## RRB Clerk Mains Memory Based-2021

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

Fourteen persons sit in the two parallel rows such that each row contains seven persons. In Row 1-P, Q, R, S, T, U and $V$ sit and face towards the south and in row2- $\mathrm{A}, \mathrm{B}, \mathrm{C}$, D, E, F and G sit and face towards the north but not necessarily in the same order.
Two persons sit between $V$ and $R$. R faces the one who sits at the extreme end. $U$ faces $F$ who sits third to the right of B. U doesn't sit adjacent to V . The number of persons sits between $B$ and $F$ is same as the persons sits between $U$ and S. V faces one who sits third to the right of D. No one sits between T and P. G faces P and sits two places away from E. A sits to the left of C.

Q1. Who among the following persons sits third to the left of the one who faces R ?
(a) B
(b) E
(c) A
(d) C
(e) F

Q2. Which among the following statement is not true?
(a) T sits at the extreme end.
(b) More than three persons sit between D and F
(c) B faces $S$
(d) G is not an immediate neighbor B
(e) All statements are true

Q3. How many persons sits between $P$ and the one who faces A?
(a) One
(b) Two
(c) Three
(d) None
(e) More than three

Q4. Four of the following five are alike in a certain way and form a group. Who among the following person does not belong to the group?
(a) D
(b) C
(c) R
(d) $T$
(e) V

Q5. What is the position of A with respect to the one who faces T?
(a) Fifth to the left
(b) Fourth to the right
(c) Immediate left
(d) Second to the left
(e) None of these

Directions (6-8): Study the following information carefully and answer the questions given below.

Tim starts his walk from point $G$ in the east direction, after walking 12 m he reaches at point H . From point H, he takes a left turn and walks 7 m to reach point F. From there he takes a right turn and walks 3 m to reach point K . Now, from point K he walks 5 m towards north and reaches at point C . Sam starts his walk from point D, after walking 4 m towards north he reaches at point B. From there he takes a right turn and walks 6 m to reach point E . Point E is 8 m towards north of point C .

Q6. In which direction is point K with respect to point B ?
(a) South
(b) South-east
(c) North east
(d) North
(e) West

Q7. What is the shortest distance between Sam initial point and point C ?
(a) $2 \sqrt{ } 13 \mathrm{~m}$
(b) $\sqrt{ } 15 \mathrm{~m}$
(c) 52 m
(d) 50 m
(e) None of these


Q8. Four of the following five are alike in a certain way and form a group. Which among the following pair does not belong to the group?
(a) G-F
(b) D-E
(c) G-C
(d) $\mathrm{F}-\mathrm{E}$
(e) B-H

Q9. A family of three generation has seven members. J is nephew of $Q$. $M$ is son-in-law of T. T has only two children. P is sister-in-law of S and has no siblings. T is the only brother of $S$. Gender of $V$ and $S$ is same. $Q$ is unmarried member of the family. Find out how $S$ is related to $Q$ ?
(a) Uncle
(b) Mother
(c) Aunt
(d) Sister
(e) Can't be determined

Directions (10-14): Study the following information carefully and answer the questions given below.

Six persons- A, B, C, D, E and F participated in the event on two different dates either 15 or 18 of three different months- March, April and May of the same year. The events are held in different cities- Indore, Agra, Bhopal, Dehradun, Delhi and Mumbai. All the information is not necessarily in the same order.
C participated on an odd numbered date in the month having odd number of days. Two persons participated between C and the person who participated in the event held in Mumbai. One event held between the event held in Dehradun and the event held in Mumbai. D participated in the event held in Dehradun but not in the month of March. Two persons participated between D and A who participated in the month having even number of days. E participated two persons before F. B doesn't participate in the event held in Delhi and Agra. The person who participated in the event held in Indore participated just before the person who participated in the event held in Agra. E doesn't participate in the event held in Indore.

Q10. Who among the following person participated in the event held in Delhi?
(a) A
(b) F
(c) C
(d) E
(e) None of these

Q11. How many persons participated between C and the one who participated on $18^{\text {th }}$ April?
(a) One
(b) Two
(c) Three
(d) None
(e) More than three

Q12. Four of the following five are alike in a certain way and form a group. Who among the following person does not belong to the group?
(a) C
(b) B
(c) E
(d) D
(e) F

Q13. In which of the following cities does E participated in the event?
(a) Delhi
(b) Bhopal
(c) Agra
(d) Mumbai
(e) None of these

Q14. Which among the following statement(s) is/are true?
(a) C participated in the month of May
(b) F participated after D
(c) More than two persons participated between E and D
(d) A participated in the event held in Indore
(e) All are true

Direction (15): A word arrangement machine when given an input line of words rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

## Input: Happy Doing Belt Active Crack First

Step I: Active Happy Doing Belt Crack First
Step II: Active Belt Happy Doing Crack First
Step III: Active Belt Crack Happy Doing First
Step IV: Active Belt Crack Doing Happy First
Step V: Active Belt Crack Doing First Happy
And step $V$ is the last step of the arrangement. As per the rule followed in the above steps, find out in each of the following questions the appropriate step for the given input:
Input: Visual Perk Ultimate Evaluate Famous Monk

Q15. Which among the following word is fourth to the left of sixth word from the left end in step III?
(a) Famous
(b) Monk
(c) Evaluate
(d) Perk
(e) None of these

Directions (16-20): In each of the following questions, relationship between different elements is shown in the statements followed by three conclusions. Find the conclusion which is definitely true.

Q16. Statements: $A \geq B=D>F ; U=S \geq J \leq K=F$
Conclusions: I. K<B
II. $F \geq S$
III. F $<U$
(a) Only I is true
(b) Only I and Either II or III are true
(c) Either II or III is true
(d) Both I and III are true
(e) All are true

Q17. Statements: $S \geq T \leq F<V ; R \leq A<J \leq M ; M=S>Z$
Conclusions: I. $\mathrm{Z} \leq \mathrm{T}$
II. $\mathrm{R}<\mathrm{S}$
III. $\mathrm{M}>\mathrm{T}$
(a) Only I is true
(b) Only II is true
(c) Only III is true
(d) Both I and II are true
(e) All are true

Q18. Statements: $K \leq M=P ; M \leq S>U ; B \leq Q<P$
Conclusions: I. Q<S
II. $B \leq K$
III. $\mathrm{P} \leq \mathrm{U}$
(a) Only I is true
(b) Only II is true
(c) Only III is true
(d) Both I and II are true
(e) All are true

Q19. Statements: $P \leq Q<S>R ; U<T=R ; Y \geq W>R$ Conclusions: I. S>Y
II. $\mathrm{T}<\mathrm{Y}$
III. $U<S$
(a) Only I is true
(b) Only II is true
(c) Both II and III are true
(d) Both I and II are true
(e) All are true

Q20. Statements: $\mathrm{I} \leq \mathrm{J}<\mathrm{K}=\mathrm{L} ; \mathrm{P}<\mathrm{O} \leq \mathrm{M} \leq \mathrm{L} ; \mathrm{K}<\mathrm{U} \leq \mathrm{V}$
Conclusions: I. $\mathrm{M}<\mathrm{V}$
II. J<0
III. $\mathrm{P}<\mathrm{K}$
(a) Only I is true
(b) Only II is true
(c) Both II and III are true
(d) Both I and III are true
(e) All are true

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

Eleven persons work on different designations of a company. Their designations are: MD, CMD, CEO, COO, CTO, CFO, Sr. Manager, Manager, Team lead, Executive and trainee. The order of seniority is- MD is senior most designation and trainee is junior most designation.
Four persons are there between $G$ and $T$ who is junior to manager. $D$ is senior to $G$ but he is not MD and CEO. B is three designations junior to D . The number of designations between $B$ and $T$ is same as the number of persons senior to P . H is not senior to P but he is senior to team lead. More than four persons work between H and $\mathrm{K} . \mathrm{N}$ is senior to K but junior to $R$. $L$ is senior to $V$ who is not just senior and just junior to B .

Q21. Who among the following works as Sr. Manager?
(a) H
(b) R
(c) N
(d) B
(e) None of these

Q22. How many persons work between $L$ and $G$ ?
(a) Six
(b) Two
(c) One
(d) Four
(e) None of these

Q23. Who among the following is just junior to R ?
(a) B
(b) P
(c) V
(d) N
(e) None of these

Q24. Which of the given combination is incorrect?
(a) MD-L
(b) Team lead-N
(c) $\mathrm{COO}-\mathrm{H}$
(d) Trainee-T
(e) CMD-K

Q25. If $V$ and $D$ interchanged their designations, then who among the following is four designations junior to V ?
(a) N
(b) R
(c) G
(d) T
(e) None of these

Directions (26-30): In each of the following questions, some statements are given followed by five conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q26. Statements: Only coin is bank. Only a few currency is coin. Some note is currency. Some note is not press.

## Conclusion:

(a) Some currency is not press
(b) Some currency is not coin
(c) All bank can be note
(d) No press is currency
(e) Some bank is currency

Q27. Statements: All line is music. Some singer is line. Only a few music is album. Only music is song.

## Conclusion:

(a) Some song can be singer
(b) No album is line
(c) Some line is song
(d) Some part of music can never be album
(e) No singer is music

Q28. Statements: All shop is shirt. No shop is pant. Only a few pant is cotton. Only a few cloth is pant. Only cloth is silk.

## Conclusion:

(a) All cotton being shirt is a possibility
(b) Some cloth is shop
(c) No shirt is pant
(d) Some cotton is not pant
(e) All silk can be shop

Q29. Statements: Some rays are alpha. All alpha are wave. Some color is wave. No band is alpha.

## Conclusion:

(a) Some color is not band
(b) All rays are wave
(c) No color being alpha is a possibility
(d) All rays can be band
(e) Some color are rays

Q30. Statements: Some cat is dog. All dog are rat. Only rat is cow. No camel is rat.
Conclusion:
(a) All camel can be dog
(b) No camel is cat
(c) Some dog being cow is a possibility
(d) Some rat is not cat
(e) All cat can never be cow

Directions (31-35): Read the following information carefully and answer the related questions:

## In a certain code language-

'Knowledge study under learning' is coded as '13 1917 23'
'Area of knowledge' is coded as '13 29 11'
'Results of learning theory' is coded as '17 2931 37'
'Theory under consideration' is coded as '19 3141 '

Q31. What is the code for 'theory'?
(a) 29
(b) 19
(c) 17
(d) 31
(e) None of these

Q32. What will be the code for 'results area'?
(a) 3711
(b) 1119
(c) 1713
(d) 3713
(e) None of these

Q33. The code ' 41 ' is used for which among the following words?
(a) Theory
(b) Under
(c) Consideration
(d) Learning
(e) None of these

Q34. Which among the following words are coded as '29 13'?
(a) Area study
(b) Theory of
(c) Under knowledge
(d) Of knowledge
(e) None of these

Q35. What will be the possible code for 'known results'?
(a) 1317
(b) 3741
(c) 1537
(d) 2931
(e) 1113

Directions (36-40): Read the given information carefully and answer the questions given below:

Ten persons A to J sit around a circular table facing inside. The consecutive alphabetical named persons do not sit adjacent to each other. Ex- A doesn't sit adjacent to B, B doesn't adjacent to A and C .
F sits third to the right of A. One person sits between A and G. B sits opposite to E. C and H are immediate neighbors. D sits second to the left of I. C neither sits opposite to I nor sits adjacent to A.C and J are not immediate neighbors.

Q36. How many persons sit between C and D ?
(a) Four
(b) Five
(c) Three
(d) Two
(e) None of these

Q37. What is the position of $B$ with respect to I?
(a) Third to the right
(b) Fourth to the left
(c) Immediate right
(d) Third to the left
(e) Seventh to the right

Q38. Who among the following sits opposite to G ?
(a) C
(b) F
(c) B
(d) H
(e) I

Q39. Who among the following sits fourth to the right of H ?
(a) A
(b) G
(c) D
(d) J
(e) None of these

Q40. Who among the following are immediate neighbors?
(a) G, J
(b) F, H
(c) $\mathrm{H}, \mathrm{A}$
(d) B, E
(e) C, F

Directions (41-45): What approximate value should come in the place of question (?) mark in following questions.

Q41. $\frac{0.99}{7.98} \times 72.03+\frac{0.99}{10.97} \times 120.95-\sqrt{15.99}=\sqrt{ }$ ?
(a) 144
(b) 324
(c) 576
(d) 196
(e) 256

Q42. $\sqrt{324.03} \times \sqrt{24.99}-17.03 \times(2.09)^{2}=\sqrt{ }$ ?
(a) 144
(b) 784
(c) 400
(d) 484
(e) 576

Q43. $21.03 \times 5.99+8.99$ of $19.96 \%$ of $60.05=$ ?
(a) 234
(b) 222
(c) 232
(d) 242
(e) 228

Q44. $11.87 \times 13.08-55.03 \div 10.92=?+99.98$
(a) 100
(b) 51
(c) 85
(d) 92
(e) 108

Q45. $53.08+77.98-33.11+?=90.93$
(a) -1
(b) -15
(c) -7
(d) 11
(e) 17

Q46. A vessel contains mixture of milk and water in the ratio of $7: 5$ respectively. If 9 liters of mixture taken out and same quantity of water is added, then the ratio of milk to water in remaining mixture becomes $7: 9$, then find the initial quantity of milk in the mixture?
(a) 21 liters
(b) 15 liters
(c) 20 liters
(d) 7 liters
(e) 28 liters

Q47. Two pipes A \& B can fill an empty tank in four hours and ' $T$ ' hours respectively. An outlet pipe $C$ can empty the half of the same tank in four hours. If all three pipes open together in the tank, then they can fill the same tank in 4 hours 48 minutes. Find the value of ' $T$ '?
(a) 8
(b) 12
(c) 4
(d) 2
(e) 1

Q48. An article marked up $30 \%$ above its cost price. Find the percentage of discount should offer on the article to make a profit of $4 \%$ ?
(a) $10 \%$
(b) $5 \%$
(c) $20 \%$
(d) $2 \%$
(e) $9 \%$

Q49. The breadth of a rectangle is 20 meters and area of a square is 125 meters $^{2}$ more than that of the rectangle. If the length of the rectangle is equal to side of square, then find the perimeter of rectangle?
(a) 90 m
(b) 45 m
(c) 55 m
(d) 80 m
(e) 75 m

Q50. Present age of father is four times of his son's present age and after three years age of father will be three times of his son's age. Find after how many years age of father will be $250 \%$ of his son's age?
(a) 6
(b) 5
(c) 4
(d) 9
(e) 10

Q51. $A$ and $B$ entered into a business by making investment of Rs. 12000 \& Rs. X respectively. After six months A withdrew Rs. 2000 from his initial investment. If at the end of a year profit share of B is Rs. 3000 out of total profit of Rs. 5200, then find the value of X ?
(a) 15000
(b) 30000
(c) 26000
(d) 50000
(e) 45000

Q52. Pallavi and Himanshi together can do a work in 120 days, while Himanshi and Ayush together can do the same work in 40 days. If Himanshi alone can do the same work in 180 days, then find in how many days Ayush, Himanshi and Pallavi together can do the same work?
(a) 18 days
(b) 9 days
(c) 36 days
(d) 6 days
(e) 60 days

Q53. The distance between two points $A$ and $B$ is 24 km . A boat travels from $A$ to $B$ and come back in six hours. If speed of stream is increases by $2 \mathrm{~km} / \mathrm{h}$, then boat takes six hours to travels from A to B in upstream. Find the speed of boat in still water?
(a) $6 \mathrm{~km} / \mathrm{h}$
(b) $9 \mathrm{~km} / \mathrm{h}$
(c) $5 \mathrm{~km} / \mathrm{h}$
(d) $7 \mathrm{~km} / \mathrm{h}$
(e) $10 \mathrm{~km} / \mathrm{h}$

Q54. A train travels 700 km with average speed of $70 \mathrm{~km} / \mathrm{h}$ and after every 140 km train takes stoppage of 4 minutes. Find the time taken by the train to cover same distance without stoppage?
(a) 9 hr 4 min
(b) 9 hr 48 min
(c) 9 hr 44 min
(d) 10 hr 16 min
(e) 10 hr 44 min

Q55. The population of city P decreased by $20 \%$ every year and population of city Q decreased by $8 \%$ every year. If after two years population of city Q was 22088 more than that of city P and initially it was 20000 more than that of population of city P , then find the population of city Q initially?
(a) 30000
(b) 45000
(c) 42000
(d) 36000
(e) 54000

Q56. Deepak invested Rs. 4800 into two schemes A and B at same rate of interest. But Compound interest obtained from scheme A in 2 years is Rs. 50 more than the simple interest obtained from Schemes B for 4 years. If Deepak invested the total sum at simple interest for 8 years at same rate, then interest obtained becomes equal to the investment. Find the amount invested in scheme B?
(a) Rs. 2600
(b) Rs. 2000
(c) Rs. 1800
(d) Rs. 1600
(e) Rs. 2400

Q57. If we add 7 to the numerator of the fraction and increases denominator by $100 \%$ then both become equal. And when the numerator is increased by $300 \%$ and denominator is increased by 5 then it becomes twice of the original fraction. What will be the half of original fraction?
(a) $\frac{3}{8}$
(b) $\frac{5}{12}$
(c) $\frac{3}{10}$
(d) $\frac{5}{16}$
(e) $\frac{4}{15}$

Q58. Running in opposite direction train $B$ can cross train A in 10 seconds, while running in same direction train $B$ can cross train A in $\frac{130}{3}$ seconds. Train B can cross 300 meters long platform in 15 seconds and speed of train $B$ is $144 \mathrm{~km} / \mathrm{hr}$. Find the length of train A?
(a) 250 m
(b) 400 m
(c) 350 m
(d) 300 m
(e) 450 m

Q59. A two - digit number decreased by 27 when its digits are reversed and difference between square of digit at unit place and square of the digit at tens place of the original number is same as difference between original number and the number obtained after reversing of digits. Find the original number?
(a) 52
(b) 74
(c) 85
(d) 63
(e) 96

Q60. There are three white and five black balls in a bag. In how many ways four balls should be selected such that there is at least one ball of each color?
(a) 55
(b) 90
(c) 45
(d) 65
(e) 130

Directions (61-65): Paragraph given the information about certain number of masks sold by three companies (A, B \& C). Read the data carefully and answer the questions.
Company A: Total 100 mask sold and cost price of each mask is Rs. $20.40 \%$ of total mask sold at profit of $20 \%$ and remaining at the profit of $10 \%$.
Company B: Total 150 masks sold and cost price of each mask is Rs. 40. Company markup price of each mask $50 \%$ above its cost price and allow a discount of $10 \%$ on each mask.
Company C: Total money received by selling all the mask by company is Rs. 10800 and selling price of each mask is Rs. 100 . Company gets a profit $25 \%$ on each mask.

Q61. Total masks sold by A and C together is what percent of total masks sold by B?
(a) $148 \frac{2}{3} \%$
(b) $139 \frac{3}{3} \%$
(c) $135 \frac{2}{3} \%$
(d) $138 \frac{3}{3} \%$
(e) $130 \frac{2}{3} \%$

Q62. Find the difference between total discount allowed by company B on each mask and cost price of each mask by company A?
(a) 18
(b) 12
(c) 11
(d) 14
(e) 15

Q63. Find the total cost price for the three companies
together?
(a) Rs. 16440
(b) Rs. 16540
(c) Rs. 16640
(d) Rs. 16740
(e) Rs. 16840

Q64. Find the total amount received by all three companies by selling all the masks?
(a) Rs. 21280
(b) Rs. 21480
(c) Rs. 21680
(d) Rs. 21880
(e) Rs. 21180

Q65. If 40\% of total masks of company A purchased by men and $30 \%$ of total masks of company B purchased by men, then find the difference between total masks purchased by women from company A and B?
(a) 42 masks
(b) 48 masks
(c) 44 masks
(d) 47 masks
(e) 45 masks

Direction (66-70): Solve the given quadratic equations and mark the correct option based on your answer-

Q66. I. $(2 x-7)^{2}=25$
II. $(4 y-1)^{2}=9$
(a) $x>y$
(b) $x \leq y$
(c) $x<y$
(d) $x \geq y$
(e) No relation can be established between $x$ and $y$.

Q67. I. $\frac{20}{x^{2}}=3+\frac{4}{x}$
II. $\frac{32}{y^{2}}+1=\frac{12}{y}$
(a) $x>y$
(b) No relation can be established between $x$ and $y$.
(c) $x \leq y$
(d) $x<y$
(e) $x \geq y$

Q68. I. $x^{2}+8 x+15=0$
II. $2 y^{2}+21 y+54=0$
(a) $x>y$
(b) $x \geq y$
(c) No relation can be established between $x$ and $y$.
(d) $x \leq y$
(e) $x<y$

Q69. I. $\frac{5}{20}-\frac{12}{x^{2}}=\frac{1}{2}$
II. $2+\frac{20}{y^{2}} \stackrel{x^{2}}{=} \frac{\bar{y}}{}$
(a) $x>y$
(b) $x \geq y$
(c) $x<y$
(d) $x \leq y$
(e) $x=y$ or no relation can be established between $x$ and $y$.

Q70. I. $3^{2 x+4}=9^{3 x+4} \times 27^{(x+1)}$
II. $\frac{y^{2}+18}{y}=9$
(a) $x>y$
(b) $x \geq y$
(c) $x<y$
(d) $x \leq y$
(e) $x=y$ or no relation can be established between $x$ and $y$.

Directions (71-75): Table given below shows total number of vehicles (Public + Private) travels in five different years and number of public vehicles travels more than that of private vehicles in these five years. Read the data carefully and answer the questions.

| Years | Total number of <br> vehicles (Public <br> + Private) <br> travels | Public <br> travels more than <br> that of private <br> vehicles |
| :--- | :--- | :--- |
| $\mathbf{2 0 1 1}$ | 850 | 250 |
| $\mathbf{2 0 1 2}$ | 1050 | 250 |
| $\mathbf{2 0 1 3}$ | 1100 | 400 |
| $\mathbf{2 0 1 4}$ | 800 | 200 |
| $\mathbf{2 0 1 5}$ | 1200 | 400 |

Q71. Total private vehicles travel in 2013 is what percent more than total private vehicles travel in 2014 ?
(a) $66 \frac{2}{3} \%$
(b) $22 \frac{1}{3} \%$
(c) $33 \frac{1}{3} \%$
(d) $14 \frac{2}{7} \%$
(e) $16 \frac{2}{3} \%$

Q72. The ratio of males to females who travel in all vehicles in 2015 is 11 : 13 and number of males are 100 more than that of females who travel in private vehicles in 2015 . Find the total females travel in public vehicles in 2015 (in each vehicle only one-person travel)?
(a) 440
(b) 540
(c) 250
(d) 400
(e) 500

Q73. Find the ratio of total private vehicles travel in 2011, 2012 \& 2014 together to total number of public vehicles travel in 2013 \& 2015 together?
(a) $15: 11$
(b) $11: 31$
(c) $15: 13$
(d) $20: 17$
(e) 20:31

Q74. 30\% of total public vehicles travel in 2014 are three wheelers and rest are four wheelers, while $37.5 \%$ of total public vehicles travels in 2015 are three wheelers and rest are four wheelers. Find the difference between total four wheelers public vehicles travel in 2014 and 2015?
(a) 200
(b) 250
(c) 300
(d) 500
(e) 150

Q75. Find the sum of public vehicles travel in all the year?
(a) 3250
(b) 3200
(c) 3675
(d) 2300
(e) 1000

Directions (76-80): Line graph shows monthly income and monthly saving of five different people (A, B, C, D \& E) in year 2018. Read the data carefully and answer the questions.


Q76. If expenditure of $F$ is $25 \%$ more than that of $A$ and the ratio of income to saving of $F$ is $4: 1$, then find the saving of F?
(a) Rs. 15000
(b) Rs. 10000
(c) Rs. 5000
(d) Rs. 20000
(e) Rs. 9000

Q77. The expenditure of $G$ is equal to difference between expenditure of $B$ and $D$, while the saving of $G$ is $\frac{50}{3} \%$ of his income. If G spends $35 \%$ of his expenditure on food, $40 \%$ of his remaining expenditure on education and rest on house rent, then find the difference between G's saving and his expenditure on house rent?
(a) Rs. 1100
(b) Rs. 1200
(c) Rs. 1700
(d) Rs. 1300
(e) Rs. 1900

Q78. E spends $25 \%$ of his expenditure on travelling and remaining he spends on household and education. If amount spends on household is $650 \%$ of amount spends on education, then find the annual expenditure on education?
(a) Rs. 17600
(b) Rs. 37600
(c) Rs. 26600
(d) Rs. 27600
(e) Rs. 33600

Q79. Find the ratio of total expenditure of $C$ for eight months to total expenditure of E for six months?
(a) 18: 19
(b) 18: 17
(c) 26:61
(d) 29: 36
(e) 26: 23

Q80. Monthly expenditure of $B$ \& $E$ together is what percent (approx.) of total yearly expenditure of C ?
(a) $4 \%$
(b) $14 \%$
(c) $24 \%$
(d) $34 \%$
(e) $44 \%$

Directions (81-88): Read the following passage carefully and answer the questions given below them.

With regard to employment, the term feminisation can be used to denote presence of women in a particular sector or industry where there is a disproportionate concentration of women; for instance, in the service industry, agriculture, or the garment industry. The Government of India in the Economic Survey (2017-2018) stated that the agricultural sector in India is undergoing feminisation. In the face of shrinking employment opportunities in agriculture, men diversified into the rural non-farm sector, and male outmigration emerged as a major livelihood strategy. Since women did not feature predominantly in either of these trends, most rural women are still engaged in agriculture, mostly as labourers and cultivators (with a disproportionate number of agricultural labourers being Dalit women).
One reason for the feminisation of agricultural labour is that capital prefers to employ women. Women are more willing to accept low-paid irregular work, are easy to hire and fire, are thought to be docile and hardworking, and certain jobs are typified as women's work. All these factors combined with gendered division of work are an important explanation for feminisation. Together, they keep production costs in check and enable capital accumulation. Against the backdrop of rural distress and agrarian crisis, rural men sought employment outside agriculture. Inside villages, they took to non-farm work as casual labourers in construction, brick kilns, mills, or worked as drivers, carpenters, teachers, and so on. An important point to note here is that such jobs, while more readily available and better remunerated than agricultural labour, are socially perceived as 'male work'. Many of these jobs are better paid, more esteemed, and involve arduous physical labour.
The participation of women in the rural, non-farm economy is few and far between, and depends on local socio-cultural value systems. In this context, women often remain in the villages, and therefore in agricultural work. At best, they are supplementary income earners; the concept of a 'breadwinner' is strongly associated with men. Social norms and a gendered division of labour. In line with patriarchal social roles, women are responsible for reproduction and care activities. With male out-migration, women have additionally taken on the role of providing for their households on a daily basis, since $\qquad$ are irregular. This means that they now have to take care of their own farming and also work as agricultural wage labourers.

Within agriculture, there exists a gendered division of labour. Women undertake work such as weeding, threshing, and paddy transplantation-tasks that might not require physical strength. Patriarchy is so deeply rooted that even though women might do male tasks like ploughing and spade work in their own fields, they might not as wage labourers. A woman doing a 'man's job' would most likely invite ridicule.

Q81. As per Economic Survey (2017-18) what is/are the main reason(s) that agriculture in India is undergoing feminisation?
(I) The challenges of agricultural employment in India.
(II) Men ventured out to non-farm sectors and outmigrating for better prospects and stable livelihood.
(III)Women want to earn for themselves and build a career out of it.
(a) Only (I)
(b) Only (II)
(c) Only (I) and (III)
(d) Only (I) and (II)
(e) All (I), (II) and (III)

Q82. According to the passage, how do the local sociocultural norms make rural women far less pliable than their male counterparts?
(I) Since the "breadwinner" tag is only associated with the male population, women's income is considered as supplementary thus they mostly confine to villages and engage in agricultural activities.
(II) The deeply rooted gender division society perceives women as a caregiver. With males out-migrating, women have taken the responsibility of aiding the family through their agricultural wages.
(III)Even in farming, women only take those jobs that are not considered as "man's job" just to avoid getting ridiculed.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (III)
(e) All (I), (II) and (III)

Q83. Why capitalists prefer to employ women?
(I) The conventional wisdom states that women are more likely to accept low paid irregular jobs and also, they are easy to hire and fire.
(II) women are prejudiced to be docile and hardworking, and certain jobs are typified as women's work.
(III) After nurturing the family, women want to earn extra income and capitalists use this in their favour.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (II)
(e) All (I), (II) and (III)

Q84. After going through the passage characterised author's tone.
(a) condescending
(b) cynical
(c) laudatory
(d) satirical
(e) acerbic

Q85. Which of the following words can fit grammatically and contextually into the blank given in the passage?
(a) remittances
(b) supplementary
(c) invoice
(d) evasions
(e) consideration

Q86. Which of the following words can REPLACE the word "arduous" given in the passage?
(a) fragile
(b) onerous
(c) effortless
(d) exciting
(e) None of these

Q87. Which of the following words can REPLACE the word "ridicule" given in the passage?
(a) applause
(b) derision
(c) praise
(d) approval
(e) None of these

Q88. Which of the following words is the OPPOSITE of "shrinking" as per passage?
(a) wither
(b) shrivel
(c) expanding
(d) condense
(e) None of these

Directions (89-93): In the following paragraph few words are missing and for each of this word five options are given. Choose the correct option for the respective blank, that is grammatically and contextually accurate.

Water (89) $\qquad$ is the lack of freshwater resources to satisfy water demand. It is (90) $\qquad$ by partial or no satisfaction of expressed demand, economic competition for water quantity or quality, disputes between users, irreversible groundwater (91) $\qquad$ , and negative effects on the environment. It affects every continent and was categorised in 2019 by the World Economic Forum as one of the largest global risks with respect to its (92) impact over the next decade.

One-third of the global population (2 billion people) live under situations of severe water scarcity at least one month of the year. Half a billion people in the world (93) $\qquad$ by severe water scarcity all year round. Half of the world's largest cities have been facing water scarcity.

## Q89.

(a) drainage
(b) clog
(c) scarcity
(d) abundance
(e) surplus

Q90.
(a) manifested
(b) attested
(c) hidden
(d) certify
(e) transparent

Q91.
(a) augmentation
(b) depletion
(c) expenditure
(d) dwindle
(e) impoverishment

Q92.
(a) latent
(b) thinkable
(c) potential
(d) probability
(e) reality

Q93.
(a) Affected
(b) effected
(c) aftermath
(d) pompous
(e) grandiose

Directions (94-97): Each question consists three sentences which may or may not have errors. Mark the correct sentence(s) as your answer. If there is no correct sentence then mark (e) that is "All sentences are incorrect".

Q94. (I)Before the exam she felt surely of excelling, but when the exam started, she realized that it is not going to be so easy.
(II) I know that eventually he will succumb to me and confess that he has committed a crime
(III)In his valedictory speech he said nothing worth listening to.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (II)
(e) All sentences are incorrect

Q95.(I)Just before the match I asked him whom he thought was going to win.
(II) My nephew, who is in Bangalore, is eager to travel to Delhi in this winter.
(III) One of my uncles is seriously ill and is in the intensive care unit.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (II) and (III)
(e) All sentences are incorrect

Q96.(a) The man was dressed simply but his eyes were beaming with knowledge.
(b) when he used to walk along the road, a wild dog started chasing him.
(C) A pair of trouser have been bought by me.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (III)
(e) All sentences are incorrect

Q97.(I) The business tycoon returned back to the corridors of Indian cricket by bagging the franchise of the IPL.
(II)Things will go the same as they were, unless you yourself look into it.
(III) The thirsty dogs drank up all the water.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (III)
(e) All sentences are incorrect

Directions (138-145): In each sentence some portion is in bold, which may or may not need improvement. Choose the correct replacement for that portion that makes the sentence grammatically and contextually correct. If the sentence is correct as it is, then mark "No improvement required".

Q98. Prime Minister Narendra Modi expressed his gratitude to doctors, nurses and all whom worked at crossing the milestone of 100 crore covid doses.
(a) those who worked on
(b) those whom worked at
(c) those who worked upon
(d) whom working on
(e) No improvement required

Q99.The leader repeatedly said that his mission was not by merely to achieve hundred percent literacy.
(a) to more achieving
(b) merely to achieve
(c) for merely to achieve
(d) in order to achieve
(e) No improvement required

Q100. Stating that the lockdown had opened up new vistas such as conduct of online classes, the Madras High Court impressed upon the need to continue the virtual mode of education for the benefit of those in need of it.
(a) impressed by the need to continue
(b) impresses with the need to continue
(c) impressed along with need of continuing
(d) impresses from the need for continue
(e) No Improvement Required

Q101. No sooner I saw him than I ran away.
(a) As soon as I see
(b) No sooner did I see
(C) No sooner had I seen him
(d) No sooner had I seen him
(e) No improvement

Q102. Rohan met with an accident and immediately admitted to the hospital.
(a) admitted to hospital
(b) admitted to a hospital
(c) admitted into a hospital
(d) has admitted to a hospital
(e) No improvement required

Q103. Our journey to Manali was far from being
comfortable, as the road was bumpy.
(a) far from comfortability
(b) far not comfortable
(c) far not comforting
(d) far and not being comfortable
(e) No improvement required

Q104. I have been ringing the doorbell five times but no one answered.
(a) Had been ringing the doorbell
(b) have rung the doorbell
(c) ringing the doorbell
(d) has rung the doorbell
(e) No improvement required

Q105. There has been a sharp decline of the profit of the company this year.
(a) have been a sharp decline of
(b) has a sharp decline in
(c) has been a sharp decline in
(d) have been a sharp decline
(e) No correction required

Directions (106-110): In each question four words are given in bold, in which one of them might be misspelt or grammatically incorrect. Choose the incorrect word as your answer. If all the words are correct, mark (e) i.e. No correction required.

Q106. What makes plastic so (A)convenient in our day-today lives it's( $B$ ) cheap also makes it (C)ubiquoitous, resulting in one of our planet's greatest environmental (D)challenges.
(a) A
(b) B
(c) C
(d) D
(e) No correction required

Q107. the country argues that deep and (A) significent cuts to fossil fuel use can (B) affect the development (C) trajectory of its and other (D) developing countries.
(a) A
(b) B
(c) C
(d) D
(e) No correction required

Q108. James was told to (A)forfeit all contact with (B)convicted felons if he did not want to (C)violate the terms of his (D)payrole.
(a) A
(b) B
(c) C
(d) D
(e) No correction required

Q109. While social media has mobilised help in a way our (A)infrastructure was unable to, and many could find the aid they needed in (B)critical times, what was once an escape from reality is now an (C)overwelming source of information and (D)distressing news.
(a) A
(b) B
(c) C
(d) D
(e) No correction required

Q110. Considering, however, the numbers of venomous and (A)innocuous snakes that occur in most (B)tropical countries, it might be supposed that(C) mimicry in this order of reptiles would be of commoner(D) occurence than appears to be the case.
(a) A
(b) B
(c) C
(d) D
(e) No correction required

Directions (111-115): In the following questions words are given in bold, and correspondent to it three sentences are given using that word. Choose the sentence(s) where the correct usage of the word is done.

## Q111. Palpable

(I) Because the bank was being robbed, the sense of fear among the patrons was palpable.
(II) The hatred between the two sports teams was palpable and seemed to fill the entire stadium.
(III) I was palpable to see my result of excelling in the exam with A grade.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (II)
(e) All (I), (II) and (III)

## Q112. Coerce

(I) The bully tried to coerce the small kids into giving him their lunch money.
(II) According to the treasure map, the cave is located at the end of the coerce path that winds up the mountain
(III) The bird carefully made a coerce nest out of twigs.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (I) and (II)
(e) All (I), (II) and (III)

## Q113. Affiliate

(I) The Global Hunger Report (GHR) has once again affiliate headlines in India for the country's poor ranking.
(II) The India-China relationship is in a difficult place, with the past affiliate the present.
(III) Jane is an atheist, and as such, she is not affiliated with any church in her community.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (II) and (III)
(e) All (I), (II) and (III)

## Q114. Callow

(I) I believed a lot of things in my callow youth that I do not believe now.
(II) Amartya is a callow secretary who needs to take a few more computer classes.
(III) He'd need to keep his senses sharp and try to put any such callow thoughts quite out of his mind.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (II) and (III)
(e) All (I), (II) and (III)

## Q115. Wander

(I) The bookworm loved to wander through the library and brush her fingers against the spines of the books.
(II) "I wander what can have happened to the boy," he said; and he opened the door and looked out.
(III) No wander, then, that he did not oftener stay to play on the common.
(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Only (II) and (III)
(e) All (I), (II) and (III)
consists of five sentences. These are labelled as A, B, C, D and E. Find out the proper order for the five sentences and answer the questions based on that.
(A) Globally, landslides lead to the expenditure of billions of bucks towards the rehabilitation of affected areas.
(B) Typically, pre-condition factors build up specific subsurface conditions that build the sloping surface and cause landslides which endanger the livelihoods of folks living under these hills and mountains.
(C) Landslide, slope failure, slum is an uncontrollable downhill flow of rocks, earth, Junk or the mixture of the three.
(D) Because of these huge annual losses, most governments have instituted bodies to deal with landslides. As an example, the U.S. government created the National Landslides info Centre to gather and distribute all types of information associated with landslides.
(E) Thus, study of landslides is crucial considering the annual economic losses they create

Q116. Which of the following sentences is third after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) E

Q117. Which of the following sentences is first after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) E

Q118. Which of the following is fourth sentence after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) E


Q119. Which of the following is second sentence after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) E

## Solutions

## Solutions (1-5):

## S1. Ans.(b)

Sol. E sits third to the left of the one who faces R i.e., C.

## S2. Ans.(d)

Sol. Statement (d) is not true.

## S3. Ans.(b)

Sol. Two persons sit between P and the one who faces A
i.e., Q.

## S4. Ans.(e)

Sol. All persons are sits at the extreme end except V given in option (e).

## S5. Ans.(b)

Sol. A sits fourth to the right of the one who faces T i.e., D.

## Solutions (6-8):



Q120. Which of the following is fifth(last) sentence after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) E

S6. Ans.(b)
Sol. Point K is in south east of point B.

## S7. Ans.(a)

Sol. shortest distance between Sam initial point and point C is $2 \sqrt{ } 13 \mathrm{~m}$.

## S8. Ans.(e)

Sol. In all cases first point is in south west of second point except in option (e).

S9. Ans.(c)
Sol. $S$ is aunt of Q .


Solutions (10-14):

| Months | Persons | Cities |
| :--- | :--- | :--- |
| March 15 | C | Indore |
| March 18 | E | Agra |
| April 15 | A | Delhi |
| April 18 | F | Mumbai |
| May 15 | B | Bhopal |
| May 18 | D | Dehradun |

## S10.Ans.(a)

Sol. A participated in the event held in Delhi.

## S11. Ans.(b)

Sol. Two persons participated between C and the one who participated on $18^{\text {th }}$ April

## S12. Ans.(e)

Sol. All of them participated in the event held in the month having odd number of days except F given in option (e).

## S13. Ans.(c)

Sol. E participated in the event held in Agra.

## S14. Ans.(c)

Sol. Statement (c) is true.

Solutions (15): Logic: Words are arranged in alphabetical order from left to right according to the place value of first letter of the words.
Input: Visual Perk Ultimate Evaluate Famous Monk
Step I: Evaluate Visual Perk Ultimate Famous Monk
Step II: Evaluate Famous Visual Perk Ultimate Monk
Step III: Evaluate Famous Monk Visual Perk Ultimate
Step IV: Evaluate Famous Monk Perk Visual Ultimate
Step V: Evaluate Famous Monk Perk Ultimate Visual

## S15. Ans.(a)

Sol. Fourth word to the left of sixth word from the left end in step III is Famous.
Solutions (16-20):

## S16. Ans.(b)

Sol. I. K $<$ B (true)
II.F $\geq$ S (False)
III.F<U(False)

## S17. Ans.(b)

Sol. I. Z $\leq T$ (False)
II.R<S(True)
III.M>T(False)

S18. Ans.(a)
Sol. I. Q<S (True)
II. $B \leq K$ (False)
III.P $\leq$ U(False)

S19. Ans.(c)
Sol. I. S>Y(False)
II. $\mathrm{T}<\mathrm{Y}$ (True)
III. U<S(True)

## S20. Ans.(d)

Sol. I. M<V(True)
II. J<O(False)
III. $\mathrm{P}<\mathrm{K}$ (True)

## Solutions (21-25):

| Designation | Persons |
| :--- | :--- |
| MD | L |
| CMD | V |
| CEO | P |
| COO | H |
| CTO | D |
| CFO | G |
| Sr. Manager | R |
| Manager | B |
| Team lead | N |
| Executive | K |
| Trainee | T |

S21. Ans.(b)
Sol. R works as Sr. manager.

S22. Ans.(d)
Sol. Four persons work between L and G.

## S23. Ans.(a)

Sol. B is just junior to R.

## S24. Ans.(e)

Sol. The correct combination is Executive-K or CMD-V.

S25. Ans.(a)
Sol. After interchanging the designations, N will be four designations junior to V .

## S26. Ans.(b)

Sol.


S27.Ans.(d)
Sol.


S28. Ans.(a)
Sol.


S29. Ans.(c)
Sol.


S30. Ans. (e)
Sol.


Solutions (31-35):

| Words | Codes |
| :--- | :--- |
| Knowledge | 13 |
| Study | 23 |
| Learning | 17 |
| Area | 11 |
| Of | 29 |
| Results | 37 |
| Theory | 31 |
| Under | 19 |
| Consideration | 41 |

## S31. Ans.(d)

Sol. '31' is the code for 'theory'.

## S32. Ans.(a)

Sol. '37 11' will be the code for 'results area'.

## S33. Ans.(c)

Sol. ' 41 ' is the code for 'consideration'.

S34. Ans.(d)
Sol. 'Of knowledge' is considered as '29 13'.

## S35. Ans.(c)

Sol. '15 37' will be the possible code for 'known results'.
Solutions (36-40):


S36. Ans.(a)
Sol. Four persons sit between C and D.

S37.Ans.(c)
Sol. B sits immediate right of I.
S38. Ans.(b)
Sol. F sits opposite to G.

S39. Ans.(c)
Sol. D sits fourth to the right of H .
S40.Ans.(e)
Sol. C and F are immediate neighbors.
S41. Ans.(e)
Sol. $1 \times 72+\frac{1}{1} \times 121-\sqrt{16}=\sqrt{ }$ ?
$9+{ }_{8} 11-4=\sqrt[11]{\sqrt{?}}$
$16=\sqrt{\text { ? }}$
? $=256$

## S42. Ans.(d)

Sol. $\sqrt{324} \times \sqrt{25}-17 \times(2)^{2}=\sqrt{ }$ ?
$18 \times 5-17 \times 4=\sqrt{ }$ ?
$22=\sqrt{?}$
? $=484$

S43. Ans.(a)
Sol. $21 \times 6+9$ of $20 \%$ of $60=$ ?
$126+108=$ ?
? $=234$

S44. Ans. (b)
Sol. $12 \times 13-55 \div 11=?+100$
? = 51

S45. Ans. (c)
Sol. $53+78-33+?=91$
? $=-7$

## S46. Ans.(a)

Sol. Let the initial quantity of milk and water be $7 x$ and $5 x$ liters.
${ }^{-7 x-9 x_{12}}$
${ }_{-5}^{-5 x-9 x_{12}}=\frac{7}{9}+9$
$\frac{7 x-\frac{21^{4}}{15}}{5 x-\frac{15}{4}+9}=\frac{7}{9}$
$9\left(7 x-\frac{21}{4}\right)=7\left(5 x+\frac{21}{4}\right)$
$63 x-\frac{189}{4}=35 x+\frac{147}{4}$
$28 x=\frac{336}{4}$
$28 x=84$
$x=3$
Initial quantity of milk $=21$ liters

## S47. Ans.(b)

Sol.
$\begin{array}{lc}\text { Pipe } & \text { Time taken } \\ \text { A } & 4 \\ \text { B } & \text { T } \\ \text { C } & -8\end{array}$

## Total work <br> 8T

$(2 T+8-T) \times\left(4+\frac{48}{60}\right)=8 T$
$T=12$ hours
S48. Ans. (c)
Sol. Let the cost price is Rs.100a
Marked price is Rs.130a
Let the discount percentage be $x \%$.
$130 a \times \frac{(100-x)}{100}=100 a \times \frac{104}{100}$
$1300-13 x=1040$
$260=13 x$
$x=20 \%$

S49. Ans.(a)
Sol. Let the length of rectangle and side of a square are ' $l$ ' meter.
$l^{2}=125+l \times 20$
$l^{2}-20 l-125=0$
$l=25 m$
Perimeter of rectangle
$=2 \times(l+b)=2 \times(25+20)=90 m$

## S50. Ans.(a)

Sol. Let the father's age be $4 x$ years.
So, Son's age $=x$ years
ATQ,
$4 x+3=3 \times(x+3)$
$x=6$
Let after ' $y$ ' years, age of father will be $250 \%$ of his son's age.
$(4 \times 6+y)=\frac{250}{100} \times(6+y)$
$48+2 y=30+5 y$
$18=3 y$
$y=6$
S51. Ans.(a)
$\frac{\text { Sol.ATQ }_{1200 \times 6+10000 \times 6}}{X \times 12}$
$\frac{132000}{12 X}=\frac{22}{30}$
$X=15000$

S52. Ans. (c)

| Sol. | Time taken | Total work | Efficiency |
| :--- | :---: | :--- | ---: |
| Pallavi +Himanshi | 120 |  | 3 units/day |
| Himanshi + Ayush | 40 | 360 units | 9 units/day |
| Himanshi | 180 |  | 2 units/day |

## Efficiency 2T <br> 8 <br> $-T$

## S58. Ans.(c)

## S54. Ans.(c)

Sol ATQ,
$\frac{700}{70}$ hour $^{-1}\left(\frac{700-140}{140}\right) \times 4 \mathrm{~min}$
10hour - 16 min
9 hr 44 min

## S55. Ans. (b)

Sol. Let population of city P and Q be 625 p and $625 q$
respectively.
ATQ
$625 q-625 p=20000$
$q-p=32 \ldots$.... i )
And, $625 q \times \frac{23}{25} \times \frac{23}{25}-625 p \times \frac{4}{5} \times \frac{4}{5}=22088$
$529 q-400 p=22088 \ldots$ (ii)
From (i) and (ii)
$p=40, q=72$
So, initial population of city $Q=625 q=45000$

## S56. Ans.(d)

Sol. Let rate of interest be r\%.
In 8 years, the investment becomes double at simple rate of interest.
So,
$4800=\frac{4800 \times r \times 8}{100}$
$\mathrm{r}=12 \frac{1}{2} \%$
Let investment in scheme A and Scheme B be Rs. y and Rs. z respectively.
ATQ,
$y\left\{\left(1+\frac{r}{100}\right)^{2}-1\right\}-\frac{{ }^{z \times r \times 4}}{100}=50$
$y\left\{\left(1+\frac{12 \mathrm{z}}{100}\right)^{2}-1\right\}-\frac{{ }^{2} \times 12 \frac{1}{2} \times 4}{100}=50$
$y \times \frac{17}{64}-\frac{z}{2}=50$
$17 y-32 z=3200$
And $y+z=4800$
On solving equations, 1 and 2 , We get
y = Rs. 3200
And z = Rs. 1600

## S57. Ans.(c)

Sol. Let the numerator and denominator of a fraction be $x$ and y respectively.
ATQ
$x+7=2 y$ $\qquad$
And,
$\frac{4 x}{y+5}=\frac{2 x}{y}$
$y=5$
So, from (i),
$x=3$
Original fraction $=\frac{3}{5}$
Required fraction $=\frac{3}{5} \times \frac{1}{2}=\frac{3}{10}$

Sol. Speed of train $-B=144 \times{ }_{-}^{5}=40 \mathrm{~m} / \mathrm{sec}$

## 18

Length of train $-B=(40 \times 15)-300=300 \mathrm{~m}$
Now, let speed and length of train - A be y m/sec \& x meters respectively.
ATQ,
$\frac{x+300}{10}=(40+y)$
$x+300=400+10 y$
$x-10 y=100 \quad \ldots$ (i)
And,
$\frac{x+300}{130} \times 3=(40-y)$
$3 x+900=5200-130 y$
$3 x+130 y=4300$
On solving (i) \& (ii):
$y=25, x=350$

## S59. Ans.(d)

Sol. Let the digit at unit place \& tens place of original number be $y$ and $x$ respectively.
So, original number $=10 \times x+y$
And, number obtained after reversing of digits $=10 \times y+$ $x$
ATQ,
$(10 \times x+y)-(10 \times y+x)=27$
$9 x-9 y=27$
$x-y=3$
Now, 2
$x-y=27$
$(x+y)(x-y)=27$
On solving (i) \& (ii), we get:
$x+y=9$
On solving (i) \& (iii), we get:
$x=6, y=3$
So, original number $=10 \times x+y$
$=63$

## S60. Ans.(d)

## Sol. CASE I:

Selection of 1 White and 3 black balls
Req number of ways $={ }^{3} \mathrm{C}_{1} \times{ }^{5} \mathrm{C}_{3}=30$
CASE II:
Selection of 3 White and 1 black balls
Req number of ways $={ }^{3} \mathrm{C}_{3} \times{ }^{5} \mathrm{C}_{1}=5$

## CASE III:

Selection of 2 White and 2 black balls
Req number of ways $={ }^{3} \mathrm{C}_{2} \times{ }^{5} \mathrm{C}_{2}=30$
Therefore, req num of ways $=30+5+30=65$.


Solutions (61-65): For company A
Total cost price of masks $=20 \times 100=$ Rs. 2000
Total selling price of masks $=\frac{120}{100} \times 20 \times 40+\frac{110}{100} \times 20 \times$
$60=960+1320=$ Rs. 2280
For company B
Total cost price of masks $=150 \times 40=$ Rs. 6000
Total marked price of the mask
$=150 \times 40 \times \frac{150}{100}=R s .9000$
Total selling price of masks $=9000 \times \frac{90}{100}=$ Rs. 8100
For company C
Let total masks be x units
Selling price $=100 \times x=10800$
$x=108$
Total cost price of masks $=\frac{10800 \times 100}{125 \times 108}=$ Rs. 80
S61. Ans.(d)
Sol. Required percentage $=\frac{100+108}{150} \times 100=138 \frac{2}{3} \%$
S62. Ans.(d)
Sol. Required difference $=20-\frac{9000-8100}{150}=20-6=14$

## S63. Ans.(c)

Sol. Total cost price $=2000+6000+8640=$ Rs. 16640

## S64. Ans.(e)

Sol. Total selling price $=2280+8100+10800=$ Rs. 21180

## S65. Ans.(e)

Sol. Required difference $=\frac{70}{100} \times 150-\frac{60}{100} \times 100=105-$
$60=45$ masks

## S66. Ans.(d)

Sol. I. $(2 x-7)^{2}=25$
$\Rightarrow 2 \mathrm{x}-7= \pm 5$
$\Rightarrow \mathrm{x}=1,6$
II. $(4 y-1)^{2}=9$
$\Rightarrow 4 y-1= \pm 3$
$y=1,-\frac{1}{2}$
$x \geq y$

## S67. Ans.(d)

Sol. I. $\frac{20}{x^{2}}=3+\frac{4}{x}$
$\Rightarrow 3 \mathrm{x}^{x^{2}}+4 \mathrm{x}-20^{x}=0$
$\Rightarrow 3 \mathrm{x}^{2}+10 \mathrm{x}-6 \mathrm{x}-20=0$
$\Rightarrow \mathrm{x}(3 \mathrm{x}+10)-2(3 \mathrm{x}+10)=0$
$\Rightarrow(\mathrm{x}-2)(3 \mathrm{x}+10)=0$
$\Rightarrow x=2, \frac{-10}{3}$
II. $\frac{32}{y^{2}}+1=\frac{12}{y}$
$\Rightarrow y^{2}-12 y+32=0$
$\Rightarrow y^{2}-4 y-8 y+32=0$
$\Rightarrow \mathrm{y}(\mathrm{y}-4)-8(\mathrm{y}-4)=0$
$\Rightarrow(y-8)(y-4)=0$
$\Rightarrow y=8,4$
$y>x$

## S68. Ans.(c)

Sol. I. $\mathrm{x}^{2}+8 \mathrm{x}+15=0$
$x^{2}+5 x+3 x+15=0$
$\mathrm{x}(\mathrm{x}+5)+3(\mathrm{x}+5)=0$
$(x+3)(x+5)$
$x=-3,-5$
II. $2 y^{2}+21 y+54=0$
$2 y^{2}+12 y+9 y+54=0$
$2 y(y+6)+9(y+6)=0$
$(2 y+9)(y+6)=0$
$y=-\frac{9}{2}-6$
No relation can be established between x \& y

S69. Ans.(b)
Sol. I. $\frac{5}{x}-\frac{12}{x^{2}}=\frac{1}{2}$
Multiply by $2 \mathrm{x}^{2}$
$10 \mathrm{x}-24=\mathrm{x}^{2}$
$\Rightarrow x^{2}-10 x+24=0$
$\Rightarrow \mathrm{x}^{2}-6 \mathrm{x}-4 \mathrm{x}+24=0$
$\Rightarrow \mathrm{x}(\mathrm{x}-6)-4(\mathrm{x}-6)=0$
$\Rightarrow(\mathrm{x}-4)(\mathrm{x}-6)=0$
$\Rightarrow \mathrm{x}=4,6$
II. $2+\frac{20}{y^{2}}=\frac{13}{y}$

Multiply by $y^{2}$
$2 y^{2}+20=13 y$
$\Rightarrow 2 y^{2}-13 y+20=0$
$\Rightarrow 2 y^{2}-8 y-5 y+20=0$
$\Rightarrow 2 y(y-4)-5(y-4)=0$
$\Rightarrow(2 y-5)(y-4)=0$
$\Rightarrow y=\frac{5}{2}, 4$
$x \geq y$

## S70. Ans.(c)

Sol. I. $3^{2 x+4}=9^{3 x+4} \times 27^{(x+1)}$
$3^{2 x+4}=3^{6 x+8} \times 3^{3 x+3}$
$\Rightarrow 2 \mathrm{x}+4=6 \mathrm{x}+8+3 \mathrm{x}+3$
$\Rightarrow 7 \mathrm{x}=-7$
$\Rightarrow \mathrm{x}=-1$
II. $\frac{y^{2}+18}{y}=9$
$\Rightarrow y^{2}-9 y+18=0$
$\Rightarrow y^{2}-3 y-6 y+18=0$
$\Rightarrow y(y-3)-6(y-3)=0$
$\Rightarrow(y-6)(y-3)=0$
$y=6,3$
$y>x$

Solutions (71-75): In year 2011,
Let number of public vehicles and private vehicles are x and y .
$x-y=250$
$x+y=850$
by equating (i) and (ii)
$\mathrm{x}=550 \mathrm{y}=300$

| Years | Public vehicle | Private vehicle |
| :--- | :--- | :--- |
| $\mathbf{2 0 1 1}$ | 550 | 300 |
| $\mathbf{2 0 1 2}$ | 650 | 400 |
| $\mathbf{2 0 1 3}$ | 750 | 350 |
| $\mathbf{2 0 1 4}$ | 500 | 300 |
| $\mathbf{2 0 1 5}$ | 800 | 400 |

## S71. Ans.(e)

Sol. Required percentage $=\frac{350-300}{300} \times 100=16^{\frac{2}{3}} \%$

## S72. Ans.(e)

Sol. Total number of males travel in a vehicle
$=\frac{11}{24} \times 1200=550$
Total number of females travel in a vehicle
$=\frac{13}{24} \times 1200=650$
Let the number of females travel in private vehicles in
$2015=x$
Number of males $=\mathrm{x}+100$
$2 x+100=400$
$x=150$
Females travel in public vehicle $=650-150=500$

## S73. Ans.(e)

Sol. Required ratio
$=(300+400+300):(750+800)$
= 1000: 1550
$=20: 31$

## S74. Ans.(e)

Sol. In year 2014,
Total public vehicle in 2014=500
Three-wheeler vehicle in $2014=\frac{30}{100} \times 500=150$
Four-wheeler vehicle $=500-150=350$
In year 2015,
Total public vehicle in $2015=800$
Three-wheeler vehicle in 2014 $=\frac{37.5}{100} \times 800=300$
Four-wheeler vehicle $=800-300=500$
Required difference $=500-350=150$

## S75. Ans.(a)

Sol. Required sum
$=550+650+750+500+800=3250$
Solutions (76-80):

| People | Income | Savings | Expenditure |
| :--- | :--- | :--- | :--- |
| A | 18000 | 6000 | 12000 |
| B | 15000 | 5000 | 10000 |
| C | 27500 | 8000 | 19500 |
| D | 30000 | 10000 | 20000 |
| E | 35000 | 12000 | 23000 |

S76. Ans.(c)
Sol. Let income and saving of F be $4 \mathrm{x} \& 1 \mathrm{x}$ respectively
Expenditure of $\mathrm{F}=(4 \mathrm{x}-1 \mathrm{x})=\frac{125}{100} \times 12000$
$3 x=15000$
$x=5000$
Saving of F = Rs. 5000

## S77. Ans.(e)

Sol. Expenditure of $G=20000-10000=$ Rs. 10000
Ratio of saving to income of $\mathrm{G}=1: 6$
Expenditure of $\mathrm{G}=5 x=10000$
$x=2000$
Saving of G = Rs. 2000
Expenditure on house rent $=10000 \times \frac{65}{100} \times \frac{60}{100}=$ Rs. 3900
Required difference $=3900-2000=$ Rs. 1900

## S78. Ans.(d)

Sol. Ratio of amount spend on household and education are 13:2.
Total amount spends on household and education
$=\frac{23000 \times 75}{100}=17250$
Annual expenditure on education
$=17250 \times \frac{2}{15} \times 12=$ Rs .27600

## S79. Ans.(e)

Sol. Required Ratio
$=(19500 \times 8):(23000 \times 6)=26: 23$
S80. Ans.(b)
Sol. Required percentage
$=\frac{10000+23000}{12 \times 19500} \times 100=14.1 \approx 14 \%$

## S81. Ans.(d)

Sol. The correct option for this question can be clearly inferred from the first paragraph of the passage "The Government of India in the Economic Survey (2017-2018) stated that the agricultural sector in India is undergoing feminisation. In the face of shrinking employment opportunities in agriculture, men diversified into the rural non-farm sector, and male out-migration emerged as a major livelihood strategy. Since women did not feature predominantly in either of these trends, most rural women are still engaged in agriculture, mostly as labourers and cultivators"

## S82. Ans.(e)

Sol. All of these sentences mentioned in this question can be seen in the passage, "In this context, women often remain in the villages, and therefore in agricultural work. At best, they are supplementary income earners; the concept of a 'breadwinner' is strongly associated with men Social norms and a gendered division of labour In line with patriarchal social roles, women are responsible for reproduction and care activities. With male outmigration, $\qquad$ they now have to take care of their own farming and also work as agricultural wage labourers.... Within agriculture, there exists a gendered division of labour A woman doing a 'man's job' would most likely invite ridicule."

## S83.Ans.(d)

The correct option for this question can be clearly inferred from the second paragraph of the passage: "One reason for the feminisation of agricultural labour is that capital prefers to employ women. Women are more willing to accept low-paid irregular work, are easy to hire and fire, are thought to be docile and hardworking, and certain jobs are typified as women's work"

## S84. Ans.(e)

Sol. "acerbic" means "sharp and forthright". From the passage we can clearly see that the author is stating the facts in coherent manner with appropriate data. Thus, acerbic is the right word to justify author's tone.
Condescending: stooping to the level of one's inferiors; patronising
Cynical: believing people are generally dishonest and selfish
Laudatory: praising someone/something
Satirical: making fun to show a weakness; ridiculing

## S85 Ans.(a)

Sol. "Remittances" means "payment of money that is transferred to another party", hence, appropriate for this context. Other words are:
Supplementary: something extra to fill the gap
Invoice: an official paper that lists goods or services that you have received and says how much you have to pay for them
Evasion: the act of avoiding something that you should do Consideration: an act of thinking about something carefully or for a long time

## S86. Ans.(b)

Sol. "arduous" means "full of difficulties; needing a lot of efforts". Whereas "onerous" means "
full of difficulties; needing a lot of effort", hence they can be used interchangeably.
Fragile: easily breakable
Effortless: easy or not required much effort
Exciting: causing strong feelings of pleasure and interest

## S87. Ans.(b)

Sol. "Derision" means "ridicule or mockery" thus, can replace the word mentioned in the question.
"Applause", "praise", "approval" are the antonyms of "ridicule", which mean "to show approval or support".

## S88. Ans.(c)

Sol. Here "expanding" means "to enlarge" which is opposite of the word "shrinking"
Other words "wither", "shrivel", "condense" are synonyms of "shrink".

## S89. Ans.(c)

Sol. From the above passage, it is clearly seen that the passage is talking about water scarcity. So, the correct word is "scarcity". Note that "scarcity" means "lack of something"
Clog: become or cause to become obstructed
Scarcity: small or inadequate amount
Abundance: more than adequate quantity
Surplus: quantity much larger than needed.

## S90. Ans.(a)

Sol. The sentence suggested that the water scarcity can be viewed as no satisfaction of expressed demand, economic competition for water quantity or quality, disputes among users, irreversible groundwater, So the correct usage of the word is "manifest" which means "provided evidence for".
Attested: established as genuine
Hidden: Not accessible to view
Certify: guarantee of something
Transparent: easily understood or easily permeable

## S93. Ans.(b)

Sol. The sentence is clearly referring groundwater reduction thus the correct answer is "depletion" which means "reduction"
Augmentation: The amount by which something increases
Expenditure: money paid out
Dwindle: become smaller or loose substances
Impoverishment: the state of having little or no money or possession

## S92. Ans.(c)

Sol. "potential" is the correct word as it means "possible". From the sentence, it can be seen that the foreseeable impact over water scarcity is the main topic.
Latent: In very small amount

## S93. Ans.(a)

Sol. "Affected" is the correct word for this sentence. It means "to influence or have an impact on something". Here we should note that "affect" and "effect" may sound similar but "affect" is a verb and "effect" is a noun.
Aftermath: the consequences

Pompous: affectedly grand, solemn and self-important Grandiose: impressive and imposing in appearance in style.

## S94. Ans.(b)

Sol. The correct sentence in this is sentence (II)
In sentence (I), "surely" should be replaced with "sure", because "felt" is the past form of "feel" and "feel" is a copular verb (It is a special kind of verb used to join an adjective or noun complement to a subject. Common examples are: be (is, am, are, was, were), appear, seem, look, sound, smell, taste, feel, become and get.) and after it adjective is used not adverb.
In sentence (III), "listening to" should be replace with only "listening". The correct form of "listen to" is "listen + to + object"

## S95. Ans.(d)

Sol. The correct sentences are (II) and (III)
In the sentence (I), "whom" should be replaced with "who". Because, "whom" is used in objective case and after it verb is not used, whereas "who" is used in nominative case and verb can be used after it.

## S96. Ans.(a)

Sol. The correct answer is sentence (I)
In the sentence (II), "when he used to walk" should be replaced with "while he was walking". The sentence is in past continuous.
In the sentence (III), "have" must be replaced with "has", as "a pair" is singular.

## S97.Ans.(c)

Sol. The correct sentence is (III)
In sentence (I), "returned back" should be replaced by "returned" because the word back is implied by the word return, so basically it is not necessary to use back. Just return is enough.
In sentence (II), "it" should be replaced with "them"

## S98. Ans.(a)

Sol. The correct answer is "those who worked on" "who" should be used as it is in nominative case and when we talk about some project or task, we say "work on".

## S99. Ans.(b)

Sol. "merely to achieve" is the correct form. Because, "subject + be" infinitive (to + V1) is used, then in that case no preposition is used before infinitive.

## S100.Ans.(e)

Sol. The sentence is correct.

## S101. Ans.(b)

Sol. The sentence that starts with "no sooner" follows inversion rules. So, the correct form is "no sooner did I see".

## S102.Ans.(a)

Sol. "admitted to hospital" is the correct answer. Because, when we are not talking about any particular 'school', 'college', 'jail', 'hospital' etc, then before all these nouns no article should be used.

## S103. Ans.(e)

The sentence is correct.

## S104.Ans.(b)

Sol. The given sentence is in present perfect tense which tells something about an action that has completed in immediate past, or at the time the statement is made and its correct structure is "S+ has/have+ v3". Therefore the correct choice is option (b).

## S105. Ans.(c)

Sol. The present perfect tense refers to an action that began at some time in the past and is still in progress. Thus, it has to be present perfect tense. "Decline of" is used to refer to a person, an organisation, a nation or some other established entity, whose power/influence/status/health/etc is decreasing and "decline in" is used more for quantitative or measurable things, or for characteristics that may vary in degree. So, the correct phrase is "has been a sharp decline in".

## S106. Ans.(c)

Sol. The correct spelling is "ubiquitous", which means present or can be found everywhere.

S107.Ans.(a)
Sol. The correct spelling is "significant" which means considerably important.

## S108. Ans.(d)

Sol. The correct spelling is "parole" which means a conditional release from imprisonment.
Forfeit: lose or give up
Convicted: (law)find or declare guilty

## S109. Ans.(c)

Sol. The correct spelling is "overwhelming", which means so strong as to be irresistible.
Distressing: causing worry, anxiety

## S110. Ans.(d)

Sol. The correct word is "occurrence" which means an event that happen.

## S111. Ans.(d)

Sol. Only (I) and (II)
The meaning of "palpable" is "capable of being touched, felt, handled, and perceived", hence, the correct usage of the word is in sentence (I) and (II).

## S112. Ans.(a)

Sol. "Coerce" means "to make someone do something by using force or threats". Thus, only sentence (I) has the correct usage of the word.

## S113. Ans.(c)

Sol. "Affiliate" means "association with a group or organization" thus, only sentence (III) has the correct usage.

## S114. Ans.(e)

Sol. Callow" means "immature, careless" thus, all the sentences correctly represent the usage of the word.

## S115. Ans.(a)

Sol. "wander" means "roaming or travelling without purpose", so, sentence (I) only correctly represent the usage of the word

## S116. Ans.(e)

Sol. The correct sequence is "CBEAD"
The passage is talking about landslides. And, we can see the definition of landslide in (C), so it is clearly the first point. The (B) point provides further information about the reasons for landslides and loss of livelihoods. The next will be a statement (E) that supports statement (B) by describing the need for study due to economic losses. Statement (A) will be the next sentence as it is mentioning the aftermath of landslides. The last sentence will be a statement (D) which is talking about steps taken for economical loss. Thus the correct and meaningful sequence is "CBEAD".

## S117. Ans.(c)

Sol. The correct sequence is "CBEAD"
The passage is talking about landslides. And, we can see the definition of landslide in (C), so it is clearly the first point. The (B) point provides further information about the reasons for landslides and loss of livelihoods. The next will be a statement (E) that supports statement (B) by describing the need for study due to economic losses. Statement ( A ) will be the next sentence as it is mentioning the aftermath of landslides. The last sentence will be a statement (D) which is talking about steps taken for economical loss. Thus the correct and meaningful sequence is "CBEAD".

## S118. Ans.(a)

Sol. The correct sequence is "CBEAD"
The passage is talking about landslides. And, we can see the definition of landslide in (C), so it is clearly the first point. The (B) point provides further information about the reasons for landslides and loss of livelihoods. The next will be a statement (E) that supports statement (B) by describing the need for study due to economic losses. Statement (A) will be the next sentence as it is mentioning the aftermath of landslides. The last sentence will be a statement (D) which is talking about steps taken for economical loss. Thus the correct and meaningful sequence is "CBEAD".

## S119. Ans.(b)

Sol. The correct sequence is "CBEAD"
The passage is talking about landslides. And, we can see the definition of landslide in (C), so it is clearly the first point. The (B) point provides further information about the reasons for landslides and loss of livelihoods. The next will be a statement (E) that supports statement (B) by
describing the need for study due to economic losses. Statement (A) will be the next sentence as it is mentioning the aftermath of landslides. The last sentence will be a statement (D) which is talking about steps taken for economical loss. Thus the correct and meaningful sequence is "CBEAD".

## S120. Ans.(d)

Sol. The correct sequence is "CBEAD"
The passage is talking about landslides. And, we can see the definition of landslide in (C), so it is clearly the first point. The (B) point provides further information about the reasons for landslides and loss of livelihoods. The next will be a statement (E) that supports statement (B) by describing the need for study due to economic losses. Statement (A) will be the next sentence as it is mentioning the aftermath of landslides. The last sentence will be a statement (D) which is talking about steps taken for economical loss. Thus the correct and meaningful sequence is "CBEAD".


