IBPS RRB PO Mains 2019

REASONING ABILITY

Directions (1-5): Study the following information to answer the questions given below:

Seven persons were born in seven different years. Their ages are calculated with respect to 2019. None of them was born before 1965. They belong to different professions such as Manager, HR, Artist, Doctor, Teacher, Engineer, and Pilot but not necessarily in the same order.

Note: All the persons were born on the same date and same month.

Nisha was 38 years old. No one was born between Nisha and the one who is Pilot. Three persons were born between the one who is Pilot and Aditi, who is the oldest among all and born before 1970 but in the even-numbered year. No one was born between Aditi and the one who is a Manager. More than one person was born between the ones who are Manager and Pilot. Dheeraj was born before Nisha but not just before. There is 4 years difference between Aditi and Dheeraj. The difference between the ages of Dheeraj and Kamal is the same as between Nisha and Swati. Pranav who was born before Pooja but after Swati. Swati was 11 years older than Pranav. Pranav was born in 1998. The difference between the ages of Kamal and Pranav was not more than 20 years. The one who is a Teacher was born just before HR. Pooja does not an HR. There are 7 years of difference between the ones who are Doctor and Engineer. No one was born between Pilot and Doctor.

1. How many persons were born between the ones who were Artist and Doctor?
    (a) One   (b) None   (c) Two
    (d) Five   (e) None of these

2. In which year Kamal was born?
    (a) 1976   (b) 1978   (c) 1981
    (d) 1987   (e) None of these

3. Which of the following combination is true?
    (a) Nisha-41-HR
    (b) Dheeraj-41-Manager
    (c) Aditi-51-Doctor
    (d) Swati-32-Piolt
    (e) None id true

4. Four of the following five are alike in a certain way and hence they form a group. Which one of the following does not belong to that group?
    (a) Aditi-Artist
    (b) Kamal-Manager
    (c) Nisha-HR
    (d) Swati-Pilot
    (e) Pooja-Engineer

5. The number of persons were born between Kamal and Pranav is same as the number of persons were born between Swati and ___?
    (a) Pooja   (b) Dheeraj   (c) Aditi
    (d) Nisha   (e) None of these

6. **Statement I-** The Indian Army plans to recruit women in combat roles, especially with regard to the operations in Jammu & Kashmir, Army Chief General Bipin Rawat said at the Passing Out Parade at the Indian Military Academy (IMA).
    Statement II- Many a time jawans in Kashmir feel hesitant about dealing with women when they are in the front lines.
    Statement III- The situation in Kashmir has been volatile for decades, flaring up for worse since last summer. In the last four days alone, the army has killed 13 suspected militants.
    Which of the following may be cause/effect among the above statements?
    (a) Statement II will be cause and Statement I and III will be it's effects.
    (b) Statement II and III will be cause and I will be it's effect.
    (c) Statement III is cause and Statement I is it's effect and Statement II is effect of independent cause.
    (d) Statement II is cause and Statement I is it's effect and Statement III is effect of independent cause.
    (e) Statement III is cause and Statement II is it's effect and Statement I is effect of independent cause.

7. **Statement:** No one in the Royal Family wants to be king or queen by their choice, Prince Harry has told a US magazine, adding that "we will carry out our duties at the right time". "Is there any one of the Royal Family who wants to be king or queen? I don't think so," he told Newsweek.
    Which of the following is not in line with the above statement?
    (I) He said the royals were doing their duties "for the greater good of the people".
    (II) Harry, who recently said he had received counselling to cope with the death of his mother in a car crash in Paris, said: "My mother had just died, and I had to walk a long way behind her coffin, surrounded by thousands of people watching me while millions more did on television.

(III) He also paid tribute to his "remarkable" grandmother for letting the younger royals do things their own way.

(a) Only (I)
(b) Only (II)
(c) Only (III)
(d) Both (II) and (III)
(e) None of these

Direction (8-10): Study the following information carefully and answer the questions given below:

In each of the questions below are given some statements followed by some 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.

8. **Statements:** Only a few Pizza are Burger. Only a few Burger are Maggie. All Maggie are Momo's. No Pasta is Maggie.
   Conclusions:
   I. Some Maggie are not Burger.
   II. Some Pizza are not Pasta.
   III. Only a few Pizza are Maggie.
   (a) If only conclusion I and II follows
   (b) If only conclusion II follows
   (c) If either conclusion II or III and I follows
   (d) None follows
   (e) None of these

9. **Statements:** Only a few Bank are Account. Few Current are Saving. All Account are Saving. Some FD are not Account.
   Conclusions:
   I. Some Account can be FD.
   II. Some Saving are not FD.
   III. All Bank being Account is a possibility.
   (a) If only conclusion I and II follows
   (b) If only conclusion II and III follows
   (c) If only conclusion I follows
   (d) All I, II and III follow
   (e) None Follow

10. **Statements:** Only Vertical is Circle. Some Vertical are not Square. All Square are Triangle.
    Conclusions:
    I. Some Circle can be Triangle.
    II. All Square being Vertical is a possibility.
    III. Only a few Vertical is Triangle.
    (a) If only conclusion I and II follows
    (b) Only II
    (c) If only conclusion I follows
    (d) All I, II and III follow
    (e) None Follow

Directions (11-15): Study the following information carefully and answer the questions given below:

Eight persons are sitting in a straight line equidistant from each other. Some of them are facing north and some of them are facing south. Not more than two persons having same direction are sitting adjacent to each other. Three persons are sitting to the left of U. Only one person sits between Z and W and both of them faces in the same direction. Z does not sit at the extreme end of the line. Y who is not an immediate neighbor of S sits second to the right of X who sits at one of the extreme ends of the line. V sits fifth to the left of T who faces in the south direction. S sits immediate right of U and both faces in opposite directions to each other. Persons sitting at the extreme ends are facing in the same direction. Y faces north direction.

11. How many persons are facing in the south direction?
    (a) Four   (b) Five   (c) Three
    (d) Two   (e) Six

12. Who sits second to the left of S?
    (a) T   (b) V   (c) X
    (d) Z   (e) None of these

13. Four of the following five are alike in a certain way and hence form a group, which of the following does not belong to the group?
    (a) S   (b) U   (c) Z
    (d) W   (e) X

14. How many persons sit between Z and Y?
    (a) One   (b) None   (c) Three
    (d) Two   (e) More than three

15. Which of the following is true?
    (a) No one sits to the left of W
    (b) U sits second to the right of T.
    (c) Z is facing in north direction
    (d) Both (b) and (c) are true
    (e) All are true

Directions (16-20): 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 question. Read both the statements and give answer.

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

16. Five members i.e. P, Q, R, S and T are in a family, then who is the husband of R?
Statement I: R is sister in law of S who is the child of P.
Statement II: R is the daughter in law of Q who is the mother of S.

17. What is the code for "cow"?
Statement I: "big cow rat" is coded as "mn vg dc" and "rat dew grass" is coded as "vg bh sx"
Statement II: "big same use" is coded as "mn we qs" and "rat cow use" is coded as "we vg dc"

18. Six persons are of different heights. Who is 2nd shortest person?
Statement I: Anshul is taller than Ankita and shorter than Anamika. Only one person is taller than Akash.
Statement II: Ankita is shorter than Akash and taller than Aditya. Ankit is not shortest person.

19. Five persons i.e. F, P, R, S and T are living in different floors of five floored building. Who is living in topmost floor?
Statement I: There are two floor gaps between P and F who is immediate above R. S is in bottommost floor.
Statement II: Only one person is above R who is just above S. There are three floors gap between P and F who is not in topmost floor.

20. Five persons i.e. A, B, C, D and G are sitting in a row facing North. Who sits in the middle of the row?
Statement I: D sits 3rd to the right of G who is at an extreme end. Two persons sit between A and B who is an immediate neighbor of D.
Statement II: B sits immediate right of D who sits 3rd to the left of A. C sits immediate right of B.

Directions (21-23): In each of the questions, relationships between some elements are shown in the statements. These statements are followed by conclusions numbered I and II. Read the statements and give the answer.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

21. Statements: A≤B>D=C, C>E≤F
Conclusion: **I.** A>C   **II.** E<B

22. Statements: P>Q>R=S, S≥T≤U≥V
Conclusions: **I.** Q>T   **II.** S≤V

23. Statements: B>C>D<E=F, H≤E>G=N
Conclusions: **I.** F<N   **II.** N>D

Directions (24-28): Study the information carefully and answer the questions given below.

A certain number of persons are sitting in a row facing north. M sits fourth to the left of O. Only two persons sit between M and Q. R sits second to the left of Q. S sits fourth to the right of O. Not more than five persons sit between P and Q. P sits to the right of S. Only three persons sit to the left of R.

24. Which of the following statement is true?
(a) M sits at an extreme end
(b) Only one person sits between M and R
(c) All are true
(d) Ten persons sits between M and S
(e) None is true

25. How many persons are sitting between O and Q?
(a) One   (b) Two   (c) None
(d) Three   (e) More than three

26. If P sits at an extreme end of the row, then how many persons are sitting in the row?
(a) Ten   (b) Twelve   (c) Thirteen
(d) Eleven   (e) More than thirteen

27. What is the position of S in the row?
(a) Immediate right of P
(b) Sixth to the right of Q
(c) Eighth to the left of M
(d) None of these
(e) Seventh to the right of R

28. If L sits exactly between S and O, then how many persons sits to the left of L?
(a) Ten
(b) Nine
(c) Eight
(d) Cannot be determined
(e) More than ten

29. India and the UAE have discussed measures to deepen cooperation in a range of areas including defence, security, terrorism and trade as the two countries held the second round of their strategic dialogue in Abu Dhabi.
Which among the following is not-in-line with given statement?
(I) The Indian delegation at the talks held yesterday was led by Minister of State for External Affairs M J Akbar while the UAE side was headed by its Minister of State for Foreign Affairs Anwar Gargash.
(II) India ships wheat to Afghanistan via Chabahar. India on Sunday began shipment of wheat to Afghanistan through the Iranian port of Chabahar.

(III) The UAE has raised its investment profile in India, and cooperation has increased on security issues, the statement said.
(a) Only I
(b) Both II and III
(c) Both I and III
(d) Only II
(e) None of these

30. Modi government to reframe social welfare schemes for OBCs. In the run-up to the high stakes elections in Gujarat and Himachal Pradesh, the Narendra Modi-led government has moved to reframe social welfare schemes for other backward classes (OBCs).
Which among the following can be hypothesized from the given statement?
(I) The targeted schemes promise quality residential accommodation and scholarships to OBC students.
(II) This reframe of social welfare schemes for OBCs by the Modi government is a political move to target high stakes elections in Gujarat and Himachal Pradesh.
(III) The ministry has laid down guidelines for construction of hostels, which would be energy efficient, economical yet good quality.
(a) Only (I)
(b) Both (III) and (I)
(c) Only (II)
(d) Both (II) and (III)
(e) None of these

Directions (31-33): Study the following information carefully and answer the questions given below.
A@B (6)- A is 10m in north of B
A$B (10)- A is 14m in south of B
A%B (12)- A is 10m in east of B
A&B (15)- A is 13m in west of B
P%Q(16), R&S(12), T&U(20), U$S(15), P@T(10), W$R(17)

31. What is the shortest distance between point P and point U?
(a) 2√130m
(b) 520m
(c) 130m
(d) 260m
(e) None of these

32. If M is the mid point of the line segment TU, then determine the distance between the point T and point M?
(a) 9m
(b) 10m
(c) 8m
(d) None of these
(e) 7m

33. What is the shortest distance between the point U and point W?
(a) 85m
(b) 120m
(c) None of these
(d) √104m
(e) √130m

Direction (34-38): Study the following information carefully and answer the questions given below:

Eight boxes AC, BD, EG, FH, IK, JL, MO and NP have different brands toffee i.e. Poppins, Melody, Kismi bar, Gems, Hajmola, Boomer, Center fresh and Coffee bite places one above another. All are not necessarily in same order.
Box FH is placed above the box which has Center fresh. There are three boxes are between the boxes have Melody and Hajmola. There are only three boxes are above the box MO. There is only one box is between MO and FH. Box AC is immediate below the box which has Melody. Box BD places just above box which has Melody and just below the box has Gems. Box FH neither has Gems nor has Hajmola. Box EG places just above the box which has Poppins and just below the box which has Coffee bite. There is one box between box IK which has Boomer and box JL. Box MO doesn't have Center fresh.

34. Which among the following box places just above the box which has Kismi bar?
(a) AC
(b) BD
(c) EG
(d) FH
(e) None of these

35. Which among the following toffee is in box NP?
(a) Poppins
(b) Melody
(c) Kismi bar
(d) Gems
(e) None of these

36. How many boxes are placed between box AC and the box which have Hajmola?
(a) One
(b) Two
(c) Three
(d) More than three
(e) None

37. Which among the following is not false?
(a) AC-Hajmola
(b) BD-Gems
(c) EG-Melody
(d) FH- Coffee bite
(e) None is true

38. Four of the following five are alike in certain way based from a group, find the one which does not belong to that group?
(a) IK- Kismi bar
(b) EG- Coffee bite
(c) NP- Center fresh
(d) BD- Gems
(e) MO- Melody

Directions (39-40): Study the following information carefully and answer the questions given below:

In a certain code language
'exams good for growth' is coded as 'jam, dam, mam, ram'
'bank exams are difficult' is coded as 'pam, jam, vam, bam'
'bank growth not easy' is coded as 'pam, ram, lam, tam'
'easy for difficult preferred' is coded as 'tam, mam, bam, sam'

39. What is the code for the word 'exams' in the given code language?
(a) jam
(b) tam
(c) lam
(d) ram
(e) None of these

40. 'ram' is the code for which of the following words?
(a) bank
(b) exams
(c) easy
(d) difficult
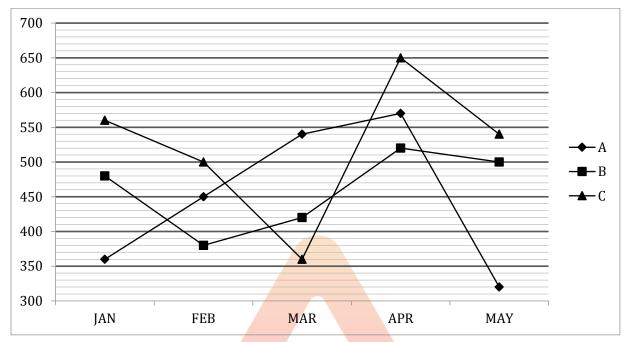(e) None of these

Directions (41-45): Following Line Graph given provides the details of total number of rides taken by 3 different drivers in 5 different months and the Table DI given below provides the details of percentage of total female rides taken by all the drivers in 5 different months and answer the questions accordingly.

Month/ Driver	% of female ride taken by Driver A	% of female ride taken by Driver B	% of female ride taken by Driver C
JAN	40%	25%	30%
FEB	30%	40%	44%
MAR	55%	50%	40%
APR	40%	45%	30%
MAY	60%	48%	60%

41. Total number of male rides taken by Driver B in January and march together is approximately what percentage more than the total female rides taken by driver A in April and may together?
(a) 40%   (b) 36%   (c) 45%
(d) 30%   (e) 50%

42. Find the total number of male rides taken by all the three drivers in March together?
(a) 652   (b) 724   (c) 696
(d) 669   (e) 628

43. Find the difference between total no. of female ride taken by all the 3 drivers in January to the total no. of male rides taken by all the 3 drivers in march?
(a) 327   (b) 294   (c) 268
(d) 214   (e) 237

44. Find the respective ratio of total no. of female rides taken by driver A in April and May together to the total no. of male ride taken by Driver B in January and march together?

(a) 14:19   (b) 17:23   (c) 18:23
(d) 19:14   (e) 23:17

45. Find the total number of female rides taken by Driver B in all the five months together?
(a) 848   (b) 956   (c) 984
(d) 918   (e) 884

46. A basket contains 8 Blue, 5 Red and 6 Green balls. 3 Balls are drawn from the basket, then find the probability of getting all 3 balls drawn are of different colors?
(a) $\frac{80}{323}$ (b) $\frac{883}{969}$ (c) $\frac{73}{223}$
(d) $\frac{86}{969}$ (e) $\frac{67}{173}$

47. Suresh was married 14 yrs ago and his present age is $\frac{3}{2}$ times of the age at the time of his marriage. If his son's age is $\frac{1}{3}$rd of his present age, then find the age of his son.
(a) 16 yrs   (b) 18 yrs   (c) 14 yrs
(d) 12 yrs   (e) 20 yrs

48. A Square and an equilateral triangle have the same area. If the perimeter of the square is 88 cm , then find the area of the equilateral triangle is?
(a) 441 cm² (b) 400 cm² (c) 484 cm²
(d) 324 cm² (e) 576 cm²

49. A, B and C together can complete a work in 8 days and A alone can complete the same work in 24 days. If A and B started the work and after 2 days C also joined them, then remaining work was completed by A, B and C together in $6\frac{4}{5}$ days. Find in how many days B alone can complete the whole work?
(a) 28 days (b) 36 days (c) 24 days
(d) 32 days (e) 30 days

50. In a mixture of milk and water, the proportion of milk by weight is 60%. If from the 80 gm mixture, 20 gm of mixture is taken out and 6 gm of pure water is added to the mixture then find the ratio of milk and water in the new mixture.
(a) 5 : 6 (b) 6 : 5 (c) 4 : 3
(d) 3 : 2 (e) 7 : 6

51. Three persons A, B and C started a business by investing in the ratio of $\frac{2}{3} : \frac{1}{2} : \frac{3}{4}$. After 5 months, B increases his investment by $\frac{2}{3}$rd of his initial amount. If after 12 months, the difference of the profit shares of A and C is Rs. 1,350 then find the profit share of B.
(a) Rs. 11,500 (b) Rs. 11,200 (c) Rs. 12,250
(d) Rs. 11,250 (e) Rs. 10,250

Directions (52-56): The following Table DI shows the quantity of waste (Dry and Wet) picked by a truck on 5 different days. The capacity of the truck from Monday to Wednesday is 180 kg and for rest two days is 150 kg.

Day	Quantity of wet waste	Ratio of wet to dry waste	Difference between dry and wet waste. (wet > dry)
Monday	-	5 : 4	20 kg
Tuesday	110 kg	-	22 kg
Wednesday	99 kg	9 : 7	-
Thursday	84 kg	7 : y	24 kg
Friday	-	12 : 7	40 kg

Note:- If the waste produce in a day is greater than the capacity of the truck, then the extra amount of waste will be picked on next day.

52. If on Wednesday the truck picks only 80% of the waste of his capacity, then find the difference between the quantity picked of wet waste and dry waste on the same day? (priority given to wet waste)
(a) 64 kg (b) 48 kg (c) 62 kg
(d) 54 kg (e) 42 kg

53. What is the value of 'y'?
(a) 4 (b) 5 (c) 6
(d) 3 (e) 8

54. Find the ratio of total dry waste produced on Monday, Tuesday and Friday together to wet waste produced on Wednesday and Thursday together?
(a) 194 :218 (b) 185 : 212 (c) 183 : 224
(d) 212:185 (e) 224 : 183

55. What is the amount of waste left by the end of the Wednesday?
(a) 18 kg (b) 16 kg (c) 14 kg
(d) 20 kg (e) 12 kg

56. Find the total quantity of dry waste on all the five days together?
(a) 381 kg (b) 413 kg (c) 361 kg
(d) 337 kg (e) 321 kg

Directions (57-60): Given questions are based on a missing series pattern and following that pattern find the relation between P, Q and R.
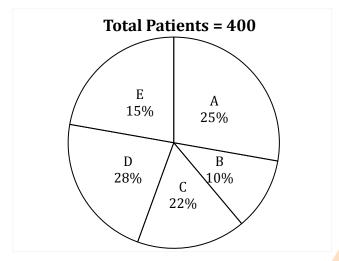
57. 300, 324, 384, 504, P, 1050
450, 474, Q, 654, 864, 1200
200, 224, 284, 404, R, 850
(a) P>Q<R (b) P<Q<R (c) P=Q>R
(d) P<Q=R (e) P<Q>R

58. 2700, 5400, P, 7200, 1440, 8640
2100, Q, 1400, 5600, 1120, 6720
1500, 3000, 1000, R, 800, 4800
(a) P>Q>R (b) P<Q=R (c) P<Q>R
(d) P=Q>R (e) P<Q<R

59. 35, 70, 210, P, 4200, 25200
140, 280, Q, 3360, 16800, 100800
40, 80, 240, R, 4800, 28800
(a) P>Q<R (b) P<Q>R (c) P<Q<R
(d) P=Q<R (e) P>Q>R

60. 7, 15, 47, 191, Q, 5754
9, 19, 59, P, 1199, 7199
11, 23, 71, 287, R, 8639
(a) P>Q<R (b) P<Q>R (c) P<Q<R
(d) P=Q<R (e) P>Q>R

Directions (61-64): In each of the following questions, two equations (I) and (II) are given. Solve the equations and mark the correct option:
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

61. I. $2x^2 + 11x + 12 = 0$ II. $8y^2 - 22y - 21 = 0$

62. I. $x^2 - 17x - 60 = 0$ II. $y^2 + 42y + 185 = 0$

63. I. $x^2 + 41x + 420 = 0$ II. $6y^2 - 11y - 10 = 0$

64. I. $x^2 - 8x - 273 = 0$ II. $y^2 + 6y - 432 = 0$

Directions (65-69): Given pie chart provides the details of total number of patients visited to different doctors for their problem and the table provides the details of fees of different doctors. Read the instruction carefully and answer the question accordingly.

Total Patients = 400

Note:-
A and B are Junior Doctor
C and D are Senior Doctor
E is Dean

Doctor's Profile	Fees (in Rs)	Additional charge on fees
Junior Doctor	1000	15%
Senior Doctor	1500	20%
Dean	2000	25%

65. What is the difference between the total fees received by Doctor C and the total fees received by Doctor D?
(a) Rs 40800   (b) Rs 43200   (c) Rs 38400
(d) Rs 36800   (e) Rs 34200

66. Find the respective ratio of total fees received by Doctor A from all its patient to the total fees received by Doctor E from all its patients
(a) 27 : 31   (b) 30 : 23   (c) 23 : 30
(d) 31: 27   (e) 29 : 31

67. Total fees received by junior doctor B is what percentage more/less than the total fees received by Doctor E?
(a) $69\frac{1}{3}$%   (b) $60\frac{2}{3}$%   (c) 72%
(d) $68\frac{2}{3}$%   (e) 64%

68. If the Doctor E's fees is increased by 15% from the current fees, then find the total fees received by Doctor E when the fees is increased? (in Rs)
(a) 1,72,500   (b) 1,78,500   (c) 2,12,000
(d) 1,92,500   (e) 2,04,000

69. Find the average of total fees received by both Junior Doctors and Senior Doctors together?
(a) Rs 1,28,500   (b) Rs 1,25,800   (c) Rs 1,30,250
(d) Rs 1,22,350   (e) Rs 1,35,600

Directions (70-74): Study the given passage carefully and answer the following questions

A train is travelling from station A to E. At station A, 80 person board in the ratio of male to female of 9 : 7.
At station B, 15 men got down and 5 women boarded the train. At station C, half of the women got down and the same number of men boarded the train
At station D, x number of male got down and now the ratio of male to female in train is 7 : 4

70. If 50% of male who were travelling from B to C do not have a valid ticket and 60% of the female travelling from B to C do not have a valid ticket, then find the number of passengers who are travelling from B to C with invalid ticket ?
(a) 43   (b) 39   (c) 47
(d) 49   (e) 51

71. The number of females travelling from station B to C is approximately how much percent more than the number of males travelling from station D to E?
(a) 10%   (b) 21%   (c) 18%
(d) 14%   (e) 24%

72. Find the difference between the passengers travelling from starting point to destination point?
(a) 25   (b) 30   (c) 34
(d) 38   (e) none of these

73. Which of the following is true?
(A) The number of females travelling from station A to B is equal to the no. of males travelling from station D to E
(B) The total number of passengers travelling from Station C to D is 45% of the no. of males who boarded from the starting point
(C) The difference between the no. of male and female travelling from station D to E is half of the difference between the no. of males and females travelling from station C to D
(a) Only A   (b) Only C   (c) Only A & C
(d) Only B & C   (e) All A, B and C

74. Find the ratio of total no. of passengers travelling from station D to E and B to C?
(a) 17 : 13   (b) 11 : 14   (c) 13 : 17
(d) 14 : 11   (e) 17 : 19

75. Total distance between A and B is 792 km and Car P starts from station A at 8 a.m with speed 64 km/hr towards B and Car Q starts from station B at 11 a.m with speed 86 km/hr towards A. Find the distance from station B when both cars will meet each other ?
(a) 430 km   (b) 258 km   (c) 344 km
(d) 312 km   (e) 384 km

76. A, B and C invested Rs 5500, Rs 4500 and Rs 6000 for three years in a partnership. After 1 year, A decreased his investment by Rs 1000, B increased his investment by Rs.500 and C's investment remains the same for the whole period of time. If the total profit at the end of 3 years is Rs 9400, then find the profit share of C?
(a) Rs 4200   (b) Rs 3600   (c) Rs 3800
(d) Rs 4000   (e) Rs 3000

Directions (77-80): Each of the following question is followed by two quantities I, and II. You have to determine the value of the quantities using the information provided and compare the quantities to answer as per the instruction set provided below.
(a) Quantity I>Quantity II
(b) Quantity I≥Quantity II
(c) Quantity I<Quantity II
(d) Quantity I≤Quantity II
(e) Quantity I=Quantity II or no relation

77. Quantity I: By selling 15 apples, a seller gains the selling price of 2 apples. Calculate his gain percentage.
Quantity II: 25% profit is gained when an article is sold for 625 rupees. Calculate the loss % when the same article is sold for 435 rupees.

78. A train travelling at 54 kmph crosses a platform in 25 seconds and a man standing on the same platform in 12 seconds
Quantity I: Length of the train.
Quantity II: Length of the platform.

79. P works twice as fast as Q, whereas P and Q together can work 3 times as fast as R. P,Q and R together can do the same work in $\frac{15}{2}$ days
Quantity I: Time taken by P and Q together to complete the work.
Quantity II: Time taken by Q and R together to complete the work.

80. The age of Manan is 50% more than that the age of Shikhar. The age of Rohit is 20% less than the age of Manan. The age of Krunal is 10% less than the age of Rohit.
Quantity I: By what percent the age of Rohit is more than the age of Shikhar.
Quantity II: By what percent the age of Krunal is more than the age of Shikhar.

ENGLISH LANGUAGE

Directions (81-85): In each of the questions given below, a sentence is given with one blank. Below each sentence, FOUR words are given. Five options are provided with various combinations of these words. You have to choose the combination with the correct set of words which can coherently fit into the given sentence.

81. When Margot lost all her money gambling, her family was forced to live in _____.
(I) penury   **(II)** mansion
(III) grandeur   **(IV)** poverty
(a) Only (I)
(b) Only (I), (III) and (IV)
(c) Both (I) and (IV)
(d) Both (II) and (III)
(e) All (I), (II), (III), (IV)

82. Scared of heights all her life, nothing would _____ Ruth's fear of flying.
(I) alleviate   **(II)** reduce
(III) aggravate   **(IV)** understand
(a) Only (III)
(b) Only (I), (III) and (IV)
(c) Both (I) and (III)
(d) Both (I) and (II)
(e) All (I), (II), (III), (IV)

83. Sometimes it seems as though we live in a/an _____ world filled with uncaring people.
(I) apathetic   **(II)** benevolent
(III) passive   **(IV)** indifferent
(a) Only (III)
(b) Only (I), (III) and (IV)
(c) Both (I) and (III)
(d) Both (I) and (II)
(e) All (I), (II), (III), (IV)

84. Taking the yoga class has helped me release my stress so I can become more _____.
(I) abundant   **(II)** pernicious
(III) placid   **(IV)** injurious
(a) Only (III)
(b) Only (I), (III) and (IV)
(c) Both (I) and (III)
(d) Both (I) and (II)
(e) All (I), (II), (III), (IV)

85. The committee met for several hours, but _____ nothing because they argued the whole time.
(I) achieved   **(II)** accomplished
(III) gained   **(IV)** attained
(a) Only (III)
(b) Only (I), (III) and (IV)
(c) Both (I) and (III)
(d) Both (I) and (II)
(e) All (I), (II), (III), (IV)

Directions (86-90): In the following questions two columns are given containing three sentences/phrases each. In first column, sentences/phrases are A, B and C and in the second column the sentences/phrases are D, E and F. A sentence/phrase from the first column may or may not connect with another sentence/phrase from the second column to make a grammatically and contextually correct sentence. Each question has five options, four of which display the sequence(s) in which the sentences/phrases can be joined to form a grammatically and contextually correct sentence. If none of the options given forms a correct sentence after combination, mark (e), i.e. "None of these" as your answer.

86. **Column (1)**
    (A) The company along with its
    (B) Including ongoing initiatives
    (C) IL&FS has appointed
    Column (2)
    (D) Aligned with the broader objective
    (E) Advisers to prepare a resolution plan
    (F) Subsidiaries is facing a liquidity crisis
    (a) C-E and B-F
    (b) A-F
    (c) C-E
    (d) Both (b) and (c)
    (e) None of these

87. **Column (1)**
    (A) The increase in MSP for rabi crops comes
    (B) There are notified crops
    (C) For big companies, there are instances
    Column (2)
    (D) The government said in a release.
    (E) Just ahead of the RBI monetary policy announcement.
    (F) Of even the infrastructure getting damaged.
    (a) C-F
    (b) C-E and B-F
    (c) A-E
    (d) Both (a) and (c)
    (e) None of these

88. **Column (1)**
    (A) India will be the third largest aviation
    (B) The biggest contribution in
    (C) Firstly, we are seeing an
    Column (2)
    (D) market globally a year sooner.
    (E) as the world's largest aviation
    (F) restrictive protectionist measures
    (a) C-F   (b) B-F   (c) A-D
    (d) C-E   (e) None of these

89. **Column (1)**
    (A) Also, the broader NSE Nifty
    (B) All the sectoral indices closed in the red
    (C) Maruti Suzuki, India's largest carmaker

Column (2)
(D) in their late morning deals .
(E) Foreign Portfolio Investors (FPIs) sold shares .
(F) with 22 of the 30 Sensex stocks finishing lower.
(a) C-F   (b) B-F   (c) A-D
(d) C-E   (e) None of these

90. **Column (1)**
    (A) A writer needs
    (B) the garden itself being
    (C) All this is fine
    Column (2)
    (D) houseboat on the silent river
    (E) somehow find the necessary bubble
    (F) quiet and peaceful environment around him in order to write.
    (a) C-F   (b) B-F   (c) A-F
    (d) C-E   (e) None of these

Directions (91-100): Read the following passage carefully and answer the questions given below them. Certain words/phrases have been printed in bold to help you locate them while answering some of the questions.

Indian roads are usually characterized by poor infrastructure and congestion which affect travel time and road safety. This is a big **hindrance** in economic development and leads to inefficiency in the transportation of goods and services across the country. To address this, the government has **embarked** upon a massive overhaul of the country's road network through Bharatmala Pariyojana—an umbrella highway development programme involving 34,800 km of road network at an investment of Rs5.35 trillion, to be completed by 2022. The programme focuses on optimizing the efficiency of road traffic movement across the country by bridging critical infrastructure gaps through shorter routes. The end goal is to create economic corridors (ECs) along the path—new industries, more employment and new markets.

The programme, however, will have a negative bearing on the existing road network because it will compete directly with some of the existing build-operate-transfer (BOT) toll road projects. Out of the 44 ECs, about 21 would partially or fully affect the existing alignments, while the remaining 23 that involve upgradation of existing alignment will not result in any deviation. Among the 21 corridors affected, eight have a totally different route (which is shorter) while the remaining 13 have some deviations from the existing alignment. Overall, there are 24 BOT projects and one operate-maintain-transfer (OMT) project whose traffic could be affected by the proposed ECs. The Bharatmala programme may result in traffic diversion from the existing road network to new roads, thereby affecting the toll collection and, consequently, the debt servicing ability of some of the BOT and OMT projects. This has raised the risk of default on 25 national highway toll projects which

involve Rs19,435 crore of debt. The risk of such loan defaults will add to banks' and financial lenders' stressed assets and non-performing assets. In terms of risk, 12% of the projects have a high risk of leakage in traffic, if a completely alternative route is available, 16% of the projects have moderate risks, and 72%, low risks. To arrive at the debt at risk, the debt outstanding for each of these special purpose vehicles (SPVs), their repayment tenure, concession end date, credit profile of the SPV and its sponsor credit risk profile, are considered. Out of the total debt at risk for the 25 affected projects about Rs6,536 crore, which accounts for about 34% of the total debt at risk, is high-risk. Projects with debt at a moderate risk have an aggregate debt of Rs3,483 crore, while about Rs9,416 crore of debt is considered to be low-risk.

To ensure that the existing BOT projects that are at risk of default **did not turn** bad for the financial institutions, swift and adequate measures are needed. The Kelkar committee had observed that since infrastructure projects span over 20-30 years, a private developer may lose bargaining power owing to abrupt changes in the economic or policy environment. It has thus recommended that the private sector must be protected against such loss. This could be ensured by allowing renegotiation of the terms of the concession agreement.

Financial institutions are already **reluctant** to finance the infrastructure sector, given the rise in non-performing assets (NPAs). Add to this the probable difficulties that would arise in the case of 25 BOT projects, which would put additional stress on the road infrastructure exposure. The need of the hour is to realign the terms and conditions of the model concession agreement to ensure that banks do not end up accumulating NPAs. Having an appropriate remedial mechanism for BOT operators will help retain interest for investments in new projects; for the lenders, it will help **curtail** the number of stressed assets from the risk of default.

91. According to the passage, Bharatmala Project aims to
(I) impact industrial development positively
(II) create employment and develop new markets
(III) improve the political status of the country.
(a) Only (I)
(b) Only (II) and (III)
(c) Only (III)
(d) Only (I) and (II)
(e) All are correct

92. According to the passage, what worries BOT operators?
(a) The risk of loan default.
(b) Disruptions in integrated Infrastructure network.
(c) Inability to maintain the overall structure of highway network in India.
(d) Both (a) and (b)
(e) All are correct

93. The total debt at risk is
(a) Rs10,456 crore
(b) Rs3,483 crore
(c) Rs19,435 crore
(d) Rs9,416 crore
(e) Rs18,544 crore

94. The appropriate **title** of the passage is
(a) Renegotiating the concession agreement.
(b) Bharatmala and the rising debt issues
(c) Creating economic corridors
(d) the rising issue of stressed assets
(e) The Kelkar Committee

95. Remedial measure(s) available to BOT operators is/are
(I) provide them the necessary resources for accomplishment of the project.
(II) realigning the terms and conditions of the model concession agreement to ensure that banks do not end up accumulating NPAs.
(III) Allowing renegotiation of the terms of concession agreement to private sector.
(a) Only (I)
(b) Both (II) and (III)
(c) Only (III)
(d) Both (I) and (II)
(e) All are correct

96. A phrase "**did not turn**" is given in the passage is highlighted which may or may not contain grammatical error. There are five alternatives given below, one of which may replace the existing highlighted part to make the sentence grammatically correct and contextually meaningful.
Choose the most appropriate alternative as your answer. If the phrase is grammatically correct, as given, and doesn't require any correction, choose option (e) i.e., "No correction required" as your answer.
(a) does not turn (b) will not turn (c) do not turn
(d) could not turn (e) No correction required

Direction (97-98): Which of the following alternatives among the five options provides the MOST SIMILAR meaning(s) of the word given in BOLD as used in the passage?

97. Curtail
(I) reduce   **(II)** curb
(III) retrench   **(IV)** trunk
(a) Only (III)
(b) Only (II) and (IV)
(c) Only (I), (II) and (III)
(d) Only (II), (III) and (IV)
(e) All are correct

98. Embarked

(I) commence   (II) initiate

(III) rot   (IV) undertake

(a) Only (III)

(b) Only (II) and (IV)

(c) Only (I), (III) and (IV)

(d) Only (I), (II) and (IV)

(e) All are correct

Direction (99-100): Which of the following alternatives among the five options provides the MOST OPPOSITE meaning(s) of the word given in BOLD as used in the passage?

99. Hindrance

(I) contrite   (II) impetus

(III) plausible   (IV) Check

(a) Only (II)

(b) Only (II) and (IV)

(c) Only (I), (II) and (III)

(d) Only (II), (III) and (IV)

(e) All are correct

100. Reluctant

(I) vaunt   (II) willing

(III) splendid   (IV) eager

(a) Only (III)

(b) Only (II) and (IV)

(c) Only (I), (II) and (III)

(d) Only (II), (III) and (IV)

(e) All are correct

Directions (101-105): Read each sentence to find out whether there is any grammatical or idiomatic error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is 'No error', the answer is (e). (Ignore errors of punctuation, if any.)

101. Why we do not (a)/ meet to discuss (b)/ this matter in detail (c)/ on next Friday? (d)/ No error. (e)

102. Had the opportunity (a)/ been given to him (b)/ he will have (c)/ proved successful (d). / No Error. (e)

103. Jamuna takes delight (a)/with music and (b)/hopes to become (c)/a successful musician. (d)/No error. (e)

104. In spite of toiling (a)/ very hardly he (b)/ realized that he had (c)/ not earned anything substantial. (d)/ No error. (e)

105. You should inform (a)/ your superiors about (b)/ all those events which are (c)/ directly related to your work. (d)/ No error. (e)

Directions (106-110): Answer the following questions after rearranging the following sentences into a coherent paragraph and identify the sentence that doesn't fit into the context of the paragraph. Statement (A) is the first sentence of the paragraph after the rearrangement.

(A) Former RBI Governor Raghuram Rajan's note of caution on the next financial crisis that could be building up needs to be taken in all seriousness.

(B) Clearly, bankers were overconfident and probably did too little due diligence for some of these loans.

(C) The disbursement under Mudra loans alone is Rs.6.37 lakh crore, which is over 7% of the total outstanding bank credit.

(D) It is debatable whether banks have the resources and manpower to do this when they are chasing the bigger borrowers for business and, increasingly these days, recoveries.

(E) In his note to Parliament's Estimates Committee on bank non-performing assets (NPAs), Mr. Rajan has flagged three major sources of potential trouble.

(F) These loans have been sanctioned under the Pradhan Mantri Mudra Yojana, which aims to 'fund the unfunded', and is a signature scheme of the NDA government.

(G) They are Mudra credit, which is basically small-ticket loans granted to micro and small enterprises; lending to farmers through Kisan Credit Cards; and contingent liabilities under the Credit Guarantee Scheme for MSMEs, run by the Small Industries Development Bank of India.

(H) Given that these are small loans up to Rs.10 lakh each, with the borrowers mostly from the informal sector, banks have to monitor them very closely.

106. Considering statement (A) "**Former RBI Governor Raghuram Rajan's note of caution on the next financial crisis that could be building up needs to be taken in all seriousness.**" as the first sentence of the rearranged paragraph, then which among the following fails to become the part of the coherent paragraph?

(a) C   (b) F   (c) B

(d) H   (e) G

107. Considering statement (A) "**Former RBI Governor Raghuram Rajan's note of caution on the next financial crisis that could be building up needs to be taken in all seriousness.**" as the first sentence of the rearranged paragraph, then which one among the following can consecutively follow the last statement after the rearrangement (excluding the incoherent one)?

(a) Not only could they play one lender off against another by threatening to divert payments to the favored bank, they could also refuse to pay unless the lender brought in more money, especially if the lender feared the loan becoming an NPA.

(b) The risk is that these small-ticket loans will drop under the radar and build into a large credit issue in course of time. The same logic holds true for crop loans made through Kisan Credit Cards.

(c) Yet, unless we can determine the unaccounted wealth of bankers, I hesitate to say a significant element was corruption.

(d) Frauds are different from normal NPAs in that the loss is because of a patently illegal action, by either the borrower or the banker.

(e) None of these

108. Among the following pairs which one of them is formed with two consecutive statements after the rearrangement?
(a) A - G   (b) B - E   (c) A - F
(d) D - C   (e) E – G

109. Considering statement (A) "**Former RBI Governor Raghuram Rajan's note of caution on the next financial crisis that could be building up needs to be taken in all seriousness.**" as the first sentence of the rearranged paragraph, identify the correct sequence of the sentences to form a coherent paragraph (excluding the incoherent one).
(a) AEGCFHD   (b) ADECBHF   (c) AGHBCDE
(d) ABCDGHF   (e) AEGFCBD

110. Considering statement (A) "**Former RBI Governor Raghuram Rajan's note of caution on the next financial crisis that could be building up needs to be taken in all seriousness.**" as the first sentence of the rearranged paragraph, which of the following statement should be FOURTH sentence after the rearrangement? (Excluding the incoherent sentence)
(a) D   (b) C   (c) G
(d) H   (e) B

Directions (111-120): In the following passage, some of the words have been left out, each of which is indicated by a number. Find the suitable word from the options given against each number and fill up the blanks with appropriate words to make the paragraph meaningfully complete.

In the __(111)__ of stakeholders at the local body level, recoverable resources __(112)__ in discarded materials are lost due to dumping. Organic refuse, which __(113)__ about 50% of all garbage, readily lends itself to the __(114)__ of compost or production of methane for household use or power generation. But it is a major opportunity __(115)__. Organic waste that could help green cities and __(116)__ small and affordable household biogas plants is simply being thrown away. It is also ironic that while some countries such as Rwanda and Kenya have introduced stiff penalties for the __(117)__ of flimsy plastic bags, India is doing little to __(118)__ them from drifting into suburban garbage mountains, rivers, lakes and the sea, and being __(119)__ by cattle feeding on dumped __(120)__.

111. (a) demolition   (b) revive   (c) restrict
(d) absence   (e) permission

112. (a) settled   (b) equipped   (c) surrounded
(d) confined   (e) embedded

113. (a) supplies   (b) forms   (c) classifies
(d) demands   (e) extends

114. (a) manufacture   (b) accumulation (c) generation
(d) foundation   (e) conception

115. (a) awed   (b) misled   (c) lost
(d) absorbed   (e) rapt

116. (a) feed   (b) deliver   (c) nurtures
(d) provide   (e) produce

117. (a) interest   (b) favor   (c) gain
(d) selection   (e) use

118. (a) reduce   (b) discourage   (c) prevent
(d) facilitate   (e) reject

119. (a) absorbed   (b) grazed   (c) ravaged
(d) ingested   (e) grasped

120. (a) limit   (b) refuse   (c) exclude
(d) evade   (e) cease

Solutions

REASONING ABILITY

Solutions (1-5):

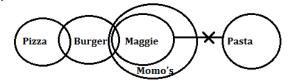| Year	Age	Persons	Professions
1968	51	Aditi	Artist
1972	47	Dheeraj	Manager
1978	41	Kamal	Teacher
1981	38	Nisha	HR
1987	32	Swati	Pilot
1998	21	Pranav	Doctor
2005	14	Pooja	Engineer

1. (e);   **2.** (b);   3. (d);
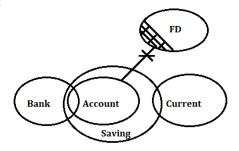
4. (b);   **5.** (b);

6. **(d);** In the above question it is clear that Statement II will be the cause and Statement I will be its effect. Because it is mentioned in statement II that jawans have doubt how to deal with the women so this will be cause and its effect will be, The Indian Army will recruit women in combat roles to tackle such kind of situation.

7. **(c);** Statement (I) suggests that royals are not kings or queens by choice but because they have to, for the welfare of the country which is in line with the statement. (II) fortifies the statement by stating out an example in which he had to face problems because of his royal background. (III) is irrelevant to the statement.
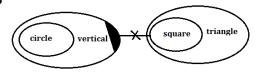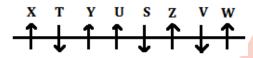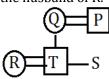
8. **(d);**

9. **(c);**

10. **(b);**

Solutions (11-15):

11. **(c);**   12. **(b);**   13. **(a);**

14. **(d);**   15. **(c);**

16. **(e);** By combining Statement I and II, we get that T is the husband of R.

17. **(e);** By combining Statement I and II, we get that the code for "cow" is "dc".

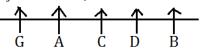| Words	Code
big	mn
cow	dc
rat	vg
dew/grass	bh/sx
same	qs
use	we

18. **(d);** We can't conclude that who is the 2nd shortest person by combining both statements.

19. **(c);** By statement I, F is in topmost floor.

Floors	Persons
5	F
4	R
3	T
2	P
1	S

By statement II, P is in topmost floor.

Floors	Persons
5	P
4	R
3	S
2	T
1	F

20. **(a);** By statement I, C is at middle of the row.

G   A   C   D   B

21. **(b); I.** A > C (False)   **II.** E < B (True)

22. **(a); I.** Q > T (True)   **II.** S ≤ V (False)

23. **(d); I.** F < N (False)   **II.** N > D (False)

Solutions (24-28):

M R   Q O   S P

24. **(e);**   25. **(c);**   26. **(b);**

27. **(e);**   28. **(c);**

29. **(d); For I-** This is in-line with the given statement as it states about the meeting in between Indian and UAE delegations which is also mentioned in the given statement that India and the UAE have discussed measures to deepen cooperation in a range of areas.

For II- This is not- in-line with the given statement as it states about shipment of wheat from India to Afghanistan through the Iranian port of Chabahar whereas the given statement states that India and the UAE have discussed measures to deepen cooperation in a range of areas.

For III- This is in-line with the given statement as it states that UAE has raised its investment profile in India which is also mentioned in the given statement that India and the UAE have discussed measures to deepen cooperation in a range of areas.
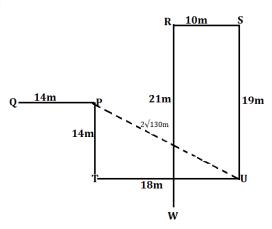
30. **(c); For I-** This statement can't be hypothesized from the given statement as nothing is mentioned about facilities given under social welfare schemes for OBCs in the given statement.

For II- This statement can be hypothesized from the given statement as it is mentioned in the given statement that Modi-led government has moved to reframe social welfare schemes for other backward classes (OBCs) in the run-up to the high stakes elections in Gujarat and Himachal Pradesh.
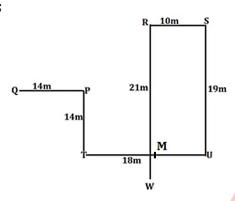
For III- This statement can't be hypothesized from the given statement as nothing is mentioned about facilities given under social welfare schemes for OBCs in the given statement.
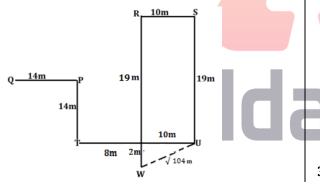
31. (a);

Solutions (34-38):

Box	Toffee
IK	Boomer
FH	Kismi bar
JL	Hajmola
MO	Coffee bite
EG	Gems
BD	Poppins
NP	Melody
AC	Center fresh

34. (e);   **35. (b);**   **36. (d);**

37. (e);   **38. (e);**

Solutions (39-40): The codes for the words are as follows:

Words	Codes
exams	jam
growth	ram
for	mam
good	Dam
bank	Pam
difficult	Bam
are	Vam
easy	tam
not	Lam
preferred	Sam

39. (a);   **40. (e);**

32. (a);

33. (d);

QUANTITATIVE APTITUDE

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41. (b); Total number of male rides taken by Driver B in January and March together

$= 480 \times \frac{75}{100} + 420 \times \frac{50}{100}$

$= 360 + 210 = 570$

Total no. of female rides taken by driver A in April and may together

$= 570 \times \frac{40}{100} + 320 \times \frac{60}{100}$

$= 228 + 192 = 420$

Required percentage $= \frac{570-420}{420} \times 100$

$= 35.71\% = 36\%$ (approx.)

42. (d); Total number of male rides taken by all the three drivers in March together

$= 540 \times \frac{45}{100} + 420 \times \frac{50}{100} + 360 \times \frac{60}{100}$

$= 243+210+216 = 669$

43. (e); Total no. of female ride taken by all the 3 drivers in January

$= 360 \times \frac{40}{100} + 480 \times \frac{25}{100} + 560 \times \frac{30}{100}$

$= 144 + 120 + 168 = 432$

Total no. of male rides taken by all the 3 drivers in March

$= 540 \times \frac{45}{100} + 420 \times \frac{50}{100} + 360 \times \frac{60}{100}$

$= 243 + 210 + 216 = 669$

Required difference $= 669 - 432 = 237$

44. (a); Total no. of female rides taken by driver A in April and May together

$= 570 \times \frac{40}{100} + 320 \times \frac{60}{100}$

$= 228 + 192 = 420$

Total no. of male ride taken by Driver B in January and march together

$= 480 \times \frac{75}{100} + 420 \times \frac{50}{100}$

$= 360 + 210 = 570$

Required ratio $= \frac{420}{570} = 14 : 19$

45. (b); Total number of female rides taken by Driver B in all the five months together

$= 480 \times \frac{25}{100} + 380 \times \frac{40}{100} + 420 \times \frac{50}{100} + 520 \times \frac{45}{100}$

$+ 500 \times \frac{48}{100}$

$= 120 + 152 + 210 + 234 + 240 = 956$

46. (b); Total Balls = 8 + 5 + 6 = 19 balls

Probability of getting all balls of same color

$= \frac{^8c_3 + ^5c_3 + ^6c_3}{^{19}c_3}$

$= \frac{\left(\frac{8 \times 7 \times 6}{3 \times 2 \times 1} + \frac{5 \times 4}{2 \times 1} + \frac{6 \times 5 \times 4}{3 \times 2 \times 1}\right)}{\frac{19 \times 18 \times 17}{3 \times 2 \times 1}} = \frac{86}{969}$

Required probability = $1 - \frac{86}{969} = \frac{883}{969}$

47. (c); Let suresh's age at the time of his marriage be x yrs

Therefore, Suresh's present age $= \frac{3}{2}$ x yrs

Also, Suresh's present age = (x + 14) yr

$\frac{3}{2}$ x = x + 14

$\frac{3}{2}$ x - x = 14

x = 28 years

His son's age $= \frac{1}{3}$ of $\frac{3}{2}$ x $= \frac{x}{2} = \frac{28}{2}$ = 14 yrs

48. (c); Here, perimeter of the square = 88 cm (given)

Side of the square $= \frac{88}{4}$ = 22 cm

Area of the square = $a^2 = (22)^2 = 484$ cm²

As it is given that area of equilateral triangle is equal to the area of the square

So, the area of the equilateral triangle is 484 cm²

49. (e); Let the time take by A,B and C alone be A days, B days and C days respectively.

ATQ, $2\left(\frac{1}{A} + \frac{1}{B}\right) + \frac{34}{5} \times \left(\frac{1}{A} + \frac{1}{B} + \frac{1}{C}\right) = 1$

$2\left(\frac{1}{24} + \frac{1}{B}\right) + \frac{34}{5} \times \frac{1}{8} = 1$

$\frac{1}{12} + \frac{2}{B} = \frac{3}{20}$

$\frac{2}{B} = \frac{3}{20} - \frac{1}{12}$

$\frac{2}{B} = \frac{9 - 5}{60}$

$\frac{2}{B} = \frac{4}{60}$

B = 30 days

50. (b); Ratio of Milk and water in mixture = 60 : 40

= 3 : 2

Quantity of Milk left in mixture after 20 gm of mixture is taken out $= 60 \times \frac{3}{5}$ = 36 gm.

Quantity of water left $= 60 \times \frac{2}{5}$ = 24 gm

∴ Required ratio $= \frac{36}{24 + 6} = 6 : 5$

51. (d); Ratio of amount invested by P, Q and R = 8 : 6 : 9

A	**B**	**C**
8 × 12	6 × 5 + 10 × 7	9 × 12
96 :	100 :	108

Ratio of their profit shares

A	B	C
24 :	25 :	27

Profit share of B $= \frac{1350}{27 - 24} \times 25$ = Rs. 11,250

Solutions (52–56):

Day	Quantity of wet waste	Ratio of wet to dry waste	Difference between dry and wet waste. (wet>dry)	Dry waste
Mon	100 kg	5 : 4	20 kg	80 kg
Tue	110 kg	5 : 4	22 kg	88 kg
Wed	99 kg	9 : 7	22 kg	77 kg
Thu	84 kg	7 : 5	24 kg	60 kg
Fri	96 kg	12 : 7	40 kg	56 kg

The above table is formed by calculating all the missing data as per instructions

52. (d); On Wednesday the truck picks only 80% of the waste of his capacity

Therefore, waste picked on Wednesday

$= 180 \times \frac{80}{100} = 144$ kg

Quantity of wet waste picked = 99 kg

Quantity of dry waste picked = 144 – 99 = 45 kg

Required difference = 99 – 45 = 54 kg

53. (b); As on Thursday, Quantity of wet waste is 84 kg and the difference between wet waste and dry waste is 24 kg (Given)

Quantity of Dry waste = 84 - 24 = 60 kg

As in the question, the ratio of wet waste and dry waste is 7 : y (Given)

ATQ, $\frac{84}{60} = \frac{7}{y}$

Therefore, y $= \frac{60}{12}$ = 5

54. (e); Total dry waste produced on Monday, Tuesday and Friday together = 80 + 88 + 56 = 224 kg

Total wet waste produced on Wednesday and Thursday together = 99 + 84 = 183 kg

Required ratio = 224 : 183

55. (c); Total amount of waste left by the end of the Wednesday

= (180 – 180) + (198 - 180) + (176 - 180)

= (0 + 18 – 4) = 14 kg

56. (c); Total quantity of dry waste taken on all the 5
days together = 80 + 88 + 77 + 60 + 56 = 361 kg

57. (a); Here, the pattern followed is
$300 + (3^3 - 3)= 324$
$324 + (4^3 - 4)= 384$
$384 + (5^3 - 5)= 504$
$504 + (6^3 - 6)= 714 =P$
$714 + (7^3 - 7)= 1050$
The next two series given follows the same
pattern as above series
And according to that pattern, the value of Q and
R are 534 and 614 respectively
Here, $P > Q < R$

58. (c); Here, the pattern followed is
$2700 \times 2 =5400$
$5400 \div 3 =1800 = P$
$1800 \times 4 =7200$
$7200 \div 5 =1440$
$1440 \times 6 =8640$
The given next two series follows the same
pattern as above series
And according to that pattern, the value of Q and
R are 4200 and 4000 respectively
Here, $P < Q > R$

59. (d); Here, the pattern followed is
$35 \times 2 =70$
$70 \times 3 =210$
$210 \times 4 =840 =P$
$840 \times 5 =4200$
$4200 \times 6 =25200$
The next two series follows the same pattern as
above series
And according to that pattern, the value of Q and
R are 840 and 960 respectively
Here, $P = Q < R$

60. (c); Here, the pattern followed is
$(7 \times 2) + 1=15$
$(15 \times 3)+2= 47$
$(47 \times 4)+3= 191$
$(191 \times 5)+4= 959 =Q$
$(959 \times 6)+5= 5759$
The next two series follows the same pattern as
above series
And according to that pattern, the value of P and
R are 239 and 1439 respectively
Here, $P < Q < R$

61. (c); I. $2x^2 + 11x + 12 = 0$
$2x^2 + 8x + 3x + 12 = 0$
$2x (x + 4) + 3(x + 4) = 0$
$(x + 4) (2x + 3) = 0$
$x= -4, -\frac{3}{2}$

II. $8y^2 -22y – 21 =0$
$8y^2+6y-28y-21 =0$
$2y(4y+3)-7(4y+3)=0$
$(2y-7)(4y+3)=0$
$y =\frac{7}{2},-\frac{3}{4}$
So, $x < y$

62. (a); I. $x^2 − 17x − 60 = 0$
$x^2-20x+3x-60=0$
$x(x-20)+3(x-20)=0$
$(x+3)(x-20)=0$
$x= -3, 20$
II. $y^2 +42y + 185 =0$
$y^2+37y+5y+185 =0$
$y(y+37)+5(y+37)=0$
$(y+5)(y+37)=0$
$y = -5, -37$
So, $x > y$

63. (c); I. $x^2 + 41x + 420 =0$
$x^2+21x+20x+420=0$
$x(x+21)+20(x+21)=0$
$(x+20)(x+21)=0$
$x= -20, -21$
II. $6y^2 -11y – 10 =0$
$6y^2-15y+4y-10 =0$
$3y(2y-5)+2(2y- 5)=0$
$(2y-5)(3y+2)=0$
$y =\frac{5}{2},-\frac{2}{3}$
So, $x < y$

64. (e); I. $x^2 − 8x − 273 = 0$
$x^2-21x+13x-273=0$
$x(x-21)+13(x-21)=0$
$(x+13)(x-21)=0$
$x= -13, 21$
II. $y^2 +6y – 432 =0$
$y^2+24y-18y-432=0$
$y(y+24)-18(y+24)=0$
$(y-18)(y+24)=0$
$y = 18, -24$
So, No relation

65. (b); Total fees of Doctor C per patient
$= 1500 + 1500\times \frac{20}{100} =Rs 1800$
Total fees received by Doctor C = 1800×88
= Rs 158400
Total fees of Doctor D per patient
$= 1500 + 1500\times \frac{20}{100} = Rs 1800$
Total fees received by Doctor D = 1800×112
= Rs 201600
Required difference = 201600 – 158400
= Rs 43200

66. **(c);** Total fees of Doctor A per patient

= 1000 + 1000× $\frac{15}{100}$ =Rs 1150

Total fees received by Doctor A = 1150 × 100

=115000 Rs

Total fees of Doctor E per patient

= 2000 + 2000× $\frac{25}{100}$ =Rs 2500

Total fees received by Doctor E = 2500 × 60

= 150000 Rs

Required ratio = $\frac{115000}{150000}$ = 23 : 30

67. **(a);** Total fees of Doctor B per patient

= 1000 + 1000× $\frac{15}{100}$ =Rs 1150

Total fees received by Doctor B = 1150 × 40

= 46000 Rs

Total fees of Doctor E per patient

= 2000 + 2000× $\frac{25}{100}$ =Rs 2500

Total fees received by Doctor E = 2500 × 60

= 150000 Rs

Required percentage = $\frac{150000-46000}{150000}$ × 100

= $69\frac{1}{3}$%

68. **(a);** Current fees of Doctor E per patients =Rs 2500

Increased fees of Doctor E per patients

= 2500 + 2500 × $\frac{15}{100}$ =Rs 2875

Total fees received by Doctor E (after fees increase) = 2875 × 60 =Rs 172500

69. **(c);** Total fees of Junior Doctor per patient

= 1000 + 1000× $\frac{15}{100}$ = Rs 1150

Total fees of Senior Doctor per patient

= 1500 + 1500 × $\frac{20}{100}$ = Rs 1800

Fees received by both junior doctor and senior doctor together = (100+40) × 1150 + (112+88) × 1800= 161000 + 360000 =521000

Required average = $\frac{521000}{4}$ = Rs 130250

Solutions (70-74): As given, at station A ,80 person board and the ratio of male to female is 9: 7, therefore there will be 45 male and 35 female.

Then at station B,15 men got down and 5 women board the train, therefore total men at station B be 30 and total female is 40.

Then at station C, half of the women got down and same no. of men boarded the train, then total male will be 50 and total female will be 20.

Finally at station D, x no. of male got down and ratio of male to female is 7 : 4, then total no. of male will be 35 and total female will be 20

STATION	Male	Female
A	45	35
B	30	40
C	50	20
D	50 – x = 35	20

70. **(b);** Total males who does not have a valid ticket

from Station B to C = 30 × $\frac{50}{100}$ =15

Total females who does not have a valid ticket

from Station B to C = 40 × $\frac{60}{100}$ =24

Total invalid ticket travellers from Station B to C

= 15 +24 = 39

71. **(d);** Total no. of females travelling from station B to C

= 40

Total no. of males travelling from station D to E

= 35

Required percentage = $\frac{40-35}{35}$ × 100 =14.28%

=14%(approx.)

72. **(a);** Total no. of passengers travelling at starting point= 45+35=80

Total no. of passengers travelling till destination point =35 +20 =55

Required difference =80 -55 =25

73. **(c);** In Statement A,

Total no. of females travelling from station A to B = 35

Total no. of males travelling from station D to E = 35

Therefore, Statement A is true

In Statement B,

Total no. of passengers travelling from station C to D =70

Total no. of males who boarded from the starting point =45

Therefore, Statement B is false

In Statement C,

Difference between no. of males and females travelling from station D to E =35 -20 =15

Difference between no. of males and females travelling from station C to D = 50 -20 =30

Therefore, statement C is true

Therefore Statement A and C is true

74. **(b);** total no. of passengers travelling from station D to E= 35 +20=55

total no. of passengers travelling from station B to C = 30+40=70

Required ratio = $\frac{55}{70}$=11: 14

75. **(c);** Relative speed of car =64 + 86 = 150 km/hr

Distance travelled by Car P in 3 hrs = 64 × 3 = 192 km

Remaining distance =792 -192=600 km

Time taken to cover remaining distance where they will meet each other = $\frac{600}{150}$=4 hrs

Distance travelled by Car Q from station B in 4 hrs = 86 × 4 = 344 km

76. (b);

	A	:	B	:	C
	5500×12		4500×12		6000×36
	+		+		
	4500×24		5000×24		
	=		=		=
	29	:	29	:	36

Profit share of C = $9400 \times \frac{36}{94}$ = Rs 3600

77. (a); Quantity I: Let SP of one apple be 1 rs

SP of 15 apple = 15 rs

And profit = 2 rs

CP = 15 -2 =13 rs.

% Profit = $\frac{2}{13} \times 100$ =15.38 %

Quantity II: 625 =125%

Therefore, 425 =$\frac{125}{625} \times 435$ = 87%

Loss % = 100 – 87 =13 %

Hence, Quantity I > Quantity II

78. (c); Let length of the platform be x metres

Speed of the train = $54 \times \frac{5}{18}$ =15 m/s

According to the question, train takes 12 sec to cross a man on the platform

So, length of the train =12×15 =180 m

Again, Time taken by train to cross the platform = 25 sec

Length of the platform = $25 \times 15 - 180$

= 375 – 180 =195 m

Hence, Quantity I < Quantity II

79. (c); P : Q = 2:1 (efficiency ratio)

(P+Q) : R = 3 : 1 (efficiency ratio)

Thus, P : Q : R = 2: 1: 1 (efficiency ratio)

Now total work = $\frac{15}{2} \times 4$= 30 units

Quantity I: Time taken by P and Q together to complete the work = $\frac{30}{3}$ = 10 days

Quantity II: Time taken by Q and R together to complete the work = $\frac{30}{2}$ = 15 days

Hence, Quantity I < Quantity II

80. (a); Shikhar Manan Rohit Krunal

100 150 150 × $\frac{80}{100}$ =120 120 × $\frac{90}{100}$=108

50 75 60 54

Quantity I:

Required percentage =$\frac{60-50}{50} \times 100$ =20 %

Quantity II: $\frac{54-50}{50} \times 100$= 8%

Hence, Quantity I > Quantity II

ENGLISH LANGUAGE

81. (c); Among the given words, alternatives (I) and (IV) suitably fit in the blank and form a grammatically correct and contextually coherent sentence. All the other words fail to adhere, either the grammatical syntax or the context of the sentence. Hence, option (c) is the most suitable answer choice.

Penury means the state of being very poor; extreme poverty.

Mansion means a large, impressive house.

Grandeur means splendour and impressiveness, especially of appearance or style.

Poverty means the state of being extremely poor.

82. (d); Among the given words, alternatives (I) and (II) suitably fit in the blank and form a grammatically correct and contextually coherent sentence. All the other words fail to adhere, either the grammatical syntax or the context of the sentence. Hence, option (d) is the most suitable answer choice.

Alleviate means make (suffering, deficiency, or a problem) less severe.

Aggravate means make (a problem, injury, or offence) worse or more serious.

83. (b); Among the given words, alternatives (I), (III) and (IV) suitably fit the blank and form a grammatically correct and contextually coherent sentence. All the other words fail to adhere, either the grammatical syntax or the context of the sentence. Hence, option (b) is the most suitable answer choice.

Benevolent means well-meaning and kindly.

Apathetic means showing or feeling no interest, enthusiasm, or concern.

Passive means accepting or allowing what happens or what others do, without active response or resistance.

Indifferent means having no particular interest or sympathy; unconcerned.

84. (a); Among the given words, only alternative (III) suitably fits in the blank and form a grammatically correct and contextually coherent sentence. All the other words fail to adhere, either the grammatical syntax or the context of the sentence. Hence, option (a) is the most suitable answer choice.

Abundant means existing or available in large quantities; plentiful.

Pernicious means having a harmful effect, especially in a gradual or subtle way.

Placid means not easily upset or excited.

Injurious means causing or likely to cause damage or harm.

85. (e); All the given words suitably fit in the blank forming a grammatically correct and contextually coherent sentence. Hence, option (e) is the most suitable answer choice.

Achieved means successfully bring about or reach (a desired objective or result) by effort, skill, or courage.

Accomplished means achieve or complete successfully.

Gained means obtain or secure (something wanted or desirable).

Attained means succeed in achieving (something that one has worked for).

86. (d); IL&FS has appointed advisers to prepare a resolution plan, (C) and (E) makes a perfect match.

The company along with its subsidiaries is facing a liquidity crisis, (A) and (F) makes a perfect match.

87. (d); For big companies, there are instances of even the infrastructure getting damaged, Sentence (C) and (F) makes proper combination as a sentence. The increase in MSP for rabi crops comes just ahead of the RBI monetary policy announcement, (A) and (E) makes the perfect match as in sentence.

88. (c); Only sentence (A) and (D) makes a perfect match as a sentence, India will be the third largest aviation market globally a year sooner.

89. (b); Only sentence (B) and (F) makes a perfect match as they both together states that "All the sectoral indices closed in the red, with 22 of the 30 Sensex stocks finishing lower."

90. (c); Only sentence (A) and (F) makes a perfect match as a sentence, "A writer needs quiet and peaceful environment around him in order to write."

91. (d); We can conclude from first paragraph of the passage that sentences (I) and (II) are in relevance with the passage. As mentioned in the paragraph that the goal is to create new industries, more employment and new markets. Sentence (III) is totally irrelevant in context to the passage.

Hence option (d) is the correct choice.

Refer the lines "The programme focuses on optimizing the efficiency of road traffic movement across the country by bridging critical infrastructure gaps through shorter routes. The end goal is to create economic corridors (ECs) along the path—new industries, more employment and new markets."

92. (d); Both (a) and (b) options are correct in context of the passage.

Existing road network got affected with implementation of Bharatmala Pariyojana. This programme affect the toll collection and thereby debt servicing ability. Hence option (d) is the correct choice. Sentence (c) is incorrect as it is not mentioned anywhere in the passage.

Refer the lines "The Bharatmala programme may result in traffic diversion from the existing road network to new roads, thereby affecting the toll collection and, consequently, the debt servicing ability of some of the BOT and OMT projects."

"Out of the 44 ECs, about 21 would partially or fully affect the existing alignments, while the remaining 23 that involve upgradation of existing alignment will not result in any deviation."

93. (c); The total debt at risk is Rs19,435 crore. It has mentioned in the passage that debt servicing ability has raised the risk of default on 25 national highway toll projects involving Rs19,435 crore of debt.

Hence option (c) is the most appropriate choice. Refer the line of second paragraph "This has raised the risk of default on 25 national highway toll projects which involve Rs19,435 crore of debt."

94. (b); "Bharatmala and the rising debt issues" is an appropriate title of the passage.

95. (b); Refer the fourth paragraph of the passage in which it is clearly mentioned that the need of the hour is to realign the terms and conditions of the model concession agreement to ensure that banks do not end up accumulating NPAs .Now in the third paragraph, refer the lines "This could be ensured by allowing renegotiation of the terms of the concession agreement.". Hence option (b) is the correct choice. Sentence (I) is irrelevant here.

96. (c); 'do not turn' is the correct phrase to be replaced thus making the sentence grammatically correct. The sentence is in present tense 'are needed', 'are at risk' Hence 'could' and 'would' will not be used as they are past form of 'can' and 'will'. The subject of the sentence 'BOT projects' is plural hence, 'does' will not be used. Hence 'do not turn' is the correct choice making option (c) as correct.

97. (c); Curtail means reduce in extent or quantity; impose a restriction on. Hence (I), (II) and (III) are similar in meaning to Curtail.

98. (d); Embarked means begin (a course of action). Hence it has same meaning as commence, initiate and undertake.
Commence means begin.
Rot means decay or cause to decay.

99. (a); **Hindrance** means a thing that provides resistance, delay, or obstruction to something or someone. Hence it has opposite meaning as that to **impetus** which means something that makes a process or activity happen or happen more quickly.

Plausible means in a way that seems reasonable or probable.

Contrite means feeling or expressing remorse at recognition that one has done wrong.

100. (b); **Reluctant** means unwilling and hesitant; disinclined. Hence it has opposite meaning as **willing** and **eager**.

Splendid means magnificent, very impressive.

Vaunt means boast about or praise.

101. (a); 'Why do we not' will come in place of 'why we do not' as the sentence is in interrogative form.

102. (c); In place of 'he will have', 'he would have been' will be used.

With Had+ subject + been + V3, Subject + would + have + been + V3 is used.

Ex. **Had** he **been taken** to hospital, he **would have been** saved.

103. (b); Replace 'with' by 'in' as "take delight in something" is the correct usage.

e.g. She **takes delight in** dancing.

104. (b); 'hard' will be used in place of 'hardly' as 'hardly' is used to depict 'rarely' or 'scarcely' whereas here 'hard' means 'tough'.

105. (e); The sentence is grammatically correct.

106. (c); Drawing a hint from statement (A), it can be understood that the paragraph is describing about an alarming note issued by Former RBI Governor Raghuram Rajan regarding the cumulative bad-debts which can lead to financial crisis. Among the given sentences, only statement (B) is describing about the lack of professionalism on the part of Banks while issuing lo   It is to be noted that sentence (B) begins with "Clearly" which is indicating that something similar in context should have been mentioned in the earlier statements. Since, none, of the statement can find relevance with statement (B), option (c) becomes are most suitable answer choice.

107. (b); Drawing a hint from statement (A), it can be understood that the paragraph is describing about an alarming note issued by Former RBI Governor Raghuram Rajan regarding the cumulative bad-debts which can lead to financial crisis. Statement (E) should logically follow statement (A) as it is further providing information on the note issued by him stating the three troubles that could be caused by increasing non-performing assets. Next should be statement (G), as it provides information on the troubles mentioned in statement (E). Since statement (C) provides data on the outstanding loan it should be following statement (G). Statement (F) provides information on the mudra loans mentioned in statement (C). Statement (H), quotes the problem and the solution to recover the small loans. Statement (D) coherently connects with statement (H) forming a meaningful paragraph. Among the given sentences, only statement (B) is describing about the lack of professionalism on the part of Banks while issuing loans. It is to be noted that sentence (B) begins with "Clearly" which is indicating that something similar in context should have been mentioned in the earlier statements. Therefore, statement (B) is incoherent. Thus the sequence formed is **AEGCFHD.** Since the last statement, statement (D) is describing about the problems associated with the banks to recover the loans, the next statement should option (b) as it is further describing about the risk if these small loans cumulatively form a huge amount. Sine all the other statements are incoherent, option (b) is the most suitable answer choice.

108. (e); Drawing a hint from statement (A), it can be understood that the paragraph is describing about an alarming note issued by Former RBI Governor Raghuram Rajan regarding the cumulative bad-debts which can lead to financial crisis. Statement (E) should logically follow statement (A) as it is further providing information on the note issued by him stating the three troubles that could be caused by increasing non-performing assets. Next should be statement (G), as it mentions all the three troubles mentioned in statement (E). Therefore, statements (E) and (G) form a logical pair. Hence, option (e) is the most suitable answer choice.

109. (a); Drawing a hint from statement (A), it can be understood that the paragraph is describing about an alarming note issued by Former RBI Governor Raghuram Rajan regarding the cumulative bad-debts which can lead to financial crisis. Statement (E) should logically follow statement (A) as it is further providing information on the note issued by him stating the three troubles that could be caused by increasing non-performing assets. Next should be statement (G), as it provides information on the troubles mentioned in statement (E). Since

statement (C) provides data on the outstanding loan it should be following statement (G). Statement (F) provides information on the mudra loans mentioned in statement (C). Statement (H), quotes the problem and the solution to recover the small loans. Statement (D) coherently connects with statement (H) forming a meaningful paragraph. Among the given sentences, only statement (B) is describing about the lack of professionalism on the part of Banks while issuing loans. It is to be noted that sentence (B) begins with "Clearly" which is indicating that something similar in context should have been mentioned in the earlier statements. Therefore, statement (B) is incoherent. Thus the sequence formed is **AEGCFHD.** Hence, option (a) is the most suitable answer choice.

110. (b); Drawing a hint from statement (A), it can be understood that the paragraph is describing about an alarming note issued by Former RBI Governor Raghuram Rajan regarding the cumulative bad-debts which can lead to financial crisis. The logical sequence of the sentences after rearrangement excluding the incoherent one is **AEGCFHD.** Since statement (C) is the fourth statement in the sequence, option (b) is the most suitable answer choice.

111. (d); 'absence' is the correct word.
Desertion means abandonment, leaving.
Paucity means the presence of something in only small or insufficient quantities or amounts.
Sparsity means to scatter or spread.

112. (e); 'embedded' is the correct word to be filled in the blank.
According to the theme of the paragraph, 'embedded' is the correct word.

113. (b); 'forms' is the correct word.

114. (c); 'generation' is the correct word.
As production is used in the sentence, hence we can get the idea that generation will be the answer.

115. (c); 'lost' is the correct word.
Awed means filled with awe or wonder.
Misled means cause (someone) to have a wrong idea or impression.
Rapt means completely fascinated or absorbed by what one is seeing or hearing.

116. (a); 'feed' is the correct word to be filled in the blank. Organic wastes are useful for the use of small and affordable households.

117. (e); 'use' is the correct word.

118. (c); "prevent" is the correct word.

119. (d); 'ingested' is the correct word to be filled in the blank.
Ravaged means severely damaged.

120. (b); 'refuse' is the correct word.
As refuse is also used elsewhere in the paragraph, we can get a hint.
Refuse means worthless and useless part of something.