22
38. A alone can do a work in 20 days. $B$ is $25 \%$ more efficient than A. A and B started working and worked for 4 days, then C alone completed the remaining job in 22 days. In how many days C alone can complete the entire job?
A. 30
B. 35
C. 40
D. 42
E. 45

Direction (39-43): Study the information carefully and answer the following questions:
A salon distributed 450 vouchers of free haircut and pedicure. The number of haircut vouchers were 130 more than the number of pedicure vouchers. The ratio between the number of male and female redeeming the pedicure vouchers is $13: 7$. The number of vouchers redeemed by male for haircut were 15 more than that of vouchers redeemed by male for pedicure. All the vouchers were redeemed.
39. Number of females redeeming pedicure vouchers are approximately what percent of the number of people redeeming haircut vouchers?
A. $24 \%$
B. $15 \%$
C. $19 \%$
D. $22 \%$
E. 17\%
40. Direction: Study the information carefully and answer the following questions:
A salon distributed 450 vouchers of free haircut and pedicure. The number of haircut vouchers were 130 more than the number of pedicure vouchers. The ratio between the number of male and female redeeming the pedicure vouchers is $13: 7$. The number of vouchers redeemed by male for haircut were 15 more than that of vouchers redeemed by male for pedicure. All the vouchers were redeemed.
If 30 people with pedicure vouchers took a manicure service and 50\% of those, who had haircut vouchers took a manicure service, then total how many people took manicure service?
A. 160
B. 150
C. 170
D. 175
E. None of these
41. How many males redeemed the pedicure voucher?
A. 94
B. 100
C. 86
D. 104
E. 98
42. Direction: Study the information carefully and answer the following questions:
A salon distributed 450 vouchers of free haircut and pedicure. The number of haircut vouchers were 130 more than the number of pedicure vouchers. The ratio between the number of male and female redeeming the pedicure vouchers is $13: 7$. The number of vouchers redeemed by male for haircut were 15 more than that of vouchers redeemed by male for pedicure. All the vouchers were redeemed.
How many males redeemed the haircut vouchers?
A. 105
B. 110
C. 119
D. 290
E. 120
43. What is the difference between the number of males and females having the pedicure vouchers?
A. 54
B. 56
C. 58
D. 48
E. 62
44. Direction: The given table shows the number of shirts produced and percentage of shirts failed the quality test in 4 years by a company. Study the table carefully and answer the given questions.

| Year | No. of Shirts <br> produced (in lakh) | \% of shirts failed <br> the quality test |
| :---: | :---: | :---: |
| 2014 | 3.2 | $2.5 \%$ |
| 2015 | 4.0 | $2.25 \%$ |
| 2016 | 2.8 | $1.25 \%$ |
| 2017 | 3.6 | $1.25 \%$ |

Note: Shirts which failed the quality test were not sold.
Average number of shirts that passed the quality test in the year 2016 and 2017 is
A. 3.16 lakh
B. 3.46 lakh
C. 3.36 lakh
D. 2.96 lakh
E. None of these
45. Direction: The given table shows the number of shirts produced and percentage of shirts failed the quality test in 4 years by a company. Study the table carefully and answer the given questions.

| Year | No. of Shirts <br> produced (in lakh) | \% of shirts failed <br> the quality test |
| :---: | :---: | :---: |
| 2014 | 3.2 | $2.5 \%$ |
| 2015 | 4.0 | $2.25 \%$ |
| 2016 | 2.8 | $1.25 \%$ |
| 2017 | 3.6 | $1.25 \%$ |

Note: Shirts which failed the quality test were not sold.
The number of shirts that failed quality test reduced by what percent in the year 2017 as compared to the year 2014?
A. 40.75 \%
B. $43.75 \%$
C. $42.75 \%$
D. $45.75 \%$
E. $44.75 \%$
46. Direction: The given table shows the number of shirts produced and percentage of shirts failed the quality
test in 4 years by a company. Study the table carefully and answer the given questions.

| Year | No. of Shirts <br> produced (in lakh) | \% of shirts failed |
| :---: | :---: | :---: |
| the quality test |  |  |
| 2014 | 3.2 | $2.5 \%$ |
| 2015 | 4.0 | $2.25 \%$ |
| 2016 | 2.8 | $1.25 \%$ |
| 2017 | 3.6 | $1.25 \%$ |

Note: Shirts which failed the quality test were not sold.
Out of total shirts produced in 2015, the number of white shirts produced is onethird less than the number of coloured shirts produced, then how many coloured shirts were produced in the year 2015?
A. 2.5 lakh
B. 2.3 lakh
C. 2.2 Lakh
D. 2.4 lakh
E. None of these
47. In $2015,10 \%$ of the total number of shirts, which passed the quality test was not sold. How many shirts in the year 2015 did not sell despite being passed the quality test?
A. 37400
B. 39500
C. 39100
D. 38600
E. 37500
48. In 2014, all shirts which passed the quality test were sold at an average price of Rs. 500 per shirt. What was the revenue (in Rs. crore) of that year?
A. 0.156 Cr
B. 15.6 Cr
C. 1.56 Cr
D. 1.52 Cr
E. 1.54 Cr
49. Direction: The following line graph shows the sales of wox boxes of two sizes medium and large on 5 different days by a company $A B C$. Study the line graph carefully and answer the questions given below:

How many large size wox boxes were sold together in all the given days?
A. 245
B. 240
C. 244
D. 226
E. 210
50. Direction: The following line graph shows the sales of wox boxes of two sizes medium and large on 5 different days by a company ABC.Study the line graph carefully and answer the questions given below:


Total number of wox boxes of given two sizes, sold on day 1 is approximately what percent of the total number of wox boxes given two sizes sold on day 4 ?
A. $84 \%$
B. $84.5 \%$
C. $86 \%$
D. $84.3 \%$
E. 84.9\%
51. What is the average of the number of wox boxes of medium size, sold on day 1 , day 4 and day 5 ?
A. 44
B. 45
C. 46
D. 47
E. 48
52. Direction: The following line graph shows the sales of wox boxes of two sizes medium and large on 5 different days by a company ABC.Study the line graph carefully and answer the questions given below:

Find the ratio between the toal number of large size wox boxes sold on day 3 and day 5 together and the number of
medium size wox boxes sold on day 1 and day 2 together.
A. $3: 4$
B. $4: 3$
C. $5: 4$
D. $4: 5$
E. None of these
53. The number of wox boxes of medium size sold on day 5 is what percent more than the number of wox boxes of large size sold on day 3 ?
A. $25 \%$
B. $33.33 \%$
C. $20 \%$
D. $16 \%$
E. None of these
54. The volume of a cylinder is $500 \mathrm{~m} \mathrm{~cm}^{3}$ and the radius is 5 cm . The height of the cylinder is equal to the diagonal of a square. Find the perimeter (in cm ) of the square.
A. $40 / \sqrt{2}$
B. $40 \sqrt{2}$
C. 40
D. 60
E. 10
55. Direction: In the following question two equations are given in variables Xand $Y$. You have to solve these equations and determine relation between $X$ and $Y$.
A) $2 x^{2}+5 x+3=0$
B) $2 y^{2}-7 y+6=0$
A. $x>y$
B. $x<y$
C. $x \leq y$
D. $x \geq y$
E. $x=y$ or no relation can be established.
56. Direction: In the following question two equations are given in variables Xand Y. You have to solve these equations and determine relation between $X$ and $Y$.
A) $3 x^{2}-7 x+4=0$
B) $2 y^{2}-3 y+1=0$
A. $x>y$
B. $x<y$
C. $x \leq y$
D. $x \geq y$
E. $x=y$ or no relation can be established.
57. Direction: In the following question two equations are given in variables Xand $Y$. You have to solve these equations and determine relation between $X$ and $Y$.
A) $x^{2}+12 x+35=0$
B) $y^{2}+17 y+72=0$
A. $x>y$
B. $x<y$
C. $x \leq y$
D. $x \geq y$
E. $x=y$ or no relation can be established.
58. A) $x^{2}-10 x+25=0$
B) $y^{2}=25$
A. $x>y$
B. $x<y$
C. $x \leq y$
D. $x \geq y$
E. $x=y$ or no relation can be established.
59. A) $x^{2}-36 x+324=0$
B) $y^{2}-42 y+441=0$
A. $x>y$
B. $x<y$
C. $x \leq y$
D. $x \geq y$
E. $x=y$ or no relation can be established.
60. Two trains leave Delhi for Kolkata at 4:00 am and 4:30 am and travel at a speed of 50 Kmph and 75 Kmph respectively, then after how many kilometers from Delhi both trains will be together?
A. 85 Km
B. 75 Km
C. 45 Km
D. 55 Km
E. None of these
61. John bought a machine for Rs. 50,000 and spent Rs. 2000 on repairs and Rs. 500 on transport and sold it with $20 \%$ profit. What price (in Rs.) did he sell the machine?
A. 62000
B. 60000
C. 61000
D. 63000
E. None of these
62. The average age of a group of some persons is 16.75 years. By joining 20 new persons with an average age of 13.25 years, the average age of the group becomes 15 years. Find out the number of persons in the group Initially.
A. 20
B. 21
C. 23
D. 24
E. 26
63. If the ratio of incomes of $A$ and $B$ in 2001 is $2: 3$ and the ratio of incomes of $A$ in 2001 and 2002 is 4 : 5. Find the expenditure of $A$ in 2002, if saving in the same year is Rs. 4000. It is given that in 2001 the sum of income of $A$ and $B$ is Rs. 25000.
A. Rs. 5000
B. Rs. 10500
C. Rs. 9500
D. Rs. 7500
E. Rs. 8500
64. The ratio of ages of Ram and shaym is 2 : 6 and after 5 years the ratio of their age becomes 6 : 8 . What will be their average age (in years) after 10 years?
A. 12
B. 13
C. 14
D. 15
E. 16
65. One container contains a mixture of spirit and water in the ratio 2: 3 and another contains the mixture of spirit and water in the ratio 3: 2. How much quantity from the second should be mixed with 10 litres of the first so that the resultant mixture has ratio of 4 : 5 ?
A. 2.86 litres
B. 3.45 litres
C. 4.31 litres
D. 5.67 litres
E. 8.94 litres
66. Direction: Find the wrong term in the following number series?
$0.5,2,1,4,32,512$
A. 0.5
B. 2
C. 4
D. 32
E. 512
67. Direction: Find the wrong term in the following number series?
4, 5.1, 7.3, 10.6, 15, 20, 27.1
A. 7.3
B. 20
C. 27.1
D. 4
E. 15
68. Direction: Find the wrong term in the following number series?
2, 3, 8, 31, 154, 924, 6460
A. 3
B. 31
C. 154
D. 924
E. 6460
69. Direction: Find the wrong term in the following number series.
2, 6, 10, 19, 36, 69, 134
A. 36
B. 19
C. 10
D. 6
E. 2
70. Direction: Find the wrong term in the following number series?
251, 252, 254, 227, 243, 118, 154
A. 251
B. 252
C. 254
D. 227
E. 118
71. Direction: 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.
Advice about the art of interview preparation and how to craft the perfect CV isn't enough to put every student on a path to a career they want. About one in three graduates end up being "mismatched" to the jobs they find after leaving university, research by Universities UK suggests.
These mismatched graduates face poorer prospects and lower earnings than their peers who embark on careers that are a better fit for the knowledge and skills they have acquired through three or four years of study. It suggests that traditional careers advice isn't working.
The problem isn't necessarily that too many students are taking the wrong course. There is little evidence that graduates are studying the "wrong" subjects, according to the UUK research, since most are on courses that offer subject knowledge and employability skills that are very much in demand. Instead, students need better careers advice that will help them define their skills and attributes - and understand how these match different career options. Students also need help finding out which skills they'll need to break into certain industries - particularly in sectors that aren't good at diversifying their recruitment, or when they have no family or social network of contacts to call on for help and advice.
Politicians complain of a skills gap, but graduates face an "experience gap" with many employers preferring to recruit young people who have spent a couple of years in the workplace rather than raw recruitments from university. To help graduates find the right jobs for them, lots of universities are experimenting with new ways to make
their careers advice more accessible and meaningful.
At the University of Kent, students can use an online Careers Explorer service to match their skills to career options, and a work-study scheme that provides bursaries for work experience. Students at the University of Dundee can take employability modules in parallel with their academic work, including online and personal career planning sessions. Source:
https://www.theguardian.com/higher-education-network/2018/jan/25/too-many-graduates-are-mismatched-to-their-jobs-whats-going-wrong Which of the following statements is/ are true with respect to the passage?
I. The graduates who do not end up getting a job best suited to their knowledge and skill end up earning less than their counterparts who pursue their skills.
II. A lot of universities have come forward to address the problem of mismatched jobs.
III. The lack of good pieces of career advice causes graduates to enter into professions that are not in sync with their skill and profession.
A. Only I
B. Only II
C. Both I and II
D. Both II and III
E. All I, II and III
72. Direction: 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.
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Which of the following myths does the author break in the passage?
A. The skills acquired by graduates is not equivalent to the degree they have achieved.
B. Instead of a wrong choice of an academic course, the problem lies in the lack of provision of a good career advice, which is well- matched with the skill and knowledge of a graduate.
C. The fact that the courses available at universities are not skill oriented, pushes the graduates to be caught up in wrong jobs.
D. The career advices being provided at the universities do not effectively analyse the potential of a graduate and provide them with good career option.
E. None of these.
73. With which of the following statements is the author most likely to agree?
A. Most of the students often enrol in courses that do not offer subject knowledge and employability skills that are in demand.
B. The initiatives being taken by the Universities to provide accessible career options may not be successful.
C. The traditional careers advice would work if they are directed towards skill development rather than imparting theoretical knowledge.
D. The employers have a tendency to recruit recruits from Universities as they can be hired at significantly low remunerations.
E. Students require help in finding the skills required to get into employment sectors at a time when they do not have access to good careers advice through their family and peers.
74. With reference to the context of the passage, what can be inferred from the line, "Politicians complain of a skills gap, but graduates face an "experience gap""?
A. The politicians have not been able to properly analyse the root cause of the problem that lands up a student in an undesirable job.
B. The politicians have rightfully identified the major cause of the unemployment problem.
C. The problem of "experience gap" is identified and well- addressed by the politicians.
D. The priority of the politicians is disoriented as they emphasize more on experience than on skills.
E. None of these.
75. Direction: 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.
Advice about the art of interview preparation and how to craft the perfect CV isn't enough to put every student on a path to a career they want. About one in three graduates end up being "mismatched" to the jobs they find after leaving university, research by Universities UK suggests.
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Politicians complain of a skills gap, but graduates face an "experience gap" with many employers preferring to recruit young people who have spent a couple of years in the workplace rather than raw recruitments from university. To help graduates find the right jobs for them, lots of universities are experimenting with new ways to make their careers advice more accessible and meaningful.
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https://www.theguardian.com/higher-education-network/2018/jan/25/too-many-graduates-are-mismatched-to-their-jobs-whats-going-wrong
75. Which of the following words is MOST SIMILAR in meaning to the "evidence" as given in the passage?
A. Result
B. Proof
C. Feature
D. Rustic
E. Misnomer
76. Which of the following words is MOST OPPOSITE in meaning to "embark" as given in the passage?
A. Undertake
B. Process
C. Reject
D. Apprehend
E. Deceive
77. Direction: In the following question, a word is given that is followed by three statements. All these three statements carry the given word. Identify the sentence(s) in which the word fits to make them grammatically correct and meaningful.
Hamper
I. The Centre's move to direct oil marketing companies to lower auto fuel price hampers the confidence of oil companies in investments made in India.
II. Metro Railway services were
hampered for 15 minutes on Monday afternoon.
III. High street retailers, Marks \& Spencer and John Lewis \& Partners, have also released their own hampers which are far more affordable than the luxury offerings.
A. Only I
B. Both I and II
C. Only III
D. Both II and III
E. All I, II and III
78. Direction: In the following question, a word is given that is followed by three statements. All these three statements carry the given word. Identify the sentence(s) in which the word fits to make them grammatically correct and meaningful.
Tact
I. The kind judge was tactful when he informed the dancer of her elimination from the show.
II. They came up with a tactfully to reach their destination in the fastest time possible.
III. He had an engaging personality and used tact in dealing with his patients.
A. Only I
B. Only III
C. Both I and II
D. Both I and III
E. All I, II and III
79. Direction: In the following question, a word is given that is followed by three statements. All these three statements carry the given word. Identify the sentence(s) in which the word fits to make them grammatically correct and meaningful.
Adage
I. Despite what that old adage says, I like to have my cake, eat it, and then have another piece.
II. Among other things, the writer is famous for adaging his philosophical ideals.
III. Tired of all the same old sayings, he adaged a new thought.
A. Only I
B. Only II
C. Only III
D. Both I and II
E. Both II and III
80. Direction: In the following question, a word is given that is followed by three statements. All these three statements carry the given word. Identify the sentence(s) in which the word fits to make them grammatically correct and meaningful.
Malaise
I. After his dog died, he remained malaised for several months.
II. Many citizens who live near the contaminated river are complaining of a malaise that keeps them bedridden.
III. Weeks before his heart attack, Mr Robbin kept mentioning how he felt
malaiseful and not like his normal self.
A. Only I
B. Only II
C. Both I and III
D. Both II and III
E. All I, II and III
81. Direction: In the following questions, two columns I and II, each containing three sentences are given. Column I consists of the first part of three sentences and Column II consists of the remaining part of those three sentences. Match column I with column II, so that the sentences formed are meaningful and grammatically correct.
I.
A) We believe in a circular rather
B) The Rig Veda was written more than 3800 years ago,
C) The word 'Juggernaut' was originally used to denote the Rath Yatra temple car,
II.
D) Veda is superior to Albert Einstein's

Theory of Relativity equation.
E) than a linear concept of time.
F) which was so massive it would crush devotees under the wheels.
A. B-E and C-F
B. A-E, B-F and C-D
C. A-F and C-D
D. B-F
E. A-E and C-F
82. Direction: In the following questions, two columns I and II, each containing three sentences are given. Column I
consists of the first part of three sentences and Column II consists of the remaining part of those three sentences. Match column I with column II, so that the sentences formed are meaningful and grammatically correct.
I.
A) A garbage patch in the Pacific Ocean
B) There's a mass of floating rubbish in the Pacific Ocean weighing around C) About 80 percent of the plastic trash that makes up the Great Pacific Garbage Patch
II.
D) is believed to have originated from land-based activities.
E) to help farmers who depend on weather.
F) has stretched to almost twice the size of France.
A. B-E and C-F
B. $A-E, B-F$ and $C-D$
C. A-F and C-D
D. B-F
E. A-E and C-F
83. Direction: In the following questions, two columns I and II, each containing three sentences are given. Column I consists of the first part of three sentences and Column II consists of the remaining part of those three sentences. Match column I with column II, so that the sentences formed are meaningful and grammatically correct.
I.
A) Overfishing can wreak havoc to marine ecology and completely
B) Unsustainable fishing practices over the last few decades have pushed
C) Oil destroys the insulating and water-repellent properties of II.
D) eventually accumulating in remote areas of the world's oceans.
E) our oceans to a point where they may now be on the verge of collapse.
F) the marine animals, exposing them to harsh environment.
A. $B-E$ and $C-F$
B. $A-E, B-F$ and $C-D$
C. A-F and C-D
D. $B-F$
E. A-E and C-F
84. Direction: In the following questions, two columns I and II, each containing three sentences are given. Column I consists of the first part of three sentences and Column II consists of the remaining part of those three sentences. Match column I with column II, so that the sentences formed are meaningful and grammatically correct.
I.
A) At Harvard, Sheryl founded a group meant to encourage women
B) Sheryl Sandberg is responsible for spearheading several successful
Facebook projects
C) In the hall of fame of women
breaking the glass ceiling and painting their name on it,
II.
D) and ended up becoming the first Indian woman to obtain a degree in Western medicine in the late 1800s.
E) to know so much about them as possible.
F) that have made the social
networking site the market giant it is today.
A. $B-E$ and $C-F$
B. $A-E, B-F$ and $C-D$
C. A-F and C-D
D. $B-F$
E. A-E and C-F
85. Direction: In the following questions, two columns I and II, each containing three sentences are given. Column I consists of the first part of three sentences and Column II consists of the remaining part of those three sentences. Match column I with column II, so that the sentences formed are meaningful and grammatically correct.
I
A) Elephants prefer one tusk over the other,
B) Elephants use their feet to listen, they can pick up
C) Elephants herds are matriarchal, with older females taking
II.
D) care of the calves and protecting them while travelling from place to place.
E) just as humans are mostly either left or right-handed.
F) sub-sonic rumblings made by other elephants, through vibrations in the ground.
A. B-E and C-F
B. $A-E, B-F$ and $C-D$
C. A-F and C-D
D. $B-F$
E. A-E and C-F
86. Direction: In the given question, a part of the sentence is printed in bold. Below the sentence, three alternatives to the bold part are given which may help improve the sentence. Choose the option that reflects the correct use of the phrase in the context of the sentence. In case the given sentence is correct, your answer is (E), i.e., "No correction required".
No other region in the world illustrates the chronic nature of displacing caused by extreme whether events and climate change more than Asia and the Pacific.
i. Chronic nature of displacement caused by extreme weather.
ii. Chronic nature of displacement caused by extreme whether.
iii. Chronic nature of displace caused by extreme weather.
A. Only i
B. Only ii
C. Only iii
D. Both ii and iii
E. No correction required
87. Direction: In the given question, a part of the sentence is printed in bold. Below the sentence, three alternatives to the bold part are given which may help improve the sentence. Choose the option that reflects the correct use of the phrase in the context of the sentence. In
case the given sentence is correct, your answer is (E), i.e., "No correction required".
The recent incidents of drug overdoserelated deaths has brought the spotlight back in the drug menace in the state and on the role of the Punjab Police in curbing it.
i. Overdosing-related deaths have brought the spotlight back over the drug ii. Overdose-related deaths have brought the spotlight back on the drug iii. Overdose-related deaths having brought the spotlight back on the drug
A. Only i
B. Only ii
C. Only iii
D. Both ii and iii
E. No correction required
88. Direction: In the given question, a part of the sentence is printed in bold. Below the sentence, three alternatives to the bold part are given which may help improve the sentence. Choose the option that reflects the correct use of the phrase in the context of the sentence. In case the given sentence is correct, your answer is (E), i.e., "No correction required".
More than anything, it is the human cost of disasters that are the most compelling argument for action.
i. the human cost of disasters that the most compelling
ii. the human cost of disasters that is the more compelling
iii. the human cost of disasters that is the most compelling
A. Only i
B. Only ii
C. Only iii
D. Both ii and iii
E. No correction required
89. Direction: In the given question, a part of the sentence is printed in bold. Below the sentence, three alternatives to the bold part are given which may help improve the sentence. Choose the option that reflects the correct use of the phrase in the context of the sentence. In case the given sentence is correct, your answer is (E), i.e., "No correction required".

Our Integrated Child Development Services, meant to provide nutrition and childcare up to six year of age, lack greatly in qualitatively and coverage.
i. years of age, lack greatly in quality and coverage
ii. years of age, lack greatly in qualitatively and coverage
iii. year of age, lack greatly in quality and coverage
A. Only i
B. Only ii
C. Only iii
D. Both i and ii
E. No correction required
90. Direction: In the given question, a part of the sentence is printed in bold. Below the sentence, three alternatives to the bold part are given which may help improve the sentence. Choose the option that reflects the correct use of the phrase in the context of the sentence. In case the given sentence is correct, your answer is (E), i.e., "No correction required".
The role of meritocracy in Chinese history, focused on the so-called examining system, have been a matter of long scholarly scrutiny.
i. focused on the so-called examination system, has
ii. focused on the so-said examination system, has
iii. focuses on the so-called examing system, have
A. Only i
B. Only ii
C. Only iii
D. Both ii and iii
E. No correction required
91. Direction: In the question, one sentence is given, and four words have been given in bold denoted by (A), (B), (C) and (D). You have to decide which of the following is inappropriate in the context. If all the words are appropriate in the context then mark 'All correct' as your answer.
Indigestion (A) is often a sign of an underline ( $B$ ) problem, such as an ulcer (C), rather than a condition (D) on its own.
A. A
B. B
C. C
D. D
E. All are correct
92. Direction: In the question, one sentence is given, and four words have been given in bold denoted by (A), (B), (C) and (D). You have to decide which of the following is inappropriate in the context. If all the words are appropriate in the context then mark 'All correct' as your answer.
A microwave heats food by causing (A) the molecules to vertebrate (B) but it certainly does not make food radioactive, (C) as a misconception (D) suggests.
A. A
B. B
C. C
D. D
E. All are correct
93. Direction: In the sentence given below, four words printed in bold are given. These are numbered (1), (2), (3) and (4). One of these words may either be wrongly spelt or inappropriate in the context of the sentence. Find out the word that is inappropriate or wrongly spelt, if any. The number of that word is your answer. If all the words printed in bold are correctly spelt and appropriate in the context of the sentence then mark option E, i.e. 'All are correct', as your answer.
She saw a fleet (A)/ of sheeps (B)/ in the nearby (C)/ sea shore. (D)
A. 1
B. 2
C. 3
D. 4
E. All are correct
94. Direction: In the question, one sentence is given, and four words have been given in bold denoted by (A), (B), (C) and (D). You have to decide which of the following is inappropriate in the context. If all the words are appropriate in the context then mark 'All correct' as your answer.
The prices of electronic goods have declined (A)/ dew to the (B)/ reduction in (C)/ import duty rates. (D)
A. A
B. B
C. C
D. D
E. All are correct
95. Direction: The following question carries a statement with four highlighted words. The words are denoted by (A), (B), (C) and (D). One of these words may either be misspelt or incorrect in the given context. Identify the incorrect word. If all of the words are correct, mark option E, 'All correct' as your answer.
By created (A)/ the most precise (B)/ lunar gravity (C)/ map, scientists (D) hope to find out what is beneath the lunar surface.
A. A
B. B
C. C
D. D
E. All are correct
96. Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
A) however, the UPSC decided to
B) cheating, the normal
C) consequence is his disqualification,
D) if an able-bodied student engages in
E) get the guidelines changed
A. DBCEA
B. DBCAE
C. CABDE
D. $A B C D E$
E. ABECD
97. Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
A) Harry and Meghan's little one
B) will be seventh in line to the throne
C) when he/she arrives, and will be
D) about a year younger than
E) the reigning baby of the family
A. ACBDE
B. ABCDE
C. ACEDB
D. BDECA
E. CEBAD
98. Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
A) a brief career in music, where they performed
B) in concerts and as standalone artists to
C) the couple moved to Mumbai to
have
D) after the wedding,
E) mesmerised the entire country.
A. ABCDE
B. CDABE
C. None of these
D. BDCEA
E. AEBCD
99. Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
A) the adjective "resilient" and the nouns
B) of disasters and emergencies who recover
C) quickly and from adversities
D) "resilience" and "resiliency" are terms
E) that are normally applied to the victims
A. ACEBD
B. EBCDA
C. CDEAB
D. ADEBC
E. ADBCE
100. Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
A) Frontwoman Lauren Mayberry
B) complimented the blue neon
C) lights illuminating the band
D) mirrored dress that
E) took the stage in a pastel-colored
A. ABCDE
B. BDACE
C. CBDAE
D. ECADB
E. AEDBC

