

## Solutions

1. Ans. A

In the first few lines of the passage, it has been stated that "cheap personal computers (PCs) and servers, the Internet and its local wired/wireless feeder networks, and powerful, low-cost software..." has resulted into "a democratization of publishing and media production using digital technology" which implies that it is no more a privilege of the few.

2. Ans. C

It can be interpreted from the following statements of the passage "Nor is it to say that entertainment companies (e.g., film, music, radio, and television companies) and information companies (e.g., book, database, and serial publishers) have ceded the digital-content battlefield to the upstarts. Quite the contrary. High-quality, thousand-page-per-volume scientific journals and Hollywood blockbusters cannot be produced for pennies, even with digital wizardry."

3. Ans. E

It can be interpreted from the following statement of the passage, "Unconstrained access to past works helps determine the richness of future works."

4. Ans. C

The central theme that runs through the passage is digital technology and its impact on conventional media which is analysed while concluding by juxtaposing it to the challenge of copyright laws.

5. Ans. D

Statement (i) can be inferred from the following statements of the passage, "Information and entertainment companies still have an important role to play, and, even if they didn't, they hold the copyrights to a significant chunk of our cultural heritage." Moreover, it has been again stated in the passage that, "The thing about the future is that it is rooted in the past. Culture, even digital culture, builds on what has gone before."

Hence, option (i) is correct.

Statement (ii) can be inferred from the following statement, "Citizens have morphed from passive media consumers to digital-media producers and publishers".

Statement (iii) can be inferred from the following statements of the passage, "Not to say that print and conventional media are dead, of course, but it is clear that their era of dominance is waning."

6. Ans. C

Concocting stands for "creating or devising" whereas "manipulating" has a negative connotation that means "to control or influence". Hence, "devising" is the most similar word.

7. Ans. D

"Ceded" refers to "give up" or "yield" whereas "contended" means the contrary. Hence, "relinquish" is the most similar word.

8. Ans. B

"Connote" means to imply or suggest whereas "infer" is used for deducing from the explicit statements. Hence, the word "Predicate" is the most similar word.

9. Ans. E

All other words except "subservience" are synonyms of "dominance".

10. Ans. D

"Waning" means to "decrease in strength" whereas "accentuating" means to make more "noticeable" or "prominent".

11. Ans. C

The passage talks about the \$625 million grid-connected rooftop solar fund and not \$652.

12. Ans. C

Refer to the fourth line of the passage.

13. Ans. A

Refer to the following statement of the passage, 'Developing a strong solar manufacturing industry is essential for sustained economic growth, and to connect those who never had the boon of electricity.'

14. Ans. E

It can be inferred from the first paragraph.

15. Ans. D

After considering the context of the passage, 'Sunny times for solar' seems to be the most apt title for the passage.

16. Ans. E

'Aspiration' is the most similar word for ambition.

17. Ans. A

'Hurdle' refers to a barrier or an obstacle. Contrary to that 'opening' is the most apt response.

18. Ans. C

Stipulation refers to a condition of agreement. Corresponding to that clause is the most suitable response.

19. Ans. D

'Metering' refers to a proper measurement. Contrary to that 'guessing' is the most apt response.

20. Ans. A

Here, 'to exploit' has a positive meaning. Corresponding to that adventure is the most apt response which means an unexpected undertaking or experience.

21. Ans. D

The problem with the given statement is that of parallelism. The whole statement should use verb+ 'ing' form. Only C and D adhere to this. Out of these two, C is eliminated due to the use of 'avoiding of' which is incorrect. Only D is grammatically correct.

Hence D is the correct answer.

22. Ans. E

'To put a check on something' means to reduce or stop something. Since the given statement is correct, preference is given to 'no error'.

23. Ans. A

The answer to this is 'exorbitant prices are costing them an arm and a leg.' The phrase 'costs an arm and leg' is used to describe anything that is considered to be extremely expensive or excessively pricey.

24. Ans. B

A- 'Facilitate' needs to be replaced with 'facilitating' because the action in context hasn't finished and is in continual phase.

C- 'Transferring to power' is the incorrect phrase and needs to be replaced with 'transfer'.

D- The regulatory body has to 'work for' not 'work to', thus here is the wrong use of modal.

E- 'During' makes the statement timeline ambiguous. So, **option B is correct.**

25. Ans. E

A- The subject is 'trees', which is plural, so the use of 'has' is incorrect as a helping verb.

B- 'Approaching' is the wrong form of the verb.

C- This option mixes two tenses. The first part uses 'approached' which makes the action of shedding trees as an action of past but the use of 'gets' in the end makes the action of getting back leaves a present action; this ambiguity in tenses is incorrect.

D- The subject is plural and therefore 'its' can't be used to address the subject.

So, **option E is correct.**

26. Ans. E

The first statement tells us that the Austrian army has some kind of an advantage in the war since they are acquainted with the field where the French have to be fought. The word 'manoeuvre', which also means a military exercise of the troops, completes the sentence correctly. Manoeuvre also means 'to move skilfully', which makes it an ideal choice for the second statement as well. In the second statement, the cart has to be moved skilfully through the crowded store.

27. Ans. D

Multiple options may appear to fit in. However, 'Blatant' which means egregious, conspicuous is the most suitable according to the context and the tone of the statements.

28. Ans. A

The first question hints towards some kind of disagreement due to poor quality of goods received by the importer. Hence, 'contention' fits in well here. The word 'contention' also means an 'assertion in an argument', which makes it the suitable choice for the second statement as well.

29. Ans. C

In the first statement, the word negotiated fits in correctly as the 'terms' of the industrial issues are settled after negotiations. In the second statement, negotiated fits well as the word 'negotiated' also means 'finding a way through a difficult route'.

30. Ans. B

'Devised' is the most suitable response. It fits both the blanks contextually as well as grammatically.

31. Ans. B

'Splendid' means dazzling, distinguished, priceless. It fits in the context of both the statements aptly.

32. Ans. C

Scale is the most appropriate word for both the blanks. For first, it refers to the level and amount of operations. For the second it specifies a measurement degree.

33. Ans. D

Without is a preposition which means not using or taking something. It makes both the statements grammatically as well as contextually correct.

34. Ans. B

Since the baby was later adopted by the mayor, it must have been found 'abandoned'. Also, the political party must have 'abandoned' its prior policy since it led to the party's defeat in the elections.

35. Ans. B

Collapse means to fall down suddenly because of pressure or having no strength or support. Statement A, among all the options, collapse is the word that is suitable for the economy and budget. Statement B- If something falls down, it collapses. The word collapsing is appropriate for the sentence.

36. Ans. A

Refer to the last question of the series.

37. Ans. B

Refer to the last question of the series.

38. Ans. C

Refer to the last question of the series.

39. Ans. B

Refer to the last question of the series.

40. Ans. A

Option D should be the first statement as it introduces us to the subject i.e increasing fiscal vulnerabilities in the EMDEs as highlighted in the World Bank's new Global Economic Prospects report. Next follows statement E further elaborating the facts stated in the report that the government debt is soaring and fiscal balance has deteriorated. It should be followed by Statement C as it connects to the worsening government finances stated in the preceding statement. The next statement should be option A as it states that as far as the financial conditions of the global market is concerned, there is nothing to worry but a slight pressure on it may adversely affect these EMDEs. Next follows statement F that states the good performance of India during the given period. The use of "it" in statement B obviously relates to India mentioned in statement F.

The correct Sequence is DECAF B

41. Ans. B

The error in I is that the verb 'requiring' is incorrect and needs to be replaced with the noun 'requirement'. The preposition in II should not be 'up' but 'out' after the verb 'pointed'. The phrase 'pointed out' means 'identified or focused on.'

42. Ans. D

The verb 'backed' must be in simple past tense to make the sentence correct. The whole sentence is in past tense. Thus the verb 'back' in simple present is incorrect. The preposition after the word fight 'of' is incorrect and must be replaced with 'for' as people fight 'for' certain things and not 'of'.

Thus D is the correct answer.

43. Ans. C

The error lies only in II as the verb 'to passage' is incorrect and needs to be replaced with the conjugated form of the verb 'to be passed' to make the sentence correct. Thus C is the correct answer.

44. Ans. A

The error lies only in II of the sentence where the preposition 'upon' is incorrect and needs to be replaced with 'to'. 'Upon' is more formal term for on, especially in abstract senses. Things are shifted from one state to another. Thus 'to' is the correct preposition here.

45. Ans. C

The error in part I is that the verb 'wondered' in simple past is incorrect and needs to be replaced in present continuous form which is 'wondering'.

The error in part III is that the pronoun 'her' is missing after the verb 'loved' and it is mandatory to be written there to make the sentence grammatically correct.

Without the pronoun the sentence is incomplete.

Thus C is the correct answer.

46. Ans. D

The error lies only in part II of the sentence where the word 'judge' must be in plural form to make the sentence correct. It should read as: 'the three other judges held that it was.'

47. Ans. B

The error is in part III only where the word 'influencing' is incorrect and needs to be replaced with 'influential' to make the sentence correct. The correct adjective should be placed here.

48. Ans. B

The error in I is that the preposition 'on' must be present after the verb 'brought'. The phrase 'brought on' means 'led to the development of.'

The correct preposition to be used after the word 'challenges' is 'to' and not 'of'. The point mentioned is something positive so 'to' is the correct preposition. Had it been a problem mentioned here the preposition 'of' would have been correct.

49. Ans. E

The verb 'show' is plural and is incorrect with the singular noun 'experience'. The verb should also be singular, which is 'shows'.

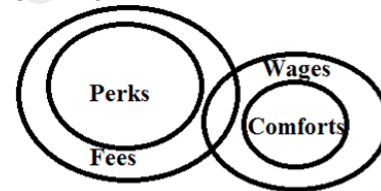
The correct adjective to be used before the word 'difficult' should be in comparative form 'more' and not superlative form 'most'. The word 'than' makes it clear that a comparison is being made between two things.

Thus E is the correct answer.

50. Ans. A

The verb 'set' in simple present tense is incorrect and needs to be replaced with the verb 'setting' in present continuous form to make the sentence correct.

51. Ans. B

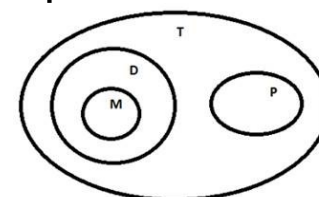


(Basic Diagram)

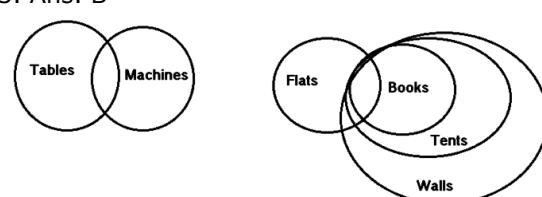
None of the conclusion follow from basic diagram. Either I or II follow.

52. Ans. C

**Explanation:**

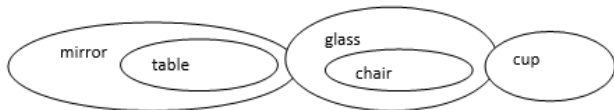


53. Ans. B

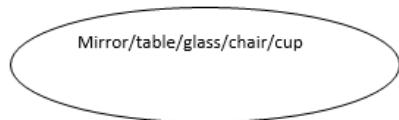


54. Ans. E

A possible Venn-diagram is:



Another possible Venn-diagram is :

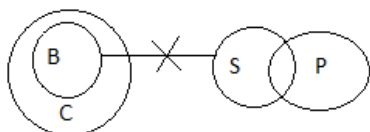


From the above Venn-diagram all the given conclusion follows. Hence answer is 5).

Shortcut: When All and Some's conditions are given is possibility case then all the possible answer follows.

55. Ans. E

The diagram is as follows:-



conclusion II, III & IV does not follow

56. Ans. B

• 3 persons watched movie between U and the one who watched Avengers and U watched movie before the one who watched Avengers but not on Monday. So U either watched on Tuesday or Wednesday.

**Case 1: If U watched on Wednesday-**

- P watched Inception two days before the one who watched Avengers. P watched on Friday.
- One person watched movie between P and the one who watched Logan. Then U watched Logan.
- Q watched Avatar just before U. So Q watched on Tuesday.
- One person watched movie between Q and T. T didn't watch movie on Thursday. So this case gets rejected.

Day	Person	Movie
Monday		
Tuesday	Q	Avatar
Wednesday	U	Logan
Thursday		
Friday	P	Inception
Saturday		
Sunday		Avengers

**Case 1: If U watched on Tuesday-**

- P watched Inception two days before the one who watched Avengers. P watched on Thursday.
- One person watched movie between P and the one who watched Logan. Then U watched Logan.
- Q watched Avatar just before U. So Q watched on Monday.
- One person watched movie between Q and T. T watched on Wednesday.
- S watched Batman before R who watched Thor. S watched on Friday and R watched on Sunday.
- T watched Superman and V watched Avengers.

Here is the final table:

Day	Person	Movie
Monday	Q	Avatar
Tuesday	U	Logan
Wednesday	T	Superman
Thursday	P	Inception
Friday	S	Batman
Saturday	V	Avengers
Sunday	R	Thor

Q watched on Monday.

57. Ans. A

• 3 persons watched movie between U and the one who watched Avengers and U watched movie before the one who watched Avengers but not on Monday. So U either watched on Tuesday or Wednesday.

**Case 1: If U watched on Wednesday-**

- P watched Inception two days before the one who watched Avengers. P watched on Friday.
- One person watched movie between P and the one who watched Logan. Then U watched Logan.
- Q watched Avatar just before U. So Q watched on Tuesday.
- One person watched movie between Q and T. T didn't watch movie on Thursday. So this case gets rejected.

Day	Person	Movie
Monday		
Tuesday	Q	Avatar
Wednesday	U	Logan
Thursday		
Friday	P	Inception
Saturday		
Sunday		Avengers

**Case 1: If U watched on Tuesday-**

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Here is the final table:

Day	Person	Movie
Monday	Q	Avatar
Tuesday	U	Logan
Wednesday	T	Superman
Thursday	P	Inception
Friday	S	Batman
Saturday	V	Avengers
Sunday	R	Thor

T watched Superman.

58. Ans. C

• 3 persons watched movie between U and the one who watched Avengers and U watched movie before the one who watched Avengers but not on Monday. So U either watched on Tuesday or Wednesday.

**Case 1: If U watched on Wednesday-**

- P watched Inception two days before the one who watched Avengers. P watched on Friday.
- One person watched movie between P and the one who watched Logan. Then U watched Logan.
- Q watched Avatar just before U. So Q watched on Tuesday.
- One person watched movie between Q and T. T didn't watch movie on Thursday. So this case gets rejected.

Day	Person	Movie
Monday		
Tuesday	Q	Avatar
Wednesday	U	Logan
Thursday		
Friday	P	Inception
Saturday		
Sunday		Avengers

**Case 1: If U watched on Tuesday-**

- P watched Inception two days before the one who watched Avengers. P watched on Thursday.
- One person watched movie between P and the one who watched Logan. Then U watched Logan.
- Q watched Avatar just before U. So Q watched on Monday.
- One person watched movie between Q and T. T watched on Wednesday.
- S watched Batman before R who watched Thor. S watched on Friday and R watched on Sunday.
- T watched Superman and V watched Avengers.

Here is the final table:

Day	Person	Movie
Monday	Q	Avatar
Tuesday	U	Logan
Wednesday	T	Superman
Thursday	P	Inception
Friday	S	Batman
Saturday	V	Avengers
Sunday	R	Thor

Two persons watched movie between P and R.

59. Ans. A

The arrangement is:

Day	Person	Movie
Monday	Q	Avatar
Tuesday	U	Logan
Wednesday	T	Superman
Thursday	P	Inception
Friday	S	Batman
Saturday	V	Avengers
Sunday	R	Thor

As per the given arrangement, 'Thor' would be related to 'Friday', since there is a gap of one day for the given movies.

60. Ans. E

The arrangement is:

Day	Person	Movie
Monday	Q	Avatar
Tuesday	U	Logan
Wednesday	T	Superman
Thursday	P	Inception
Friday	S	Batman
Saturday	V	Avengers
Sunday	R	Thor

As clearly mentioned in the above arrangement, 'V' watches 'Avengers' on 'Saturday'. Hence all the given statements are incorrect.

61. Ans. C

$$J = K \leq L$$

$$I. L > J$$

$$II. L = J$$

62. Ans. E

$$I > J = K$$

$$I. I > K \text{ (true)}$$

$$Q > K = J$$

$$II. Q > J \text{ (true)}$$

63. Ans. D

$$A = M > P, N > R, A > T$$

I.  $T = P$  (false) There is no relation between T and P.

For conclusion II -

$$A = M > P, N > R$$

II.  $R < A$  (false) - there is no relation between R and A. Hence, neither conclusion I nor II follows.

64. Ans. B

$$X = M < A < S = T < R$$

**Conclusions:**

For conclusion I -  $M < A < S = T$  - There is no relation between M and T.

I.  $M = T$  (false)

For conclusion II -

$$A < S = T < R$$

II.  $R > A$  (True) - R is greater than A.

Hence, only conclusion II follow.

65. Ans. A

$$Y > A < N, Y = B < P$$

$$P > B = Y > A < N$$

For conclusion I -

$$P > B = Y > A$$

$$P > Y > A$$

I.  $P > A$  (True) P is greater than A is true.

For conclusion II -

$$B = Y > A < N$$

II.  $N > B$  (false) There is no relation between N and B.

Hence, only conclusion I follow.

66. Ans. B

Floor	Person	City
8	T	Jaipur
7	P	Pune
6	U	Delhi
5	W	Patna
4	Q	Raipur
3	S	Mumbai
2	R	Kolkata
1	V	Ranchi

67. Ans. C

Floor	Person	City
8	T	Jaipur
7	P	Pune
6	U	Delhi
5	W	Patna
4	Q	Raipur
3	S	Mumbai
2	R	Kolkata
1	V	Ranchi

68. Ans. A

Floor	Person	City
8	T	Jaipur
7	P	Pune
6	U	Delhi
5	W	Patna
4	Q	Raipur
3	S	Mumbai
2	R	Kolkata
1	V	Ranchi

69. Ans. D

Floor	Person	City
8	T	Jaipur
7	P	Pune
6	U	Delhi
5	W	Patna
4	Q	Raipur
3	S	Mumbai
2	R	Kolkata
1	V	Ranchi

70. Ans. D

Floor	Person	City
8	T	Jaipur
7	P	Pune
6	U	Delhi
5	W	Patna
4	Q	Raipur
3	S	Mumbai
2	R	Kolkata
1	V	Ranchi

71. Ans. C

'wo' stands for value.

in	to
market -	ki
loss -	le
value -	wo
increase -	xo
money -	bc
now -	pu
making -	na
the/decrease	bo/co

72. Ans. A

Code for making is - na

in	to
market -	ki
loss -	le
value -	wo
increase -	xo
money -	bc
now -	pu
making -	na
the/decrease	bo/co

73. Ans. E

Either co or bo is the code for decrease

in	to
market -	ki
loss -	le
value -	wo
increase -	xo
money -	bc
now -	pu
making -	na
the/decrease	bo/co

74. Ans. E

none of these is the correct option for **the increase you value**

in	to
market -	ki
loss -	le
value -	wo
increase -	xo
money -	bc
now -	pu
making -	na
the/decrease	bo/co

75. Ans. D

'to na ki bc' is a code of - making money in market.

in	to
market -	ki
loss -	le
value -	wo
increase -	xo
money -	bc
now -	pu
making -	na
the/decrease	bo/co

76. Ans. A

V is the daughter of S, S is the wife of T, So, wife's daughter=daughter

From the above information

i. There are eight people P, Q, R, S, T, U, V & W. Each of the female is sitting between two males and vice versa i.e. there are equal number of male and female i.e. four female, four male present in that family

ii. Four persons are sitting at the middle of each side of the table. All the mothers present in that family is facing their own respective daughters i.e. all four females are sitting at the middle of each side of the table and facing each other & mothers are facing their own daughter. It's clear that all the males of the family are sitting at the corners

iii. W is son in law of S i.e. W is male, Grandmother of Q is sitting to his left i.e. Q is male, R is the wife of U i.e. U is male and granddaughter of T is sitting to his right i.e. T is male.

I.e. males are W, U, Q, T and females are P, R, S, V

iv. U is sitting third to the right of R, R is the wife of U i.e. daughter of R is facing towards R.

v. Only S is sitting between U & Q, grandmother of Q is sitting to his first left

vi. Mother of U is sitting to his first right and father of U is sitting to his 2<sup>nd</sup> left i.e. S is the mother of U and S is

the grandmother of Q.

vii. W is sitting 3<sup>rd</sup> to the left of S and W is the son in law of S

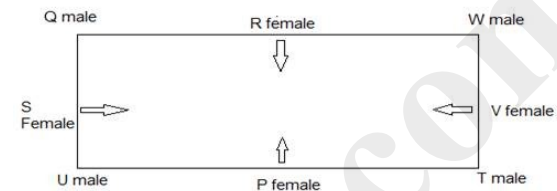
viii. Clearly T sits 3<sup>rd</sup> to the right of S since T is a male(all males are sitting at the corners)

ix. Father of U is sitting to his 2<sup>nd</sup> left i.e. T is the father of U i.e. S is the wife of T.

x. R is the mother of Q, P is the sister of Q i.e. P is the daughter of R. P is sitting 4<sup>th</sup> to the right of R i.e.

granddaughter of T is sitting to his first right

xi. Clearly V is the daughter of S sitting 4<sup>th</sup> to the right of S.



77. Ans. B

From the above information

i. There are eight people P, Q, R, S, T, U, V & W. Each of the female is sitting between two males and vice versa i.e. there are equal number of male and female i.e. four female, four male present in that family

ii. Four persons are sitting at the middle of each side of the table. All the mothers present in that family is facing their own respective daughters i.e. all four females are sitting at the middle of each side of the table and facing each other & mothers are facing their own daughter. It's clear that all the males of the family are sitting at the corners

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I.e. males are W, U, Q, T and females are P, R, S, V

iv. U is sitting third to the right of R, R is the wife of U i.e. daughter of R is facing towards R.

v. Only S is sitting between U & Q, grandmother of Q is sitting to his first left

vi. Mother of U is sitting to his first right and father of U is sitting to his 2<sup>nd</sup> left i.e. S is the mother of U and S is the grandmother of Q.

vii. W is sitting 3<sup>rd</sup> to the left of S and W is the son in law of S

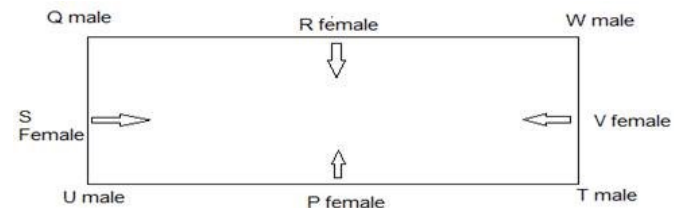
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ix. Father of U is sitting to his 2<sup>nd</sup> left i.e. T is the father of U i.e. S is the wife of T.

x. R is the mother of Q, P is the sister of Q i.e. P is the daughter of R. P is sitting 4<sup>th</sup> to the right of R i.e.

granddaughter of T is sitting to his first right

xi. Clearly V is the daughter of S sitting 4<sup>th</sup> to the right of S.



78. Ans. C

From the above information

i. There are eight people P, Q, R, S, T, U, V & W. Each of the female is sitting between two males and vice versa i.e. there are equal number of male and female i.e. four female, four male present in that family

ii. Four persons are sitting at the middle of each side of the table. All the mothers present in that family is facing their own respective daughters i.e. all four females are sitting at the middle of each side of the table and facing each other & mothers are facing their own daughter. It's clear that all the males of the family are sitting at the corners

iii. W is son in law of S i.e. W is male, Grandmother of Q is sitting to his left i.e. Q is male, R is the wife of U i.e. U is male and granddaughter of T is sitting to his right i.e. T is male.

I.e. males are W, U, Q, T and females are P, R, S, V

iv. U is sitting third to the right of R, R is the wife of U i.e. daughter of R is facing towards R.

v. Only S is sitting between U & Q, grandmother of Q is sitting to his first left

vi. Mother of U is sitting to his first right and father of U is sitting to his 2<sup>nd</sup> left i.e. S is the mother of U and S is the grandmother of Q.

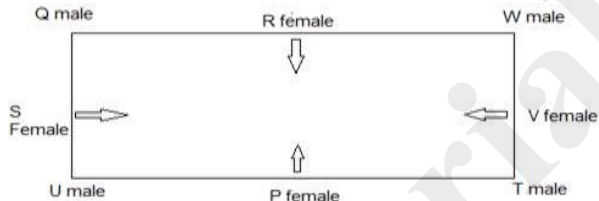
vii. W is sitting 3<sup>rd</sup> to the left of S and W is the son in law of S

viii. Clearly T sits 3<sup>rd</sup> to the right of S since T is a male (all males are sitting at the corners)

ix. Father of U is sitting to his 2<sup>nd</sup> left i.e. T is the father of U i.e. S is the wife of T.

x. R is the mother of Q, P is the sister of Q i.e. P is the daughter of R. P is sitting 4<sup>th</sup> to the right of R i.e. granddaughter of T is sitting to his first right

xi. Clearly V is the daughter of S sitting 4<sup>th</sup> to the right of S.



79. Ans. A

From the above information

i. There are eight people P, Q, R, S, T, U, V & W. Each of the female is sitting between two males and vice versa i.e. there are equal number of male and female i.e. four female, four male present in that family

ii. Four persons are sitting at the middle of each side of the table. All the mothers present in that family is facing their own respective daughters i.e. all four females are sitting at the middle of each side of the table and facing each other & mothers are facing their own daughter. It's clear that all the males of the family are sitting at the corners

iii. W is son in law of S i.e. W is male, Grandmother of Q is sitting to his left i.e. Q is male, R is the wife of U i.e. U is male and granddaughter of T is sitting to his right i.e. T is male.

I.e. males are W, U, Q, T and females are P, R, S, V

iv. U is sitting third to the right of R, R is the wife of U i.e. daughter of R is facing towards R.

i.e. daughter of R is facing towards R.

v. Only S is sitting between U & Q, grandmother of Q is sitting to his first left

vi. Mother of U is sitting to his first right and father of U is sitting to his 2<sup>nd</sup> left i.e. S is the mother of U and S is the grandmother of Q.

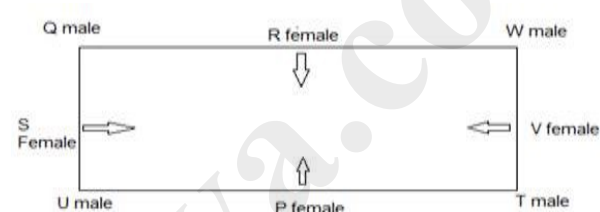
vii. W is sitting 3<sup>rd</sup> to the left of S and W is the son in law of S

viii. Clearly T sits 3<sup>rd</sup> to the right of S since T is a male (all males are sitting at the corners)

ix. Father of U is sitting to his 2<sup>nd</sup> left i.e. T is the father of U i.e. S is the wife of T.

x. R is the mother of Q, P is the sister of Q i.e. P is the daughter of R. P is sitting 4<sup>th</sup> to the right of R i.e. granddaughter of T is sitting to his first right

xi. Clearly V is the daughter of S sitting 4<sup>th</sup> to the right of S.



80. Ans. B

from the arrangement only S, U, P are only serially sitting in the table in the above question

From the above information

xii. There are eight people P, Q, R, S, T, U, V & W. Each of the female is sitting between two males and vice versa i.e. there are equal number of male and female i.e. four female, four male present in that family

xiii. Four persons are sitting at the middle of each side of the table. All the mothers present in that family is facing their own respective daughters i.e. all four females are sitting at the middle of each side of the table and facing each other & mothers are facing their own daughter. It's clear that all the males of the family are sitting at the corners

xiv. W is son in law of S i.e. W is male, Grandmother of Q is sitting to his left i.e. Q is male, R is the wife of U i.e. U is male and granddaughter of T is sitting to his right i.e. T is male.

I.e. males are W, U, Q, T and females are P, R, S, V

xv. U is sitting third to the right of R, R is the wife of U i.e. daughter of R is facing towards R.

xvi. Only S is sitting between U & Q, grandmother of Q is sitting to his first left

xvii. Mother of U is sitting to his first right and father of U is sitting to his 2<sup>nd</sup> left i.e. S is the mother of U and S is the grandmother of Q.

xviii. W is sitting 3<sup>rd</sup> to the left of S and W is the son in law of S

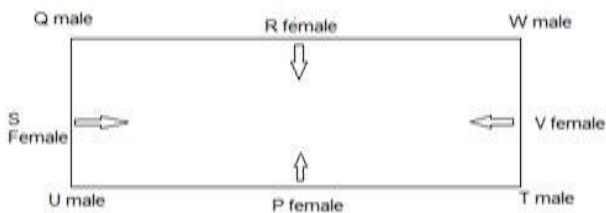
xix. Clearly T sits 3<sup>rd</sup> to the right of S since T is a male (all males are sitting at the corners)

xx. Father of U is sitting to his 2<sup>nd</sup> left i.e. T is the father of U i.e. S is the wife of T.

xxi. R is the mother of Q, P is the sister of Q i.e. P is the daughter of R. P is sitting 4<sup>th</sup> to the right of R i.e. granddaughter of T is sitting to his first right

xxii. Clearly V is the daughter of S sitting 4<sup>th</sup> to the right of S.





81. Ans. C

In the rearrangement, first numbers are arranged and then words are rearranged. In the first step the smallest even number comes at the left end and the largest odd number comes at right end. In the second step second smallest even number comes at the left end and the second largest odd number comes at the right end and so on till the numbers are rearranged. After that words are rearranged. The words beginning with consonant are rearranged in alphabetical order on the left end and words beginning with vowels are rearranged in reverse alphabetical order on the right end till the final arrangement.

**Input:** enough 57 plum 12 67 sense other 44 amount 71 hill 98

**Step I:** 12 enough 57 plum 67 sense other 44 amount hill 98 71

**Step II:** 44 12 enough 57 plum sense other amount hill 98 71 67

**Step III:** 98 44 12 enough plum sense other amount hill 71 67 57

**Step IV:** hill 98 44 12 enough plum sense amount 71 67 57 other

**Step V:** plum hill 98 44 12 sense amount 71 67 57 other enough

**Step VI:** sense plum hill 98 44 12 71 67 57 other enough amount

82. Ans. B

In the rearrangement, first numbers are arranged and then words are rearranged. In the first step the smallest even number comes at the left end and the largest odd number comes at right end. In the second step second smallest even number comes at the left end and the second largest odd number comes at the right end and so on till the numbers are rearranged. After that words are rearranged. The words beginning with consonant are rearranged in alphabetical order on the left end and words beginning with vowels are rearranged in reverse alphabetical order on the right end till the final arrangement.

**Input:** enough 57 plum 12 67 sense other 44 amount 71 hill 98

**Step I:** 12 enough 57 plum 67 sense other 44 amount hill 98 71

**Step II:** 44 12 enough 57 plum sense other amount hill 98 71 67

**Step III:** 98 44 12 enough plum sense other amount hill 71 67 57

**Step IV:** hill 98 44 12 enough plum sense amount 71 67 57 other

**Step V:** plum hill 98 44 12 sense amount 71 67 57 other enough

**Step VI:** sense plum hill 98 44 12 71 67 57 other enough amount

83. Ans. A

In the rearrangement, first numbers are arranged and then words are rearranged. In the first step the smallest even number comes at the left end and the largest odd number comes at right end. In the second step second smallest even number comes at the left end and the second largest odd number comes at the right end and so on till the numbers are rearranged. After that words are rearranged. The words beginning with consonant are rearranged in alphabetical order on the left end and words beginning with vowels are rearranged in reverse alphabetical order on the right end till the final arrangement.

**Input:** enough 57 plum 12 67 sense other 44 amount 71 hill 98

**Step I:** 12 enough 57 plum 67 sense other 44 amount hill 98 71

**Step II:** 44 12 enough 57 plum sense other amount hill 98 71 67

**Step III:** 98 44 12 enough plum sense other amount hill 71 67 57

**Step IV:** hill 98 44 12 enough plum sense amount 71 67 57 other

**Step V:** plum hill 98 44 12 sense amount 71 67 57 other enough

**Step VI:** sense plum hill 98 44 12 71 67 57 other enough amount

84. Ans. D

In the rearrangement, first numbers are arranged and then words are rearranged. In the first step the smallest even number comes at the left end and the largest odd number comes at right end. In the second step second smallest even number comes at the left end and the second largest odd number comes at the right end and so on till the numbers are rearranged. After that words are rearranged. The words beginning with consonant are rearranged in alphabetical order on the left end and words beginning with vowels are rearranged in reverse alphabetical order on the right end till the final arrangement.

**Input:** enough 57 plum 12 67 sense other 44 amount 71 hill 98

**Step I:** 12 enough 57 plum 67 sense other 44 amount hill 98 71

**Step II:** 44 12 enough 57 plum sense other amount hill 98 71 67

**Step III:** 98 44 12 enough plum sense other amount hill 71 67 57

**Step IV:** hill 98 44 12 enough plum sense amount 71 67 57 other

**Step V:** plum hill 98 44 12 sense amount 71 67 57 other enough

**Step VI:** sense plum hill 98 44 12 71 67 57 other enough amount

85. Ans. B

In the rearrangement, first numbers are arranged and then words are rearranged. In the first step the smallest even number comes at the left end and the largest odd number comes at right end. In the second step second smallest even number comes at the left end and the second largest odd number comes at the right end and so on till the numbers are rearranged. After that words are

rearranged. The words beginning with consonant are rearranged in alphabetical order on the left end and words beginning with vowels are rearranged in reverse alphabetical order on the right end till the final arrangement.

**Input:** enough 57 plum 12 67 sense other 44 amount 71 hill 98

**Step I:** 12 enough 57 plum 67 sense other 44 amount hill 98 71

**Step II:** 44 12 enough 57 plum sense other amount hill 98 71 67

**Step III:** 98 44 12 enough plum sense other amount hill 71 67 57

**Step IV:** hill 98 44 12 enough plum sense amount 71 67 57 other

**Step V:** plum hill 98 44 12 sense amount 71 67 57 other enough

**Step VI:** sense plum hill 98 44 12 71 67 57 other enough amount

86. Ans. B

South	U(Black)	T(Brown)	Q(Yellow)	S(Grey)	R(White)
North	W(Orange)	Y(Blue)	V(Pink)	Z(Red)	X(Green)

87. Ans. C

South	U(Black)	T(Brown)	Q(Yellow)	S(Grey)	R(White)
North	W(Orange)	Y(Blue)	V(Pink)	Z(Red)	X(Green)

88. Ans. A

South	U(Black)	T(Brown)	Q(Yellow)	S(Grey)	R(White)
North	W(Orange)	Y(Blue)	V(Pink)	Z(Red)	X(Green)

89. Ans. D

South	U(Black)	T(Brown)	Q(Yellow)	S(Grey)	R(White)
North	W(Orange)	Y(Blue)	V(Pink)	Z(Red)	X(Green)

90. Ans. B

South	U(Black)	T(Brown)	Q(Yellow)	S(Grey)	R(White)
North	W(Orange)	Y(Blue)	V(Pink)	Z(Red)	X(Green)

91. Ans. E

**From both the statements:**

eat and drink healthy  $\Rightarrow$  se ta pa me . . . (i)

drink hot beverages  $\Rightarrow$  ta nu fa . . . (ii)

eat hot meal daily  $\Rightarrow$  fa me la du . . . (iii)

cold and hot  $\Rightarrow$  pa fa ga . . . (iv)

From (i) and (ii), drink  $\Rightarrow$  ta

From (i) and (iii), eat  $\Rightarrow$  me

From (i) and (iv), and  $\Rightarrow$  pa

The code for 'healthy' is 'su'.

92. Ans. A

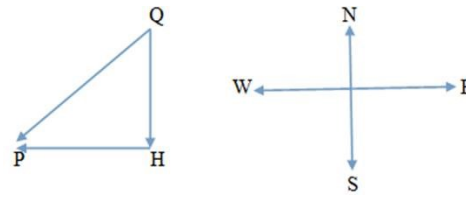
if the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

Using statement I alone, C is the brother of D.

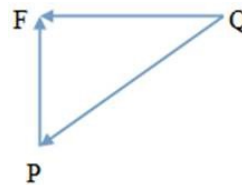
From Statement II, gender of C cannot be determined.

93. Ans. C

From statement I ,



Hence P is the south-west of Q



From statements II, P is the South-West of Q.

94. Ans. D

From statements I,

(J & T) > M > (L & R)

From statement II,

L & R

Hence from statements I & II ,

(J & T) > M > L > R

95. Ans. E

From I Neha's birthday, according to Ramesh, falls on Wednesday or Thursday.

From II Neha's birthday, according to kiran, falls on Tuesday or Wednesday.

From I and II Neha's birthday falls on Wednesday.

96. Ans. B

The amount of disposable income is higher in rural household than semi urban even though they get same monthly income is because semi urban household have to pay more rent and maintenance expenses for their basic amenities. The services are costlier in semi urban so they need to spend more and will have lesser disposable cash than rural households

97. Ans. B

It's a laptop for all. The statement says students will get an offer that does not mean other can't buy it. So I does not follow. Since students are given an offer we can conclude that Lenovo wants students to buy their laptops. So II follow.

98. Ans. D

Choice (A): Based on some assessment, the school has come to the understanding that the students are not getting proper meal at home. No facts are provided to conform this. Hence, (A), is not implicit. Choice (B): There is no information given about the donation, which is given to the charity. Hence (B) is out of context. Statement (C) the statement has no reference to the utilization of funds. Hence it is out of context. Choice (D) The school authority was providing the breakfast to the students assuming that they are not getting a proper meal. Hence Choice (D) is an assumption.

99. Ans. A

Educating the school going children on politics will definitely acquaint them with the intricacies and modalities of the same thus help them to make informed decision. Hence, argument I is strong.

100. Ans. C

Both are the viable course of action and results in immediate response.

101. Ans. C

The pattern followed is:

$$4 = 3.5 + 0.5$$

$$5 = 4 + 1 \text{ (i.e. } 0.5 \times 2)$$

$$8 = 5 + 3 \text{ (i.e. } 1 \times 3)$$

$$20 = 8 + 12 \text{ (i.e. } 3 \times 4)$$

$$? = 20 + 60 \text{ (i.e. } 12 \times 5)$$

$$? = 80$$

102. Ans. A

The pattern followed is:

$$86 = 88 - 2 \text{ (1}^3 + 1)$$

$$95 = 86 + 9 \text{ (i.e. } 2^3 + 1)$$

$$67 = 95 - 28 \text{ (i.e. } 3^3 + 1)$$

$$132 = 67 + 65 \text{ (i.e. } 4^3 + 1)$$

$$? = 132 - 126 \text{ (i.e. } 5^3 + 1)$$

$$? = 6$$

103. Ans. B

The pattern followed is:

$$4 = 3 * 1 + 1$$

$$9 = 4 * 2 + 1$$

$$28 = 9 * 3 + 1$$

$$113 = 28 * 4 + 1$$

$$? = 113 * 5 + 1$$

$$? = 566$$

104. Ans. D

The pattern followed is:

$$491 = 500 - 9$$

$$478 = 491 - 13 \text{ (i.e. } 9 + 2^2)$$

$$449 = 478 - 29 \text{ (i.e. } 13 + 4^2)$$

$$384 = 449 - 65 \text{ (i.e. } 29 + 6^2)$$

$$? = 384 - 129 \text{ (i.e. } 65 + 8^2)$$

$$? = 255$$

105. Ans. A

The pattern followed is:

$$5 = 9 * 0.5 + 0.5$$

$$6 = 5 * 1 + 1$$

$$10.5 = 6 * 1.5 + 1.5$$

$$23 = 10.5 * 2 + 2$$

$$? = 23 * 2.5 + 2.5$$

$$? = 60$$

106. Ans. D

Total Dangal tickets sold in Mumbai = 24000  
 45% of the sold tickets ranged between INR 1 and INR 250  
 ⇒ 55% of the sold tickets ranged between INR 251 and INR 350  
 ∴ Number of tickets sold of Dangal ranged between INR 251 and INR 350 = 55% of 24000  
 ⇒ Number of tickets sold of Dangal ranged between INR

251 and INR 350 = 13200

Additional 8% entertainment duty should be imposed duty on movie tickets priced between INR 251 and INR 350

⇒ Amount collected as entertainment duty = 8% of 13200

⇒ Amount collected as entertainment duty = INR 1056

The government has also allowed theatre owners to collect INR 11 as service charges on the tickets

⇒ Amount collected as service charge = 11 × 24000

⇒ Amount collected as service charge = INR 264000

Now, total amount collected as revenue by theatre and government = 264000 + 1056 = INR 265056

Hence, an amount of INR 265056 is collected as revenue by theatre and government on movie Dangal from Mumbai.

107. Ans. A

Total number of Neerja tickets sold in all six cities = 19000+ 17000+28000+23000+22000+14000 = 123000

The number of tickets sold of film Neerja in these six cities is 75% of the total tickets of film Neerja sold in India

⇒ Total number of Neerja tickets sold in India

$$= \frac{123000}{75} \times 100 = 164000$$

∴ Total number of Neerja tickets sold in India = 164000

Let the number of tickets sold over the globe be x

The total number of ticket sold over the globe except India is 36% of the total number of ticket sold over the globe

⇒ Total number of Neerja tickets sold over the globe

$$= \frac{164000}{64} \times 100$$

⇒ Total number of Neerja tickets sold over the globe = 256250

Hence, number of Neerja tickets sold over the globe is 256250

108. Ans. C

Total number of Airlift tickets sold in Manali = 18000

7% of the total number of Airlift tickets sold in Manali was sold by one multiplex

⇒ Number of Airlift tickets sold by the multiplex = 7% of 18000

⇒ Number of Airlift tickets sold by the multiplex = 1260

Let the number of children tickets sold be x

And number of adult tickets sold be y

According to the question:

$$\Rightarrow x + y = 1260 \text{ ..... (1)}$$

The cost of tickets for movie Airlift is 120 for children and 250 for adults and INR 274050 was collected in total for movie Airlift by the multiplex

$$\Rightarrow 120x + 250y = 274050 \text{ ..... (2)}$$

Now, multiply equation (1) by 120 and subtract equation (1) from (2)

$$\Rightarrow 120x + 250y - 120x - 120y = 274050 - 151200$$

$$\Rightarrow 130y = 122850$$

$$\Rightarrow y = 945$$

Putting value of y in equation (1)

$$\Rightarrow x + 945 = 1260$$

$$\Rightarrow x = 315$$

Hence, 315 tickets of children and 945 tickets of adults were sold by the multiplex of the airlift.

109. Ans. B

Let price of sultan ticket be x

Price of Dangal ticket be y

And price of Neerja ticket be z

Anita buys 2 sultan tickets, 1 Dangal ticket and 3 Neerja tickets for a total of INR 1500

$$\Rightarrow 2x + y + 3z = 1500 \dots\dots\dots (1)$$

Gunjan buys 1 sultan ticket, 2 Dangal ticket and 2 Neerja tickets for INR 1225

$$\Rightarrow x + 2y + 2z = 1225 \dots\dots\dots (2)$$

Khushboo buys 2 sultan tickets, 3 Dangal tickets and 1 Neerja tickets for INR 1200

$$\Rightarrow 2x + 3y + z = 1200 \dots\dots\dots (3)$$

Now, subtract (3) from (1)

$$\Rightarrow 2x + y + 3z - 2x - 3y - z = 300$$

$$\Rightarrow 2z - 2y = 300 \dots\dots\dots (4)$$

Multiply equation (2) by 2 and then equation (1) by (2)

$$\Rightarrow 2x + 4y + 4z - 2x - y - 3z = 2450 - 1500$$

$$\Rightarrow 3y + z = 950 \dots\dots\dots (5)$$

Multiply equation (4) by 3 and equation (5) by 2 and then add both of them

$$\Rightarrow 6z - 6y + 6y + 2z = 900 + 1900$$

$$\Rightarrow 8z = 2500$$

$$\Rightarrow z = 350$$

Putting value of z in equation (5)

$$\Rightarrow 3y + 350 = 950$$

$$\Rightarrow 3y = 600$$

$$\Rightarrow y = 200$$

Now putting value of y and z in (1)

$$\Rightarrow 2x + 200 + 3(350) = 1500$$

$$\Rightarrow 2x = 1500 - 1250$$

$$\Rightarrow x = 125$$

Hence, price of one Sultan ticket is INR 125

Number of Sultan tickets sold in Bangalore = 24000

$$\therefore \text{Collection made by sultan from Bangalore} = 24000 \times 125$$

$$\Rightarrow \text{Collection made by sultan from Bangalore} = \text{INR } 30,00,000$$

Hence, movie Sultan collected INR 30,00,000 from Bangalore.

110. Ans. D

Let total number of tickets sold in day be x

$$\therefore \text{Total collection in day} = 76x$$

Let the total number of tickets sold in night be y

$$\therefore \text{Total collection in night} = 60y$$

$$\text{Total day and night customers} = x + y$$

$$\text{Total average collection} = 65(x + y)$$

According to the question:

$$\Rightarrow 76x + 60y = 65(x + y)$$

$$\Rightarrow 76x - 65x = 65y - 60y$$

$$\Rightarrow 11x = 5y$$

$$\Rightarrow x/y = 5/11$$

Total number of M.S. Dhoni tickets sold in Ahmedabad = 32000

15% of the total number is sold by the theatre

$$\Rightarrow \text{Number of M.S. Dhoni tickets sold by theatre} = 15\% \text{ of } 32000$$

$$\Rightarrow \text{Number of M.S. Dhoni tickets sold by theatre} = 4800$$

$$\therefore \text{Number of tickets sold by theatre in night} = 11/16 \times 4800$$

$\Rightarrow$  Number of tickets sold by theatre in night = 3300  
Total number of M.S. Dhoni tickets sold in Hyderabad = 15000

$$\text{Now, required percentage} = \frac{3300}{15000} \times 100 = 22\%$$

Hence, the number of tickets sold in the night is 22% of total M.S. Dhoni tickets sold in Hyderabad.

111. Ans. B

$$\frac{68}{100} \times 595 - \frac{45}{100} \times 372$$

$$404.6 - 167.4$$

$$237.2$$

112. Ans. D

Let the answer be Y

$$\frac{49.84}{\sqrt{5.2}} \times 18.12 = 62.21 \times \sqrt{Y}$$

By approximation,

$$\frac{50}{\sqrt{4}} \times 20 = 60 \times \sqrt{Y}$$

$$\frac{50}{2} \times 20 = 60 \times \sqrt{Y}$$

$$500 = 60 \times \sqrt{Y}$$

$$\sqrt{Y} \approx 8$$

Squaring both sides

$$Y \approx 64$$

Hence the answer is option (D).

113. Ans. C

$$\Rightarrow \frac{(?)^{\frac{9}{4}}}{(?)^{\frac{1}{4}}} = \frac{324}{9}$$

$$\Rightarrow (?)^{\left(\frac{9}{4} - \frac{1}{4}\right)} = 36$$

$$\Rightarrow (?)^2 = 36 = 6^2$$

$$\Rightarrow ? = 6$$

114. Ans. B

By approximation,

$$\left(\frac{70}{100} \times 260\right) - 63 = Y - \left(\frac{5}{100} \times 900\right)$$

$$(7 \times 26) - 63 = Y - (5 \times 9)$$

$$182 - 63 = Y - 45$$

$$Y = 182 - 63 + 45 = 164$$

Hence the answer is option (B).

115. Ans. E

$$\frac{17}{7} - \frac{9}{4} - \frac{5}{4} + \frac{29}{28} = -\frac{1}{28}$$

Hence option E is correct

116. Ans. E

$$\text{Boys \%} = \frac{(4000 - 2500)}{4000} \times 100 = 38\% \text{ approx.}$$

117. Ans. A

Total students enrolled in singing & craft

$$= \frac{4000 \times (20 + 20)}{100} = 1600$$

Total girls enrolled in singing & craft

$$= \frac{2500 \times (20 + 25)}{100} = 1125$$

No. of boys enrolled = 1600 - 1125 = 475

118. Ans. B

$$\frac{2500 \times (20 + 14)}{100} = 850$$

119. Ans. C

No. of girls enrolled in dancing

$$= \frac{21 \times 2500}{100} = 525$$

$$\% = \frac{525}{4000} \times 100 = 13.12\%$$

120. Ans. D

Total students in swimming = 840

$$\text{No. of girls enrolled in swimming} = \frac{2500 \times 20}{100} = 500$$

No. of boys enrolled in swimming = 340

Ratio = 500 : 340 = 25 : 17

121. Ans. E

$$(X + 5)(5X + 3) = 0 \Rightarrow X = -5, -3/5$$

$$(Y + 5)(6Y + 5) = 0 \Rightarrow Y = -5, -5/6$$

No relation

122. Ans. C

$$\text{I. } 12x^2 + 82x + 140 = 0$$

$$x = -7/2, -10/3$$

$$\text{II. } 16y^2 + 48y + 32 = 0$$

$$y = -1, -2$$

Y > X

123. Ans. E

$$(2X - 11)(2X - 13) = 0 \Rightarrow X = +11/2, +13/2$$

$$(2Y - 11)(2Y - 15) = 0 \Rightarrow Y = +11/2, +15/2$$

say  $x = 11/2$  and  $y = 15/2$ ;  $y > x$

but if say  $x = 13/2$  and  $y = 11/2$ ; then  $x > y$   
Hence, No relation.

124. Ans. E

$$(X - 3)(X + 7) = 0 \Rightarrow X = +3, -7$$

$$(Y - 4)(Y - 2) = 0 \Rightarrow Y = +4, +2$$

No relation

125. Ans. E

From I,

$$\frac{8}{\sqrt{x}} + \frac{6}{\sqrt{x}} = \sqrt{x}$$

$$\Rightarrow x = 14$$

From II,

$$y^2 - (14^{5/2} / y^{1/2}) = 0$$

$$\Rightarrow y^{5/2} = 14^{5/2}$$

$$\Rightarrow y = 14$$

So,  $x = y$

126. Ans. C

Average number of students (males and females) passed out from all the colleges together.

$$\frac{(15 + 22.5) + (17.5 + 20) + (27.5 + 35) + (25 + 30) + (7.5 + 10)}{5}$$

$$= \frac{210.0}{5} \text{ thousands}$$

$$= 42000$$

127. Ans. B

Number of females passed out from college C = 35  
Total number of females passed out from all the college together.

$$= 22.5 + 20 + 35 + 30 + 7.5$$

$$= 115$$

Required percentage

$$= \frac{35}{115} \times 100 = 30.43\%$$

$$\approx 30\% (\text{approx.})$$

128. Ans. E

Total number of students passing out from college A = 15 + 22.5

$$= 37.5 \text{ thousand}$$

Total number of students passing out from college E

$$= 7.5 + 10$$

$$= 17.5 \text{ thousand}$$

$$\text{Required difference} = (37.5 - 17.5) \text{ thousand}$$

$$= 20 \text{ thousand} = 20000$$

129. Ans. A

Required ratio

$$= \frac{15 + 17.5 + 27.5 + 20 + 10.0}{22.5 + 20 + 35 + 30 + 7.5}$$

$$= \frac{95}{115} = \frac{19}{23} = 19 : 23$$

130. Ans. D

Number of males passing out from college A and B

$$= 15 + 17.5 = 32.5$$

Number of females passing out from college C and D

$$= 35 + 30 = 65$$

Required percentage

$$= \frac{32.5}{65} \times 100 = 50\%$$

131. Ans. E

From II: it is clear that out of 180 students, 120 students scored over 70% In the test.

From I: 15 boys scored over 70%.

Hence using both the statements, number of girls who scored over 70% = 120-15 = 105.

132. Ans. E

From statement I,

Given: The ratio of speed in upstream to the speed in downstream is 2 : 3

Let speed in upstream be 2x km/hr and speed in downstream be 3x km/hr.

Since x is not known, so speed of the stream cannot be obtained.

Thus, the data in Statement I alone are not sufficient to answer the question

From statement II,

Given: The distance travelled in upstream in 2 hours by a man is more than distance travelled by him in downstream in 1 hour by 4km.

⇒ distance travelled in upstream - distance travelled in downstream = 4 km

$$(2 \times \text{speed in downstream} - 1 \times \text{speed in upstream}) = 4 \text{ km}$$

∴ Speed in upstream and downstream is not known, so speed of the stream cannot be found using these data.

Thus, the data in Statement II alone are not sufficient to answer the question

Combining I and II,

$$\text{Speed in upstream} = 2x$$

$$\text{Speed in downstream} = 3x$$

$$(2 \times \text{speed in downstream} - 1 \times \text{speed in upstream}) = 4 \text{ km}$$

$$\Rightarrow (2 \times 3x - 1 \times 2x) = 4 \text{ km}$$

$$\Rightarrow 6x - 2x = 4$$

$$\Rightarrow x = 1 \text{ km/hr}$$

∴ Speed in upstream and downstream are 2 km/hr and 3 km/hr respectively.

$$\text{Speed of the stream} = \frac{1}{2} (\text{speed in downstream} - \text{speed in upstream})$$

$$= \frac{1}{2} (3 - 2)$$

$$= \frac{1}{2} \text{ km/hr}$$

133. Ans. C

From I:  $x+(x+2) = 34$  i.e.  $x = 16$ , hence, fourth consecutive even number is  $(x+6) = 22$ .

From II:  $x+4+(x+6) = 42$  i.e.  $x = 16$ , hence, fourth consecutive even number is  $(x+6) = 22$ .

134. Ans. A

From statement 1,

$$\text{Marks in English} = \frac{1}{2} \text{ Hindi}$$

Marks in chemistry = 50% of Hindi

$$\text{Hindi} = 42 \times 2$$

$$\text{English} = \frac{1}{2} \times 42 \times 2 = 42$$

In statement 2 total marks is not given

135. Ans. A

Our aim is to calculate the ratio of the total number of girls to the total number of boys in a college.

From statement A,

There are 2000 students in the college out of which 40% are girls.

$$\Rightarrow \text{Number of girls} = \frac{40}{100} \times 2000 = 800$$

$$\text{Thus, number of boys} = 2000 - 800 = 1200$$

Ratio of number of boys to the total number of girls in a college = 1200 : 800

⇒ Ratio of number of boys to the total number of girls in a college = 3 : 2

So, statement A is sufficient to reach at the solution.

From statement B,

The ratio of the total number of boys to the total number of girls in the last year was 5 : 5.

Here, only last year ratio is given but this data is not sufficient to calculate ratio of number of girls to the total number of boys in a college.

So, Statement B alone is not sufficient to reach at the solution.

136. Ans. C

Let the age of A, 5 years ago be X

Then, the age of B, 5 years ago will be 3X

According to question

$$\frac{(3X+5+6)}{(X+5+12)} = \frac{7}{4}$$

$$\frac{(3X+11)}{(X+17)} = \frac{7}{4}$$

$$12X+44 = 7X+119$$

$$5X = 119-44$$

$$5X = 75$$

$$X = 15$$

$$\text{A's present age} = 15+5 = 20$$

$$\text{B's present age} = 3*15 + 5 = 45+5 = 50$$

$$\text{Ratio} = (20-3):(50+3) = 17:53$$

137. Ans. A

$$\text{Let CP1} = 100 \text{ CP2} = 100 \text{ overall CP} = 200$$

$$15\% \ 20\%$$

$$\text{SP1} = 115 \text{ overall SP} = 240$$

$$\text{SP2} = \text{overall SP} - \text{SP1} = 240 - 115 = 125$$

$$\text{Difference in SP} = 125-115 = 10$$

$$\text{Therefor CP} = 48000 * 100 / 10 = \text{Rs.48000 Ans.}$$

138. Ans. B

$$\text{Speed of boat going downstream} = 30 + 5 = 35 \text{ kmph}$$

$$\text{Speed of boat going upstream} = 30 - 5 = 25 \text{ kmph}$$

$$\text{Speed of approach} = 35 + 25 = 60 \text{ kmph}$$

$$\text{Distance to be travelled} = 300 \text{ km}$$

$$\text{Time required} = 300/60 = 5 \text{ hours}$$

139. Ans. A

$$\text{Ratio of weight of three types of rice} = (5*6) : (4*5) : (3*4) = 15:10:6$$

$$\text{Weight of type one rice} = 248 * (15/31) = 120 \text{ kg}$$

140. Ans. D

Let Rakesh's salary be '100x'.

Salary spent in PPF = 12x

Remaining Salary = 88x

So, Salary spent on clothes = 3/8 of 88x = 33x

As per the question,

$$33x - 12x = 10500$$

$$21x = 10500,$$

$$\text{i.e. } x = 500$$

So, Rakesh's Salary = Rs. 50000/-

Amount spent on Remaining expenses = 50000 -

$$((12 \times 500) + (33 \times 500))$$

$$= 50000 - (6000 + 16500) = 50000 - 22500 = 27500.$$

Now, let House rent be 'a'

Other expenses = a + 1500

As per question,

$$a + (a + 1500) = 27500$$

$$2a = 26000$$

$$a = \text{Rs. } 13000/-$$

141. Ans. B

X, Y, and Z invested Rs. 14000 in total in a business.

Let Y invested Rs. x in the business.

X invested Rs. 3120 more than Y and Z, Rs. 1720 less than Y.

So, we can write now,

$$(x + 3120) + x + (x - 1720) = 14000$$

$$\Rightarrow 3x + 3120 - 1720 = 14000$$

$$\Rightarrow 3x = 14000 - 1400$$

$$\Rightarrow x = 12600/3$$

$$\Rightarrow x = 4200$$

So, the investment of Y = Rs. 4200

The investment of X = Rs. 4200 + 3120 = Rs. 7320

And, the investment of Z = Rs. 4200 - 1720 = Rs. 2480

Then, the ratio of their shares = X : Y : Z = 7320 : 4200 : 2480 = 183 : 105 : 62

The total profit was Rs. 35000.

$$\therefore \text{The share of Z} = \text{Rs. } 35000 \times (62/350) = \text{Rs. } 6200$$

142. Ans. E

Let the sum invested at 6% be Rs. x

Total sum = Rs. 5500

The interest of one part at 6% for 4 years is equal to the interest of another at 10% for 2 years.

We know,

Simple interest =  $P \times T \times R$  [Where, P = Principal amount, T = duration in years, R = Interest percentage annually]

So, we can write now,

$$x \times 4 \times 6\% = (5500 - x) \times 2 \times 10\%$$

$$\Rightarrow 6x/25 = (5500 - x) \times 1/5$$

$$\Rightarrow 6x = (5500 - x) \times 25 \times (1/5)$$

$$\Rightarrow 6x = 27500 - 5x$$

$$\Rightarrow 11x = 27500$$

$$\Rightarrow x = 2500$$

$$\therefore \text{The sum invested at 6% interest} = \text{Rs. } 2500.$$

143. Ans. D

Total no of balls = 8 + 7 + 6 = 21

Let, E be the event where the ball can be selected which is neither yellow nor black

Number of events where the ball can be selected which is neither yellow nor black = 7

$$P(E) = 7/21 = 1/3$$

144. Ans. A

Given, A certain work is completed by A and B together in 10 days.

Let the number of days taken by A alone be 'a' and by B alone be 'b'

In 1 day,

A completes 1/a part and B completes 1/b part.

$$1/a + 1/b = 1/10 \text{ ---- (1)}$$

Now, if A had worked at twice the speed and B had worked at half his speed it would have taken them 8 days to finish the work.

$$\text{Thus, } 2/a + 1/2b = 1/8 \text{ ----- (2)}$$

$$2 \times (1) - (2)$$

$$\Rightarrow 2/b - 1/2b = 1/5 - 1/8$$

$$\Rightarrow 3/2b = 3/40$$

$$\Rightarrow b = 20 \text{ days}$$

145. Ans. A

Let the radius of cylinder A = 4X and that of cylinder B = 7X

And height of cylinder A = 5Y and that of cylinder B = 2Y

Volume of cylinder =  $22/7 \times r^2 \times h$ .

$$\text{Ratio} = [22/7(4X)^2 \times 5Y] / [22/7(7X)^2 \times 2Y] = 40:49$$

146. Ans. C

The relative speed = (58+50) km/hr = 108km/hr

$$= 108 \times \frac{5}{18} \text{ m/sec} = 30 \text{ m/s}$$

The distance covered to pass each other = 60+90 = 150m

$\therefore$  The time taken to pass each other

$$= \frac{\text{distance}}{\text{relative speed}} = 150/30 = 5 \text{ second}$$

147. Ans. D

Let the capacity of the tank be C

Speed of inlet tap = C/16

Speed of outlet tap = C/8

Difference in speed = C/8 - C/16 = C/16 hours

Time to empty 3/4<sup>th</sup> of the tank =  $(3C/4) / C/16 = 3C/4$

$$\times 16/C = 12 \text{ hours}$$

148. Ans. D

Suppose MP = 100

Then CP =  $100 \times 80 / 100 = 80$

According to question

Half the goods at MP =  $100/2 = 50$

One quarter =  $100/4 = 25$  at 10% discount =

$$25 \times 90 / 100 = 22.5$$

And rest =  $100 - 50 - 25 = 25$  at 30% discount =

$$25 \times 70 / 100 = 17.5$$

$$\text{Total sold} = 50 + 22.5 + 17.5 = 90$$

$$\text{Gain\%} = (90 - 80) \times 100 / 80 = 12.5\% \text{ Ans.}$$

149. Ans. B

Let the principal amount be Rs. x

Calculating SI:

SI for 1 year at 12% rate is Rs  $(12/100) \times x$ . For 3 years it will be Rs  $(36/100) \times x$  ----- (1)

Calculating CI:

$$\text{For 1<sup>st</sup> year, Interest} = (12/100) \times x$$

For 2<sup>nd</sup> year, interest =  $(12/100)*x + (12/100)*x + (144/10000)*x$

For 3<sup>rd</sup> year, interest =  $(12/100)*x + (12/100)*x + (12/100)*x + (144/10000)*x + (144/10000)*x + (1728/1000000)*x$ . ----- (2)

Subtracting equation 2 and 1 and solving further,  
 $312*144*x/1000000 = 112.32$

$X = \text{Rs } 2500$ .

150. Ans. D

Let us suppose Women give 10 units a day

Therefore, a man gives  $1.4 * 10 = 14$  units a day

Similarly, a child gives  $0.6 * 10 = 6$  units a day

Total job (units) = (7 days \* per day contribution) =  $7 * (3 * 14 + 5 * 10 + 4 * 6) = 812$  units

New combination = 2 M + 7 W + 3 C

Contribution per day =  $2 * 14 + 7 * 10 + 3 * 6 = 116$  units

Days required to complete the job =  $812/116 = 7$  days

151. Ans. E

Social forestry was an important initiative by the government of India which aimed at planting trees on wasteland, village common land, along rivers, canals, roadsides and railway lines. The whole idea was to increase the forest area.

152. Ans. D

On 2<sup>nd</sup> Oct 1952, the government of India initiated Community Development program. The whole idea of this initiative was to involve rural people for the improvement and development of rural India.

153. Ans. E

Option E is the odd one out. Government, commercial banks, co-operative banks and land mortgage banks are examples of institutional agencies while traders are not. Institutional agency is characterized by having organized funds at their disposal and well-defined rules for lending money as loans.

154. Ans. B

Farm planning requires stepwise planning of land resources, labor and capital. Farm budgeting defines the monetary aspects in farm planning. Farm budgeting in turn is divided into types viz. partial and complete budgeting.

155. Ans. B

The co-operative banks work under three- tier system including participation from state, district and rural level. State co-operative bank, district co-operative bank and co-operative societies are involved at state, district and rural levels respectively.

156. Ans. E

Initiation, planning and execution, monitoring and control process and closing process, all are important components of project life cycle.

157. Ans. A

Farm budgeting defines the process of advance preparation of farm budget. Farm budgeting is an important component of farm planning.

158. Ans. D

In a regulated market for agriculture, the sale of agriculture products is achieved both by open auction and close tender system. Regulated markets are known to be socio- economic reform for the farms which enable them to obtain the best price for their agriculture produce.

159. Ans. D

Regional banks were entrenched in 1975. Prathama Bank was the first regional rural bank that was established on 2<sup>nd</sup> October 1975 with nominal capital of 5 crore. A year later, five new regional rural banks were established with nominal income of 100 crores.

160. Ans. A

Indian Institute of Rice Research is located in Hyderabad. It was established in 1965 by Indian Council of Agricultural Research (ICAR). It was formally known as Directorate of Rice Research (DRR).

161. Ans. B

The government of India started a scheme 'Comprehensive Crop Insurance Scheme' (CCIS) in 1985 to provide financial assistance to the farmers for the crop damage due to natural calamities. CCIS was closed in 1999 which was later superseded by National Agricultural Insurance Scheme (NAIS).

162. Ans. D

Best planning depends on many factors namely determining the objective, deciding the plan of action and implementation of the policies. Best planning helps reap profits in stipulated time.

163. Ans. E

Value addition is a marketing strategy that increases the customer base. It involves processing of food/ agriculture products based on consumer needs/ requirements. The current contribution of processing industry in value addition of agro- based products is 6%.

164. Ans. D

National Agricultural Credit Fund was established by Reserve Bank of India in February 1956 to provide long term loans to the statement government to enable the later to contribute in co-operative banks.

165. Ans. B

In 1951, Shri A. D Gorwala headed All India Rural Credit Committee. The committee submitted a report to Reserve Bank of India in 1954 which highlighted pitfalls of money lending system in rural India. They reported that 93% of money in rural India is lended by money lenders and relatives to people in need of money. In contrast, the government and co-operative banks together account for <7%. This led the committee to conclude "Cooperation has failed in India but must succeed".

166. Ans. D

Holstein Friesian is a cattle breed that produces highest amount of milk in the world viz. > 32000 kg milk per 365 days.



167. Ans. C

Aseel is a breed of chicken found in many states in India but is most abundant in Andhra Pradesh and Tamil Nadu. They lay 6-40 eggs/ year depending on their size.

168. Ans. C

The optimum moisture content for paddy storage depends on the duration of storage. For grain storage, seed storage and long term seed preservation, the optimum moisture content are less than 14%, less than 12% and less than 9% respectively.

169. Ans. D

In sprinkler irrigation, pressurized water is applied to the fields through the pipes with the help of pumps. Sprinkler irrigation can be used for irrigation of all kinds of soils except heavy clay soil.

170. Ans. D

Depreciation is method of determining the cost of assets (in this case tractor) at a given time. Straight line method used to determine the depreciation cost of tractor relies on depreciating the cost of tractor by equal amounts every year. This in turn depends on the original cost of the tractor and its useful life.

171. Ans. D

Citrus canker is a disease of citrus fruits (lime, orange and grapefruit) caused by a bacterium viz. *Xanthomonas*. The symptoms of citrus canker appear on leaves, stem and fruits of these citrus plants. The disease causes premature falling of fruits from the trees.

172. Ans. E

Crop rotation is a method employed routinely in agriculture in many parts of India. It involved growing different crops during the different seasons in a year on the same piece of land. This prevents the erosion of one type of nutrients thereby improving the soil fertility. In addition, it also aids in decreasing soil erosion and preventing soil borne diseases.

173. Ans. C

Nozzle is used to control the flow of either gas or liquid. Rotary duster lacks nozzle. Hence, it is the odd one out. In contrast, hand compression sprayer and devices used for sprinkler irrigation consist of nozzle.

174. Ans. E

*Helicoverpa axmiger* damages the gram crop at every stage viz. seedling, pod formation and maturity stage. However, the peak of damage occurs during the pod formation stage. *Helicoverpa axmiger* is a known pest for other crops viz. tomato, cotton, lady finger, cereals and vegetable crops.

175. Ans. D

In the areas with high temperature, the plants loose excessive water by transpiration that causes wilting in plants. Wilting in plants is also seen if there is not enough water for the plants/ they are excessively watered/ have inappropriate lighting/ insect damaged/ have fungal disease.

176. Ans. A

Xerophytes are the plants that are naturally equipped to grow in the dry conditions. Such plants make many structural adaptations, namely decrease in the number of stomata to decrease the water loss through transpiration, adaptation in the roots that allow them to absorb more water, and trichome on the leaves to absorb atmospheric water. The tropical trees have been reported to be drought resistant. Their leaf water potential is negative.

177. Ans. D

An integrated weed management system consists of tillage operations (digging, stirring, shoveling and raking), covering the area with weed mat (a material that doesn't support the growth of weeds), flame weeding, seed targeting and use of herbicides.

178. Ans. D

There are seventeen (17) essential elements for the growth of the plants. The most prominent essential elements are nitrogen, phosphorus, potassium, calcium, sulfur, magnesium, cobalt, chlorine, zinc, copper, boron, molybdenum, manganese, and iron.

179. Ans. A

The process of microbial conversion of nitrate to nitrogen is known as denitrification. The process of conversion of nitrogen to ammonia is known as ammonification. The conversion of ammonia to nitrite is known as nitrification.

180. Ans. B

*Azotobacter* is a gram negative, aerobic bacterium that is found in fresh waters, marshes, neutral and basic soil and in association with plants.

181. Ans. A

Urea, mono ammonium phosphate and ammonium nitrate are examples of nitrogen containing fertilizers. Ammonium citrate is used as food additive (acid regulator) and thus is the odd one out.

182. Ans. C

The process of nitrification proceeds in two steps. The first step involves conversion of ammonia to nitrite and second involves conversion of nitrite to nitrate. There is an addition of four oxygen molecules and removal of four protons in the nitrification. Hence, nitrification is an oxidation process.

183. Ans. C

Zinc is an essential element that influences the production of auxin, root development, formation of chlorophyll and enables plants to stand against low air temperatures. Plants highly responsive to the application of zinc are rice, dry beans, corn, sweet corn, sorghum, pecans, citrus and cotton.

184. Ans. C

The clay soils are alkaline soils with  $\text{pH} > 8.5$ . These soils have low infiltration rate and are characterized by the presence of either sodium carbonate or sodium bicarbonate.

185. Ans. D

Gypsum is chemically known as  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ . It finds its application as fertilizer, blackboard chalk and plaster.

186. Ans. B

Adhesion forces are attractive forces that allow interaction between soil and water. Thus, allowing retention of water. In contrast, cohesive forces are largely responsible for the interaction between water molecules.

187. Ans. A

It is important to check the seed viability during long term storage of seeds. Mainly two types of tests are used to check seed viability viz. tetrazolium and germination test. Tetrazolium test is a rapid biochemical test for determining seed viability. It is considered to be less reliable than germination test.

188. Ans. E

Any change in the chromosome structure is known as chromosome aberration. Translocation, deletion, inversion and duplications are examples of change in chromosome structure. Translocation is movement of a part of chromosome to the other non-homologous chromosome. Deletion is loss of a segment of chromosome. Inversion is the change in the orientation of genetic material in a chromosome. Duplication is the presence of two copies of same genetic material on a chromatid of a chromosome.

189. Ans. B

The process of introducing mutations to enable crop improvement is known as mutation breeding/ variation breeding. The mutations can be induced with radiations, chemical mutagens and recombinant DNA technology.

190. Ans. C

Linseed is the odd one out. It is not a Kharif crop. In contrast, jowar, rice, millet, maize, soyabean, turmeric, groundnut and cotton are examples of kharif crops. Kharif crops are sown at the onset of first rains in India (usually in the beginning of June- July). The kharif season lasts from June/July to October.

191. Ans. D

Male sterility refers to production of non- functional pollens by the plants. Cytoplasmic male sterility is widely used for producing hybrid seeds. Maize is a well-documented example of production of hybrid seeds due to cytoplasmic male sterility.

192. Ans. D

Aseel is a breed of chicken. In contrast, Poonam, Sapna, Suchitra and Happy end are examples of Gladiolus. Gladiolus is a perennial monocot that belongs to Iridaceae family.

193. Ans. D

S-12, PKM 1, Pusa Red Plum and Punjab Chuhara are varieties of tomato. Punjab Chuhara is the only tomato variety that is pear shaped amongst all the listed options. Punjab Chuhara is a high yielding variety (200 quintals/

hectare) of tomato developed by Punjab agricultural university.

194. Ans. D

UPAS-120 is an improved variety of pigeon pea. It is characterized by early maturing (120-125 days) and average yield of 16- 20 quintals per hectare. It is often manifested by sterility mosaic disease.

195. Ans. D

Organic farming relies on the use of biological pest control agents, organic waste as manure and crop rotation. Use of genetically modified seeds and synthetic pesticides/ insecticides is completely prohibited. Organic farming is practiced in many western nations. India is a recent addition to the list of countries following organic farming.

196. Ans. A

Cultivation of maize- wheat- moong is an example of crop rotation. In crop rotation, many crops (two or more than two crops) are grown on same piece of land per year. Crop harvesting of one crop is followed by sowing of seeds for the second crop. In mixed cropping, two or more crops are grown together on the same piece of land. In contrast, in relay cropping, second crop is sown before completing the harvesting of first crop. All techniques aim at increasing the crop production per hectare of land.

197. Ans. D

Potato is planted during September- October (Autumn), October- November (Winter) and December- January (Spring) in the Northern Plains.

198. Ans. B

Sugandh -5 is a rice variety grown in Punjab, Haryana, Uttar Pradesh and Jammu Kashmir. It is characterized by high yields (65-70 quintals/ hectare), excellent aroma, long grains and resistance to gall midge and brown spot diseases.

199. Ans. D

Phalaris minor is a weed known to affect onion, mustard, chick pea, barley, lentils, pea, flax, potato, berseem clover and wheat.

200. Ans. D

Bio-fertilizer is a fertilizer consisting of microorganism which promotes the growth of plants by improving the availability of nutrients of the plants. Blue green algae, Azotobacter and rhizobium are well documented examples of bio-fertilizer.