

**State Bank of India**  
**Probationary Officer's Examination**  
**Held on 26.11.2006**

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**REASONING**

Directions (1-5): Study the following information to answer these question.

I. Seven persons P, Q, R, S, T, V, X belonging to different cities viz. Delhi, Mumbai, Chennai, Kolkata, Bangalore, Hyderabad and Trivandrum, not necessarily in the same order, went to USA for attending a Conference. Each one had a different specialisation viz. Literature, Physics, Economics, Marketing, Computers, Textile Engineering and Information Technology.

II. 'S' is from Chennai and 'Q' does not have specialisation in Textile or Economics. R is a man of Marketing and comes from Mumbai. The person from Kolkata has specialisation in Computers. 'P' who is specialised in Literature does not belong to Delhi. V having specialisation in Physics is from Trivandrum. Information Technology is the specialisation of X who comes from Bangalore.

1. Which of the following persons s from Delhi?
  - (a) P
  - (b) S
  - (c) T
  - (d) S or T
  - (e) None of these
2. Who is a Textile Engineer?
  - (a) S
  - (b) T
  - (c) V
  - (d) S or T
  - (e) None of these
3. Person with specialisation in Literature comes from which of the following cities?
  - (a) Bangalore
  - (b) Kolkata
  - (c) Delhi
  - (d) Hyderabad
  - (e) None of these
4. Which of the following combinations of person, city and specialisation is correct?
  - (a) S-Chennai-Economics
  - (b) S-Chennai-Textile
  - (c) Q-Kolkata-Computers
  - (d) T-Delhi-Economics
  - (e) None of these
5. Who is specialised in Computers ?
  - (a) Q
  - (b) S
  - (c) T
  - (d) Data inadequate
  - (e) None of these

Directions (6-10): Study the following information carefully and answer the questions given below:

XYZ Limited Company organised an exhibition of machine tools. The exhibition was opened on all the weekdays for public. Certain passcode were issued to the visitors as entry card. The passcode of entry card was changed every hour according to a certain rule as shown below. The entry time of the first batch of the visitors was 9 AM and that for the last batch was 7 PM. Each batch was allowed only one hour. The lunch time was from 1 PM to 2 PM.

**Batch I** (9 AM to 10AM)

**Passcode:** course easy set for each year was

**Batch III** (10 AM to 11 AM)

**Passcode:** easy each course for was set year

**Batch III** (11 AM to 12 Noon)

**Passcode:** each was easy for year course set and so on.

6. If the passcode for the batch entering at 12 Noon is “she the girl is clever very good”, then what will be the passcode for the batch entering at 3 PM?
  - (a) Clever good is the very she girl
  - (b) Clever good the is she very girl
  - (c) Clever good the very is she girl
  - (d) Clever good very is the she girl
  - (e) None of these
7. The passcode of which of the following batches will be similar to the passcode for the batch III?
  - (a) VI
  - (b) VII
  - (c) VIII
  - (d) IX
  - (e) None of these
8. If the passcode for the batch III is “pin to the point is sharp not”, then what will be the passcode for the batch V ?
  - (a) Is not to sharp point pin the
  - (b) Is not to point sharp pin the
  - (c) Not is to sharp point pin the
  - (d) Not is to point sharp pin the
  - (e) None of these.
9. If the passcode for the second batch is “for the life is good change got” then the passcode for which of the following batches is “got change good is life the for” ?
  - (a) IV
  - (b) III
  - (c) V
  - (d) VI
  - (e) None of these

10. If the passcode for batch IV is “do how will the you job now”, then what will be the passcode for batch II ?
- (a) Job will now the do you how
  - (b) Job now will the do you how
  - (c) Job will how the do you now
  - (d) Job will the now do you how
  - (e) None of these

Directions (11-15): in each question below is given a statements followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

- (a) If only assumption I is implicit
- (b) If only assumption II is implicit
- (c) If either I or II is implicit
- (d) If neither I nor II is implicit and
- (e) If both I and II are implicit.

11. **Statement:** ‘Country ‘A’ would explore all channels to diffuse current tensions with country ‘B’ and bring peace on its borders’ – Statement of spokesperson of country ‘A’.

**Assumptions:**

- I. Country ‘A’ is desirous to diffuse current tension and restore peace with country ‘B’.
- II. It is desirable to use more than one channel when complex issues are to be settled amicably.

12. **Statement:** Two months ago, it was announced that central government pensioners would get dearness relief with immediate effect but till date, bank have not credited the arrears’-A statement from a Pensioner’s Forum.

**Assumptions:**

- I. Most of the banks normally take care of the pensioners.
- II. Two months’ time is sufficient for the government machinery to move and give effect to pensioners

13. **Statements:** The bridge was built at the cost of Rs. 128 crores and even civil bus service is not utilising it, what a pity to see it grocely underutilised’ A citizen’s view on a new flyover linking east and west sides of a suburb.

**Assumptions:**

- I. The building of such bridges does not serve any public objective.
- II. There has to be some accountability and utility of money spent on public projects.

14. **Statement:** Use our product to improve memory of your child, it is based on natural herbs and has no harmful side effects’-Advertisement of Pharmaceutical Company.

**Assumptions:**

- I. People generally opt for a medical product which is useful and has no harmful side effects.
- II. Improving memory of child is considered as important by many parents.

15. **Statements:** The traders of State ‘K’ would observe a state-wide bandh as the state has failed to meet their demand to resolve sales tax and other issues.

**Assumptions:**

- I. The traders of State ‘K’ have earlier tried other usual procedures to get their problem solved.

II. The State 'K' is not keen to solve the problem of traders.

**Directions (16-20) :** In the following questions the symbols +, x, ?, @ and \$ are used with the following meaning"

A + B means A is neither equal to nor smaller than B.

A x B means A is neither equal to nor smaller than B.

A ? B means A is neither greater nor equal than B.

A @ B means A is neither greater nor equal to B.

A \$ B means A is equal to B.

Now in each of the following questions assuming the given statements to be true find out which of the conclusions I and II given below them is/ are definitely True?

- (a) If only conclusion I is true
- (b) If only conclusion II is true.
- (c) If either I or II is true
- (d) If neither I nor II is true
- (e) If both I and II are true.

**16. Statements :**

C + D, D \$ M, M ? C

**Conclusion:**

I. M \$ C

II. D + M

**17. Statements :**

K \$ M, M x B, K + B

**Conclusions:**

I. M x K

II. K ? M

**18. Statements :**

F @ G, G ? P, P x H

**Conclusions:**

I. F @ H

II. H x G

**19. Statements :**

M @ T, T x R, R \$ Q

**Conclusions :**

I. M ? R

II. M ? Q

**20. Statements :**

D x G, G @ K, K + M

**Conclusions:**

I. M + G

II. D x K

**Directions (21-25) :** Each of the followings below consists of a questions and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the questions. Read both the statements and

- (a) If the data in statement I alone are sufficient to answer the question, while the data in statements II alone are not sufficient to answer the question.
- (b) If the data in statements 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 even 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.

**21.** Which village is to the North-East of village 'A'?

I. Village 'B' is to the North of village 'A' villages C and D are to the East and West of village B, respectively.

II. Village 'P' is to the South of village 'A' and village 'E' is to the East of village 'P' village 'K' is to the North of village 'P'.

**22.** Can Rohan retire from office 'X' in January 2006, with full pension benefits?

I. Rohan will complete 30 year of service in office 'X' in April 2006 and desires to retire.

II. As per office 'X' rules an employee has to complete minimum 30 years of service and attain age of 60. Rohan has 3 years to complete age of 60.

**23.** Among five friends P, Q, R, S and T, who ranks third in terms of salary obtained by them?

I. T's salary is more than P and Q but not more than S.

II. R' salary is lowest among them.

**24.** How is P related to Q?

I. J has two daughters, one of them 'R' is married to 'P'.

II. Q is the mother of 'S', the younger sister of 'R'.

**25.** Which word in the code language means 'flower'?

I. 'de fu ia pane' means 'rose flower is beautiful' and 'la quiz' means 'beautiful tree'.

II. 'de la chin' means 'red rose flower' and 'pa chin' means 'red tea'.

**Directions (26-30) :** Below is given a passage followed by several possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

- (a) If the inference is "definitely true", i.e. it properly follows from the statement of facts given.
- (b) If the inference is "probably true" though not "definitely true" in the light of the facts given.
- (c) If the "data are inadequate" i.e., from the facts given you cannot say whether the inference is likely to be true or false.
- (d) If the inference is "probably false" though not "definitely false" in the light of the facts given".
- (e) If the inference is "definitely false", i.e., it cannot possibly be drawn from the facts given or it contradicts the given facts.

In India the asbestos industry is growing and employs more than 15,000 people in 75 units which are spread over several states like Gujarat, Madhya Pradesh, Maharashtra, Andhra

Pradesh etc. Surprisingly advanced countries are banning cancer causing asbestos products, multinational companies are from those countries which are setting up units in developing countries like India. One reason being lack of awareness in the society and indifference of the government machinery of these countries. Prolonged exposure to asbestos dust and fibres can cause lung cancer but most workers in India are too afraid to protect for fear of losing jobs. Some of these factories are operating in Mumbai. Quite a few of the factories in India are not known to take adequate precautions to protect workers from asbestos dust.

The Government is taking several steps to provide medical inspection of workers. In fact it has amended factories act to extend the provision to even those factories employing less than 10 workers.

26. The asbestos industry is one of the largest industries in India.
27. The asbestos industries in India are located in few metropolitan pockets only.
28. The advanced countries are concerned and careful to protect health hazards of its people.
29. The demand for asbestos products appears to be growing in India
30. The Governments of developing countries appear to be not taking appropriate measures while granting permission to set up production units of multinational companies in their countries.

**Directions (31-35) :** Given below are pairs of events A and B. You have to read both the events A and B and decide their nature of relationship. You have to assume that the information given in A and B are true and you will not assume anything beyond the given information in deciding the answer.

- (a) If 'A' is the effect and 'B' is its immediate and principal cause
- (b) If 'A' is the immediate and principal and 'B' is its effect.
- (c) If 'A' is an effect but 'B' is not its immediate and principal cause.
- (d) If 'B' is an effect but 'A' is not its immediate and principal cause.
- (e) None of these

31. **Event (A) :** We can get anything with money.

**Event (B) :** Today money is the most important.

32. **Event (A) :** Due to mechanisation the life of human beings is becoming more comfortable in urban areas.

**Event (B) :** Life is becoming insecure in urban areas.

33. **Event (A) :** The Government has decided recently to provide additional dearness allowance to its employees.

**Event (B) :** Consumer Price Index is increasing for the last five months.

34. **Event (A) :** The children of younger generation do better in their study.

**Event (B) :** The parents of children now realise the importance of education very well.

35. **Event (A) :** There is considerable increase in the number of people having computers.

**Event (B) :** Computer education is being made compulsory in schools.

**Directions (36-40):** Read the following information and answer the questions based on it.

- (a) The length breadth and height of a rectangular piece of wood are 4 cm, 3 cm, and 5 cm. respectively.

- (b) Opposite sides of 5 cm, x 4 cm. piece are coloured in red colour.
- (c) Opposite sides of 4 cm x 3 cm are coloured in blue
- (d) Rest 5 cm x 3 cm. are coloured in green in both sides.
- (e) Now the piece is cut in such way that a cuboid of 1 cm. x 1 cm. will be made.
36. How many cuboids shall have all the three colours ?
- (a) 8
- (b) 10
- (c) 12
- (d) 14
- (e) None of these
37. How many cuboids shall have not any colour?
- (a) No any
- (b) 2
- (c) 4
- (d) 6
- (e) None of these
38. How many cuboids shall have only two colours red and green in their two sides?
- (a) 8
- (b) 12
- (c) 16
- (d) 20
- (e) None of these
39. Anita was doing a survey in different companies by working on all days of the week. She started with company 'A' and on completing her work she went to company 'B' on the third day. She was required to work there for three days and then went to company 'C' on the fourth day. She worked in company 'C' on the fourth day. Thereafter she worked in company 'D' and completed her work on fourth day after working for three days which was a Saturday. On which day did she start her work in company A?
- (a) Thursday
- (b) Saturday
- (c) Sunday
- (d) Monday
- (e) None of these
40. How many pairs of letters are there in the word ATMOSPHERE which have as many letters between them as in the English alphabet ?
- (a) Two
- (b) Three
- (c) Four
- (d) Five
- (e) None of these

**Directions (41-45) :** In each question below are given some statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem at variance from commonly know facts. Read all the conclusions and then decide which of the given conclusions logically follows from the two given statements disregarding commonly known facts.

**41. Statements :**

Some ice are rings.  
No ring is paint.  
Some rings are gold.

**Conclusions :**

- (I) No any gold is paint
- (II) No any ice is gold
- (III) Some rings are paints
- (a)** Only I and III follows
- (b)** Only I and II follow
- (c)** Only III and IV follow
- (d)** Only II and III follow
- (e)** None of these

**42. Statements :**

All gates are flowers.  
Some gates are fruits.  
Some flowers are clips.

**Conclusions :**

- (I) Some flowers are fruits.
- (II) Some clips are fruits.
- (III) Some clips are gates.
- (IV) No any flower is fruit.
- (a)** Only I follows
- (b)** Only I and IV follows
- (c)** Only II and IV follows
- (d)** Only I and III follows
- (e)** None of these

**43. Statements :**

No candle is bell.  
Some shoes are bells.  
All tables are shoes.

**Conclusions:**

- (I) Some tables are bells
- (II) No table is bell.
- (III) Some shoe are candles
- (IV) No shoes are candle.
- (a)** Only I and IV follow
- (b)** Only I and II follow
- (c)** Only III and IV follow
- (d)** Only I and III follow
- (e)** None of these

**44. Statements :**

Some films are clouds.  
All rate are clods.  
Some clouds are chairs.

**Conclusions :**

- (I) No film is chair.
- (II) Some rats are films
- (III) Some clouds are rats.

- (IV) Some chairs are rats.  
**(a)** Only I and III follow  
**(b)** Either II or IV follow  
**(c)** No any conclusion follows  
**(d)** Only IV follows  
**(e)** None of these

**45. Statements :**

Some lice are slates  
 All slates are apples.  
 No apple is car

**Conclusions :**

- (I) Some cars are slates.  
 (II) Some lice are cars.  
 (III) Some apples are lice  
 (IV) No car is lice.  
**(a)** No any conclusion  
**(b)** Only II follows  
**(c)** Only III follows  
**(d)** Either II or IV and III follow  
**(e)** None of these

**Directions (46-50):** Read the following information to answer the questions Symbolise the given number and symbol.

**Number :** 1 2 3 4 5 6 7 8 9

**Symbol :** x \* ? ÷ \$ · + ! D

- (i) If any number by odd number then odd number then the odd number symbolised by @.  
 (ii) If any number ends by even number then the even number symbolised as ©.

**46.** Which of the following will be the symbol of 673258?

- (a) · + ? \* \$ !  
 (b) @ + ? \* \$ !  
 (c) © ? + \$ \* !  
 (d) · + ? \* \$ ©  
 (e) None of these

**47.** Which of the following will be the symbol of 236475 ?

- (a) ? \* · ÷ x @  
 (b) © ? · ÷ + @  
 (c) x ? · ÷ + @  
 (d) © ÷ · + \$  
 (e) None of these

**48.** Which of the following will be the symbol of 846721

- (a) © ÷ · + \* x  
 (b) ! ÷ · + \* @  
 (c) ! ÷ · + \* x  
 (d) © ÷ · + \* x  
 (e) None of these

**49.** Which of the following will be the symbol of 178524 ?

- (a) © + ! \$ \* ©  
 (b) @ x + ! \$ ©  
 (c) © + ! \$ \* ÷  
 (d) \* + ! \$ ÷ ©  
 (e) None of these
50. Which of the following will be the symbol of 25486 ?  
 (a) \* \$ ÷ ! D  
 (b) \* \$ ÷ ! ©  
 (c) © \$ ÷ ! ·  
 (d) \* \$ ! ÷ ·  
 (e) None of these
51. If 3 is subtracted from the middle digit of the following numbers and then the position of the digits are reversed, which of the following will be the last digit of the middle number after they are arranged descending order ?  
 589 362 554 371 442  
 (a) 5  
 (b) 4  
 (c) 2  
 (d) 1  
 (e) 3
52. In a certain code language GERMINATION is written as IMGRENNOAIT. How is ESTABLISHED written in that code ?  
 (a) BATESLDEIHS  
 (b) BAETSLDEIHS  
 (c) BAETSLEDIHS  
 (d) BEATSLDEIHS  
 (e) None of these
53. In a certain code language POULTRY is written as PRQXNVTY. How is TREASON written in that code ?  
 (a) TVSGCUQN  
 (b) TVTGCUQN  
 (c) TTVGCUQN  
 (d) TVTHCUQN  
 (e) None of these
54. If in the English alphabet, all the letters at odd numbered positions are written in serial order from left to right followed by the letters at even numbered positions written in reverse order, which letter will be sixth to the left of seventeenth letter from left ?  
 (a) D  
 (b) B  
 (c) V  
 (d) U  
 (e) None of these
55. If it is possible to make a meaningful word from the second, fourth, fifth, eleventh and thirteenth letters of the word ESTABLISHMENT using each letter only once, write second letter of that word as your answer, if more than one such word can be formed, write M as your answer and if no such word can be formed, write 'X' as your answer.  
 (a) B  
 (b) A

- (c) E
- (d) M
- (e) X

**Directions (56-60) :** Study the following information carefully and answer the questions given below:

An institute XYZ provides scholarship to its employees for higher studies in the United States of America. Following are conditions for awarding scholarship to the employees .

The candidate must:

- (i) Not be more than 30 year of age as on April 1, 2006
- (ii) Have secured more than 70 per cent marks in Post-graduation and 75 per cent marks in Graduation
- (iii) Have at least two years work experience in the XYZ institute.
- (iv) Be ready to sign a bond of two years with the company,
- (v) Have got A or A + rating for his/her works in the last two years.

However, in case of a candidate who fulfils all other criteria EXCEPT

- (a) (ii) above but has secured minimum 60 per cent marks in Graduation and post Graduation and he/she has got Ph.D. may be referred to the Director.
- (b) (v) above but has work experience of three years with ratings B + A or A + may be referred to the Chairman
- (c) (iv) above but he/she has to leave the institute and he is ready to pay Rs. 50,000, may be referred to the President.

Based on these criteria and information provided below, decide the course of action in each case. You are not to assume anything. The cases are given to you as on April 1, 2006. If the data provided are not adequate to decide the given course of action your answer will be "data inadequate".

**56.** Deepali Mirza working in XYZ institute for the last two and half years. Her performance is good and has secured ratings A +. She has secured 70 per cent and 75 per cent marks in Graduation and Post-Graduation respectively. She is Post Graduate from Mathematics. She is ready to sign the bond of two years. Her date of birth is 31 .03 .1977. she has also done Ph.D.

- (a) Data inadequate
- (b) Refer to the Director
- (c) Refer to the President
- (d) Refer to the Chairman
- (e) Not to be selected

**57.** Ajit D' souza is a Post-Graduate in Physics with 75 per cent marks and passed Graduation with 77 per cent marks. He is working in the institute since 2002 and has always got A ratings on performance. He was 25 years old at the time of joining the institute. He is keen to seek job in the United States of America.

- (a) Refer to the Chairman
- (b) Refer to the President
- (c) Data inadequate
- (d) Not to be selected
- (e) To be selected.

**58.** Rajendra Bhawe is a post-graduate in Psychology. He had secured 72% marks at post graduation and 78 % marks at graduation. He is working in XYZ institute for more than two years and his performance ratings are A + and A respectively in the last two years.

He is not keen to sign the bond but does not mind paying Rs. 50,000/- if required to leave. His date of birth is 14.8.1976.

- (a) To be selected
- (b) Refer to the Chairman
- (c) Refer to the Director
- (d) Refer to the President
- (e) Not to be selected

59. Harish Chheda has a bright academic career throughout. He has done post-graduation with 65% marks and has submitted Ph. D. thesis. His date of birth is 27.9.1979. He is working for last three years in the XYZ institute and has always got A ratings on performance. He is ready to pay Rs. 50,000/- in case if required to leave.

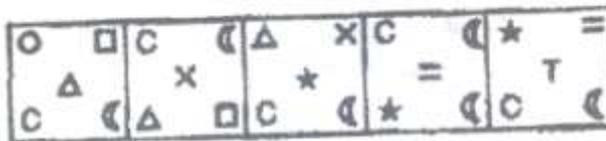
- (a) To be selected
- (b) Refer to the President
- (c) Refer to the Director
- (d) Data inadequate
- (e) Not to be selected

60. 28 years old Tarique Anwar is a post-graduate in Chemistry and has registered for Ph. D. He scored 80% and 78 % marks at graduation and post-graduation respectively. He is working in the XYZ institute since 2001. His performance ratings in the last three years are B + , A+ and A respectively. He is ready to sign two years' bond with the institute

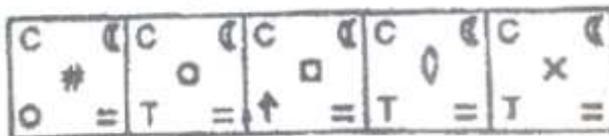
- (a) To be selected
- (b) Refer to the President
- (c) Refer to the Chairman
- (d) Refer to the Director
- (e) No to be selected

**Direction (61-65) :** In each of the questions given below which of the five answer figures should come after the problem figures if the sequence were continued ?

61. **Problem Figures**



**Answer Figures**



- (a)
- (b)
- (c)
- (d)
- (e)

62. **Problem Figures**



**Answer Figures**



- (a)
- (b)
- (c)
- (d)
- (e)

63.

**Problem Figures**

**Answer Figures**

(a) (b) (c) (d) (e)

64.

**Problem Figures**

**Answer Figures**

(a) (b) (c) (d) (e)

65.

**Problem Figures**

T = □	□ =	= T Δ	O Δ
	T S Δ S C □ C		
	Δ □ = T □		S = T

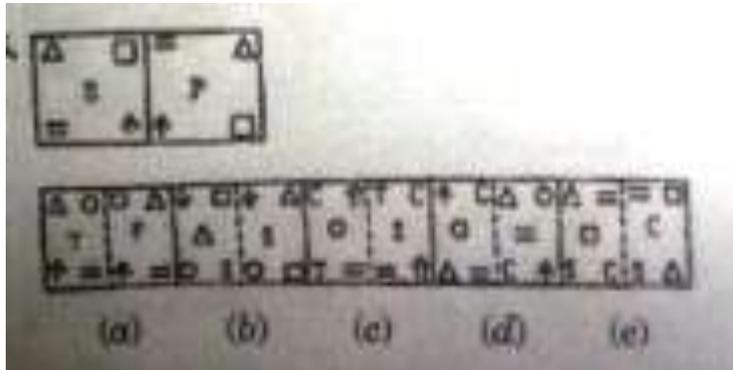
**Answer Figures**

□ S =	□ S	□ S T	□ O S	□ S =
O T #	= O =	O =	= O T	
C ↑ Δ	C Δ T	* C Δ	C Δ T	* C Δ

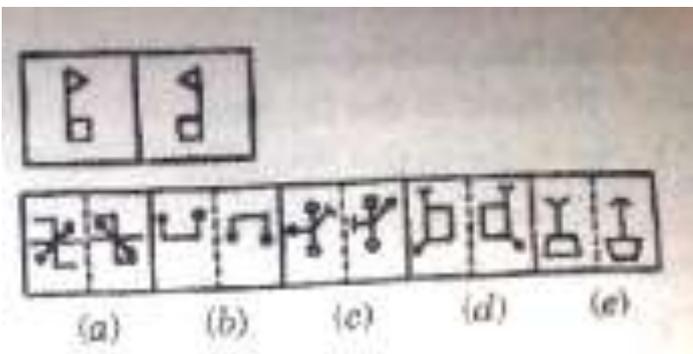
(a) (b) (c) (d) (e)

**Directions (66-70) :** In each of the following questions a related of figures is followed by five numbered pairs of figures. Select the pair of figure which shows similar relationship as that given in the original pair. You are required to select the best answer from among fairly close alternatives.

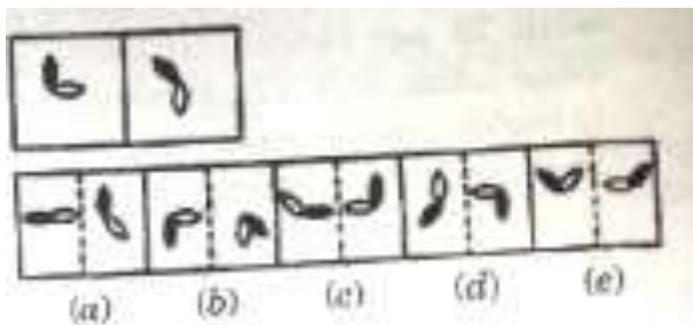
66.



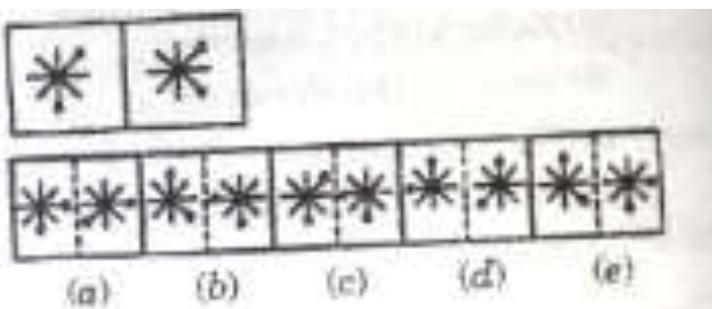
67.



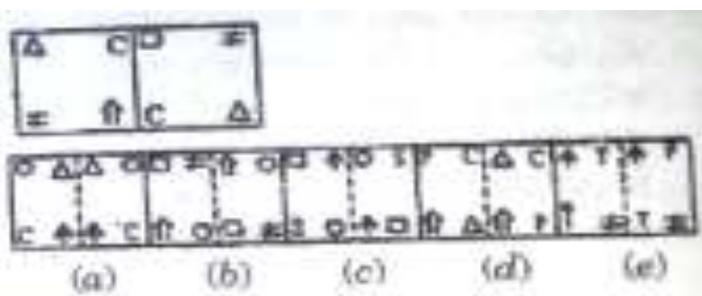
68.



69.

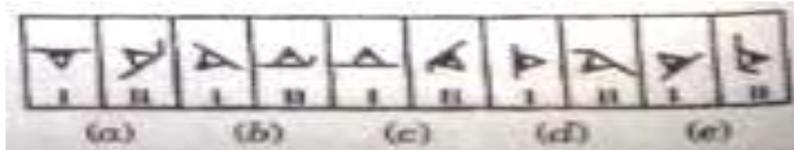


70.



**Directions (71-75) :** In each of the following questions is four out of the five figures, element I is related to element II in the same particular way. Find out the figure in which the element I is so related to element II.

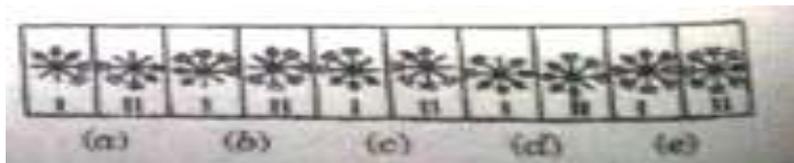
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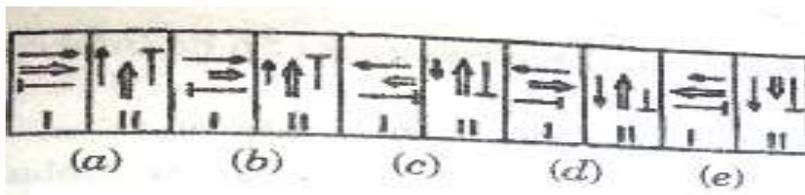
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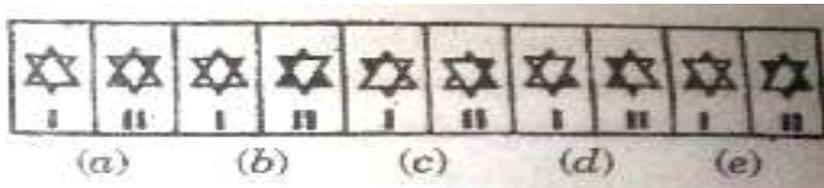
73.



74.



75.



**ENGLISH LANGUAGE**

**Directions (76-90) :** Read the following passage and answer the questions given below it . Certain words/phrases are given in bold to help you locate them while answering some of the questions.

In a disarmingly frank talk at the Indian Merchants Chamber in Mumbai the Japanese Ambassador in India dwelt at length with issues that exercise the mind of Japanese investors when they consider investment proposals in India.

Raising the question “ What comparative advantages does India offer as an investment market?”, he said though labour in India is inexpensive, wage levels are offset by productivity level to a large extent.

Acknowledging that vastness of the Indian market is great **inducement** for investment in manufacturing industry he wondered if it was **justifiable** to provide that overseas remittance of profit in foreign exchange to be fully covered by exchange earnings as had been done.

Significantly, on the eve of the Prime Minister’s visit to Japan, the Government delinked profits repatriation from exports, meeting this demand.

The Ambassador said foreign investors needed to be assured of the continuity and consistency of the liberalization policy and the fact that new measures had been put into force by means of administrative notifications without amending Government laws acted as a damper.

The Ambassador pleaded for speedy formulation of the exit policy and pointed to the highly restrictive control by the Government on disinvestment by foreign partners in joint ventures in India.

While it is all too easy to dismiss critical comment on conditions in India **Contemptuously**, there can be little doubt that if foreign investment is to be wooed **assiduously**, we will have to meet exacting international standard and cater at least partially to what we may consider the **idiosyncrasies** of our foreign collaborators. The Japanese too have passed through a divided as substandard and **shoddy**. That they have come out of the ordeal of fire to emerge as an economic super power speaks as much of their doggedness to pursue goals against all odds as of their ability to improvise and adapt to internationally acceptable standards.

There is no gain-saying that the past record of Japanese investment is a poor benchmark for future expectations.

76. The author has appreciated the Japanese for their
- (a) Quality of products manufactured in the fifties
  - (b) Passing through an ordeal
  - (c) Perseverance for raising quality of products
  - (d) Future expectations
  - (e) None of these
77. According to the Japanese Ambassador, which of the following motivates the foreign investors to invest in India manufacturing industry?
- (a) Very large scope of Indian market
  - (b) Overseas remittance of profit in foreign exchange
  - (c) Assurance of continuity of the liberalisation policy
  - (d) High productivity levels
  - (e) None of these
78. The purpose of the author in writing this passage seems to be to
- (a) Discourage foreign investment in India
  - (b) Critically examine Indian investment environment
  - (c) Paint a rosy picture of India’s trade and commerce
  - (d) Criticise Government’s liberalisation policy
  - (e) Raise the expectations of foreign investors
79. Which of the following suggestions were expected by the Japanese Ambassador?
- (A) Speedy formulation of the exist policy.

- (B) Imposing restrictions of disinvestment by foreign partners in joint ventures in India  
 (C) Continuity and consistency of the liberalisation policy  
 (a) All the three  
 (b) (A) & (B) only  
 (c) (B) & (C) only  
 (d) (A) & (C) only  
 (e) None of these
- 80.** According to the Japanese Ambassador, India offers a comparative advantage of foreign investors in terms of –  
 (a) Inexpensive labour  
 (b) Abysmally low wage levels  
 (c) Higher productivity  
 (d) Skilled workforce  
 (e) None of these
- 81.** For seeking more and more foreign investment the author suggest that we should –  
 (a) Satisfy fully the whims of our foreign collaborators  
 (b) Dismiss all critical comments of Indian conditions  
 (c) Link profit repatriations to exports  
 (d) Raise the quality of product of match international standards  
 (e) None of these
- 82.** From the passage it can be inferred that the author is-  
 (a) A political commentator  
 (b) A secretary of the Japanese Ambassador  
 (c) A Japanese investor  
 (d) An Indian investor  
 (e) None of these
- 83.** The author attributes Japan's emergence as an economic super power to  
 (A) Their ability to overcome any ordeal.  
 (B) Their tenacity and perseverance despite unfavourable circumstances.  
 (C) Their ability to improvise and adapt to globally acceptable quality levels  
 (a) (A) & (B) only  
 (b) (B) & (C) only  
 (c) (A) & (C) only  
 (d) ALL of three  
 (e) None of these
- 84.** Which of the following statements (s) is/are true about the critical comments on investment conditions in India.  
 (A) These comments are difficult to be countered.  
 (B) These comments are received from various international quarters.  
 (C) These comments are based more on based than on facts.  
 (a) Only (C)  
 (b) Only (B)  
 (c) Only (A)  
 (d) (A) & (B) only  
 (e) (A) & (C) only

**Directions (82-86) :** Choose the word which is most nearly the SAME in meaning as the word printed in **bold** as used in the passage.

**85. Assiduously**

- (a) Persistently
- (b) Hastify
- (c) Feebly
- (d) Deliberately
- (e) Innocently

**86. Idiosyncrasies**

- (a) Demands
- (b) Needs
- (c) Deviations
- (d) Ideologies
- (e) Identify

**87. Shoddy**

- (a) Extraordinary
- (b) Shabby
- (c) Cheap
- (d) Disadvantageous
- (e) Unprofitable

**Directions (88-90) :** Choose the word which is most OPPOSITE in meaning of the word printed in **bold** as used in the passage.

**88. Inducement**

- (a) Incentive
- (b) Motive
- (c) Breach
- (d) Temptation
- (e) Impediment

**89. Justifiable**

- (a) Unreasonable
- (b) Formidable
- (c) Irrevocable
- (d) Unscrupulous
- (e) Inevitable

**90. Contemptuously**

- (a) Amicably
- (b) Reasonably
- (c) Respectfully
- (d) Methodically
- (e) Indecisively

**Directions (91-95) :** Rearrange the following six sentences (A), (B), (C), (D), (E), and (F) in the proper sequence to form a meaningful paragraph; then answer the question given below them.

- (A) The application of economic, environmental and consumer pressures have been on an increase in recent years.
- (B) As a result, our agro-food production and technology are amongst the most advanced in the world.
- (C) They are thus able to provide expertise and technology to satisfy the needs of agro-food production.
- (D) In turn, the support industries have developed to an equally advanced state.
- (E) They have also equipped themselves with the necessary expertise to satisfy the most exacting requirements of the overseas markets.

(F) These have greatly influenced the development of the agriculture and food industries in our country.

91. Which of the following should be the SECOND sentence after rearrangement ?

- (a) F
- (b) E
- (c) D
- (d) C
- (e) B

92. Which of the following should be the THIRD sentence after rearrangement ?

- (a) F
- (b) E
- (c) D
- (d) C
- (e) B

93. Which of the following should be the FOURTH sentence after rearrangement ?

- (a) F
- (b) E
- (c) D
- (d) C
- (e) B

94. Which of the following should be the FIFTH sentence after rearrangement ?

- (a) F
- (b) E
- (c) D
- (d) C
- (e) B

95. Which of the following should be the SIXTH (LAST) sentence after rearrangement ?

- (a) F
- (b) E
- (c) D
- (d) C
- (e) B

**Directions (96-100) :** Which of the phrases (a), (b), (c) and (d) given below should replace the phrase given in **bold** in the following sentence to make the sentence grammatically correct ? if the sentence is correct as it is and no correction is required, mark (e) as the answer.

96. They didn't pay any heed to their superior's instructions. **I did neither.**

- (a) I either did
- (b) Either I did not
- (c) Neither didn't I
- (d) Nor did I
- (e) No correction required

97. Every poet **gives vice** to his anger and his compassion through his poems.

- (a) Voiced to give
- (b) Gives voice for
- (c) Gave voice against
- (d) Voiced at given
- (e) No correction required

98. The police nabbed a notorious criminal who **had been terrorising builders and extorted** money from them for the past two years.
- (a) Was terrorising builders and extorted
  - (b) Had not been terrorised builder and extorted
  - (c) Had been terrorising builders and extorting
  - (d) Had terrorised builders and extorted
  - (e) No correction required
99. Managers frequently encounter situations where they need to **help other solved** problems.
- (a) To helping others solved
  - (b) Help others solved
  - (c) To help others solve
  - (d) Help others solving
  - (e) No correction required
100. From among various alternatives we should choose the one which **is viable and consumes less** time and energy.
- (a) Is viable and consuming lesser
  - (b) Is viability and consumes less
  - (c) Being viable and consumed less
  - (d) Has viable and consuming less
  - (e) No correction required
101. **We are looking forward for good** rains this year.
- (a) Are looking forward to
  - (b) Have looked forward for
  - (c) Have been looking forward at
  - (d) Should look forward with
  - (e) No correction required
102. There is full justification to close down the units **which are neither profitable nor serving** any social cause.
- (a) Which are not profitable or serve
  - (b) Which have neither profitable nor serving
  - (c) Which have neither profitable nor serve
  - (d) Which are neither profitable nor serve
  - (e) No correction required
103. Please take delivery of the material and **acknowledgement at the earliest**.
- (a) Send acknowledging at the earliest.
  - (b) Acknowledge at the earliest
  - (c) Acknowledge the earliest
  - (d) Early acknowledgement
  - (e) No correction required
104. The Officer had triggered a controversy **by charging his superiors by ignoring** his warning.
- (a) By charging his superiors with ignoring
  - (b) With charging his superiors by ignoring
  - (c) By charging his superiors after ignoring
  - (d) For charging his superiors on ignoring
  - (e) No correction required.

- 105.** Had we been alone we would have contended ourselves with any plain food **that give us strength**
- (a) That gives us strength
  - (b) That gave us strength
  - (c) Which give us strength
  - (d) Which give strength to us
  - (e) No correction required

**Directions (106-110) :** In each of the following question an idiomatic expression and its four possible meanings are given. Find out the correct meaning of the idiomatic expression and mark the number of that meaning as you answer

**106. To eat humble pie**

- (a) To go to ruins
- (b) To be earnest
- (c) To spread rapidly
- (d) To refuse after consenting
- (e) To apologize

**107. A wild goose chase**

- (a) An absurdly hopeless enterprise
- (b) A fuss over a trifling matter
- (c) To be insensitive to criticism
- (d) To speak boastfully of oneself
- (e) To protect oneself from wild animals

**108. To be hard up**

- (a) To look depressed
- (b) To keep starvation away
- (c) To act excitedly
- (d) To be short of money
- (e) To behave like a fool

**109. To cry wolf**

- (a) To come to what is most important
- (b) To give false alarm
- (c) To turn pale
- (d) To be astonished
- (e) To run away

**110. To take to one's heels**

- (a) To act against one's own interest
- (b) To assault
- (c) To run away
- (d) To have concern
- (e) To run oneself

**Directions (111-115) :** In each of the following sentences there are two blank spaces. Below each sentence there are five pair of words denoted by numbers a, b, c, d and e, . Find out which pair of words can be filled up in the blanks in the sentence in the same sequence to make the sentence meaningfully complete.

- 111.** He objected to the proposal because it was founded on a \_\_\_ principle and also was \_\_\_ at time.
- (a) Faulty \_\_\_ desirable
  - (b) Imperative \_\_\_ reasonable

- (c) Wrong \_\_\_ inconvenient
  - (d) Sound \_\_\_ acceptable
  - (e) Uncomforting \_\_\_ deplorable
- 112.** The criterion for \_\_\_ a player should be his recent performance; but unfortunately, the journalists are \_\_\_ to be carried away by earlier successes.
- (a) Condemning \_\_\_ satisfying
  - (b) Revealing \_\_\_ reluctant
  - (c) Judging \_\_\_ prone
  - (d) Eager \_\_\_ acclaiming
  - (e) Criticising \_\_\_ clean
- 113.** For the last half century he \_\_\_ himself to public affairs \_\_\_ taking a holiday.
- (a) By \_\_\_ committed
  - (b) After \_\_\_ offered
  - (c) Devoted \_\_\_ without
  - (d) Sacrificed \_\_\_ after
  - (e) Prepared \_\_\_ before
- 114.** You will see signs of everywhere, which speak well for the \_\_\_ of these people.
- (a) Decoration-senses
  - (b) Clear-debris
  - (c) Beauty-careful
  - (d) Industry -prosperity
  - (e) Repairs-extravaganza
- 115.** The police arrested Ramesh on a \_\_\_ of theft but for lack of evidence \_\_\_ him.
- (a) Crime \_\_\_ imprisoned
  - (b) Punished \_\_\_ complaint
  - (c) Left \_\_\_ condition
  - (d) Tip \_\_\_ absconding
  - (e) Charge \_\_\_ released

**Directions (116-125) :** In the following passage, there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

**(116)** stringent antipollution laws, mass awareness levels in India about the need to **(117)** the environment are low. Which is **(118)** many people insist that mere laws won't do; what we **(119)** need are "environment conscious" citizens. It is in this context that the University's **(120)** to introduce environment studies as a compulsory paper at the undergraduate level **(121)** significance. There was some **(122)** initially about who would teach the paper because financial **(123)** make it impossible for colleges to **(124)** approval for new teaching posts. In fact, in August 1999, the University Grants Commission (UGC) imposed a ban on the creation of new teaching posts in colleges. **(125)** with this problem, authorities at the university have decided that serving teachers belonging to various disciplines will teach the paper.

- 116.** (a). Despite  
 (b) Having  
 (c) Enacting  
 (d) Adopting  
 (e) Although
- 117.** (a) contaminate

- (b) Clean
- (c) Filter
- (d) Protect
- (e) Pollute
- 118.** (a) resulting
- (b) Why
- (c) Obvious
- (d) As
- (e) Because
- 119.** (a) seldom
- (b) Don't
- (c) Hardly
- (d) Perfectly
- (e) Actually
- 120.** (a) inability
- (b) Deferral
- (c) Decision
- (d) Failure
- (e) Reluctance
- 121.** (a) extracts
- (b) Trivalency
- (c) Expects
- (d) Loses
- (e) Assumes
- 122.** (a) displeasure
- (b) Antagonism
- (c) Hurdles
- (d) Confusion
- (e) Priority
- 123.** (a) losses
- (b) Constraints
- (c) Apathy
- (d) Soundness
- (e) Independence
- 124.** (a) receive
- (b) Establish
- (c) Emphasize
- (d) Expect
- (e) Sanction
- 125.** (a) Down
- (b) Familiarity
- (c) Faced
- (d) Convinced
- (e) Solution

### QUANTITATIVE APTITUDE

**Directions (126-130) :** Each of the questions below consists of a question and three statements denoted A, B and C are given below it. You have to study the question and all the

three statements and decide whether the question can be answered with anyone or two of the statements or all the statements are required to answer the question.

**126.** How much marks did Arun secure in English?

- A. The average mark obtained by Arun in four subjects including English is 60.
- B. The total mark obtained by him in English and Mathematics together is 170.
- C. The total mark obtained by him in Mathematics and Science together is 180.
- (a) All three A, B and C together are necessary.
- (b) Only A and B together are necessary
- (c) Only B and C together are necessary
- (d) Only A and C together are necessary
- (e) None of these

**127.** How much profit did Mahesh earn on the cost price of an article by selling it ?

- A. He get 15% discount on the marked price at the time of purchase
- B. He sold it for Rs. 3060.
- C. He earned 2% profit on the marked price.
- (a) Only A and B both together are necessary
- (b) Only B and C both together are necessary
- (c) Only A or C and B together are necessary
- (d) Even A, B and C all together are not sufficient to answer the question.
- (e) All three A, B and C together are necessary

**128.** What will be sum of two numbers?

- A. Among the two numbers, the bigger number is greater than the smaller number by 6.
- B. 40% of the smaller number is equal to 30% of the bigger number.
- C. The ratio between half of the bigger number and  $\frac{1}{2}$ rd of the smaller number is 2 : 1.
- (a) Only B and C together are necessary
- (b) Only A and B together are necessary
- (c) Out of A, B and C any two together are necessary
- (d) All three A, B and C together are necessary
- (e) None of these

**129.** What is the area of a right angled triangle?

- A. The perimeter of the triangle is 30 cm.
- B. The ratio between the base and the height of the triangle is 5 : 12
- C. The area of the triangle is equal to the area of a rectangle of length 10 cms.
- (a) Only B and C together are required
- (b) Only A and B together are required
- (c) Only either A or B and C together are required
- (d) Only A and C together are required
- (e) None of these

**130.** What is R's share of profit in a joint venture ?

- A. Q started business investing Rs. 80,000
- B. R joined him after 3 months.
- C. P joined after 4 months of Rs. 1,20,000 and got 6,000 as his share of profit.
- (a) Only A and C are required
- (b) Only B and C are required
- (c) All A, B and C together are required
- (d) Even with all A, B and C the answer cannot be arrived at
- (e) None of these

**Directions (131-135) :** Study the following table carefully and answer the questions given below it.

<b>The number of candidates appeared, passed and selected in a competitive examination from five states over the years.</b>															
State →	A			B			C			D			E		
	A	P	S	A	P	S	A	P	S	A	P	S	A	P	S
2000	850	215	25	1050	245	35	990	195	28	1080	300	36	1120	240	40
2001	880	240	20	980	230	30	650	150	28	1150	320	38	960	180	26
2002	750	180	22	1120	210	28	840	180	25	995	280	42	885	177	32
2003	920	290	36	890	190	32	780	160	32	975	260	39	1040	220	30
2004	960	300	32	950	225	40	1020	220	36	888	240	32	980	280	34
2005	820	250	28	1180	200	38	930	215	35	864	216	30	900	228	24

**A = Appeared, P= Passed, S = Selected**

- 131.** In the year 2000, which state had the lowest percentage of candidates selected over the candidates appeared ?
- (a) A  
(b) B  
(c) C  
(d) D  
(e) E
- 132.** During which of the following years the passing percentage over appeared is the highest from state 'D'?
- (a) 2005  
(b) 2004  
(c) 2003  
(d) 2002  
(e) None of these
- 133.** Total number of candidates selected from state 'A'; is approximately what percentage of the total number of candidates selected from state 'B' ?
- (a) 72  
(b) 88  
(c) 85  
(d) 75  
(e) 80
- 134.** During which of the following years the percentage of candidates selected over passed is the lowest for state 'B' ?
- (a) 2000

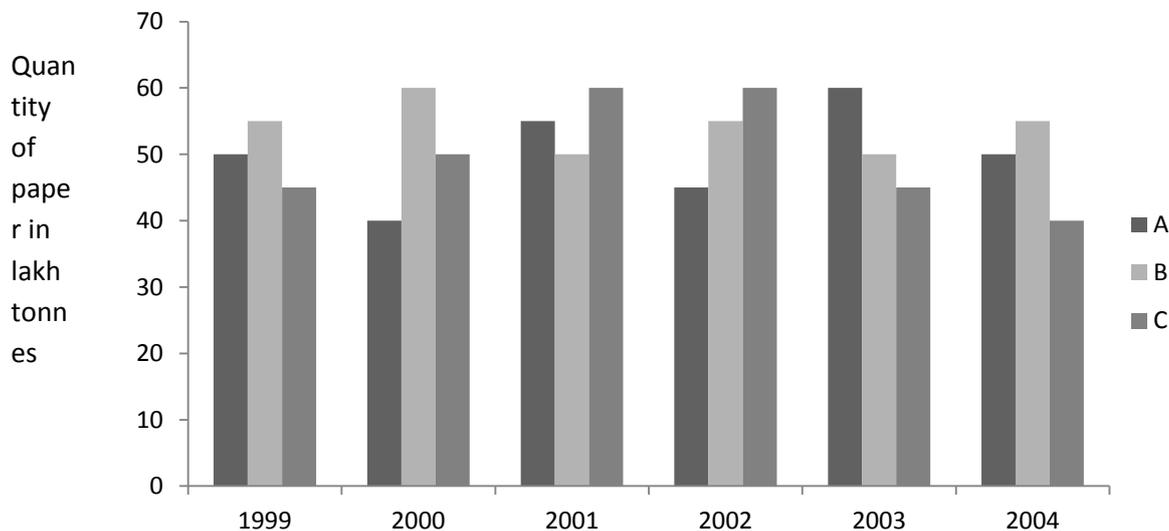
- (b) 2001
- (c) 2003
- (d) 2004
- (e) None of these

**135.** What is the ratio between number of candidates passed from state A in 2001 to that from state E in 2004 ?

- (a) 6 : 7
- (b) 14 : 15
- (c) 13 : 16
- (d) 12 : 16
- (e) None of these

**Directions (136-140) :** Study the following graph carefully to answer the question given below it.

Production of paper by 3 different companies A, B and C over the years.



**136.** What is the difference between the production of company C in 1991 and the production of company A in 2004 ?

- (a) 50,000 tonnes
- (b) 5,00,0000 tonnes
- (c) 50,00,000 tonnes
- (d) 5,00,000 tonnes
- (e) None of these

**137.** What is the percentage increase in production of company 'A' from 2000 to 2001 ?

- (a) 37.5
- (b) 38.25
- (c) 35
- (d) 36
- (e) None of these

**138.** For which of the following years the percentage of rise/fall in production from the previous year is the maximum for company B

- (a) 2000
- (b) 2001
- (c) 2002
- (d) 2003
- (e) 2004

**139.** The total production of company C in 2001 and 2004 is what percentage of the total production of company A in 1999 and 2000?

- (a) 95
- (b) 90
- (c) 110
- (d) 115
- (e) 133.33

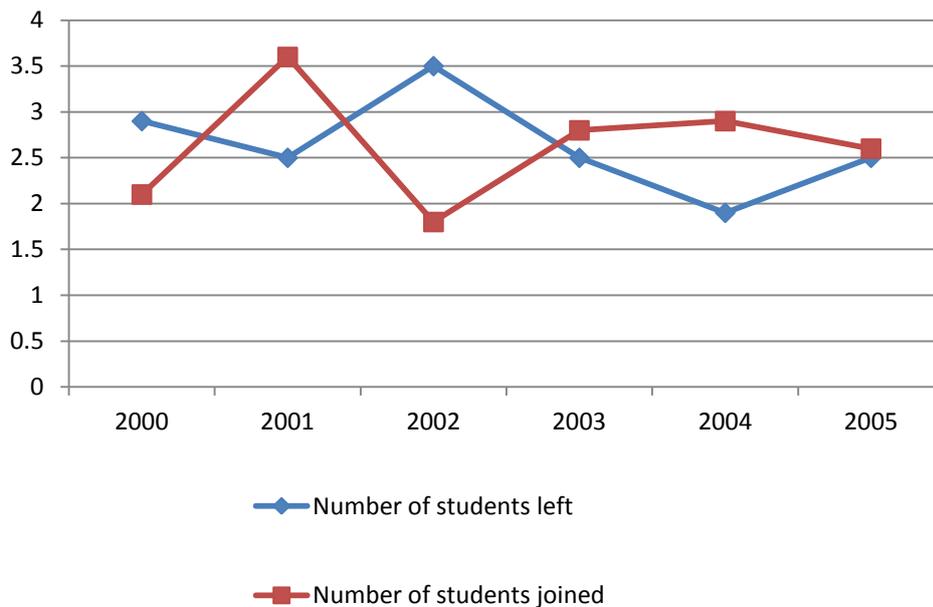
**140.** What is the difference between the average production per year of the company with highest average production and the company with lowest average production in lakh tonnes?

- (a) 3.17
- (b) 4.33
- (c) 4.17
- (d) 3.33
- (e) None of these

**Direction (141-145) :** Study the following graph carefully and answer the question given below it.

The number of students who joined and left the school in the beginning of years for six years, from 2000 to 2005.

Initial strength of the school in 1999 = 1500



**141.** What was the increase/decrease in strength of the school from 2001 to 2002?

- (a) Increase by 100
- (b) Decrease by 100
- (c) Increase by 200
- (d) Decrease by 200
- (e) None of these

**142.** For which of the following years, the percentage rise/fall in number of students left from the previous years is the highest ?

- (a) 2001
- (b) 2002
- (c) 2003
- (d) 2004
- (e) 2005

**143.** How many students were there in the school during the year 2003?

- (a) 1495
- (b) 1600
- (c) 1550
- (d) 1700
- (e) None of these

**144.** During which of the following pairs of years, the strength of school is equal ?

- (a) 2001 and 2002
- (b) 2002 and 2004
- (c) 2003 and 2005
- (d) 2002 and 2005
- (e) 2000 and 2002

**145.** The number of students in 2003 is approximately what percent of the number of students in 2001 ?

- (a) 85
- (b) 117
- (c) 95
- (d) 103
- (e) 108

**Directions (146-150) :** In each of the following questions a number series is given. After the series, a number is given followed by (a), (b), (c), (d) and (e). You have complete the series starting with the number given following the sequence of the given series. Then answer the question given below it.

**146.** 9 19.5 41 84.5

12 (a) (b) (c) (d) (e)

Which of the following numbers will come in place of (c) ?

- (a) 111.5
- (b) 118.5
- (c) 108.25
- (d) 106.75
- (e) None of these

**147.** 4 5 22 201

7 (a) (b) (c) (d) (e)

Which of the following number will come in place of (d) ?

- (a) 4948
- (b) 4840
- (c) 4048
- (d) 4984
- (e) None of these

**148.** 5 5.25 11.5 36.75

7 (a) (b) (c) (d) (e)

Which of the following number will come in place of (c) ?

- (a) 34.75
- (b) 24.75
- (c) 24.5
- (d) 34.5
- (e) None of these

**149.** 38 19 28.5 71.25

18 (a) (b) (c) (d) (e)

Which of the following number will come in place of (d) ?

- (a) 118.75
- (b) 118.25
- (c) 108.25
- (d) 118.125
- (e) None of these

150. 25 146 65 114

39 (a) (b) (c) (d) (e)

Which of the following number will come in place of (e) ?

(a) 122

(b) 119

(c) 112

(d) 94

(e) None of these

**Directions (151-155) :** Read the following statement carefully to answer the given question.

A committee of 12 persons is to be formed from 9 women and 8 men.

151. In how many ways this can be done if atleast 5 women have to be included in a committee?

(a) 6000

(b) 6010

(c) 6062

(d) 6005

(e) None of these

152. In how many of these committees, the women are in majority?

(a) 2000

(b) 2700

(c) 2705

(d) 2702

(e) None of these

153. In how many of these committees, the men are in majority?

(a) 1008

(b) 1100

(c) 1200

(d) 1225

(e) None of these

154. An urn contains 9 red, 7 white and 4 black balls, If two balls are drawn at random, find the probability that both the balls are red

(a)  $\frac{17}{95}$

(b)  $\frac{18}{95}$

(c)  $\frac{1}{12}$

(d)  $\frac{91}{190}$

(e) None of these

155. How many different words can be formed with the letters of the word 'ALLAHABAD'?

(a) 7500

(b) 7560

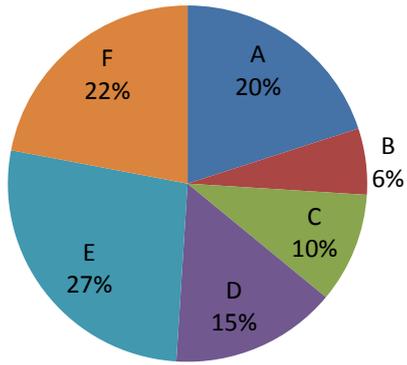
(c) 7510

(d) 7580

(e) None of these

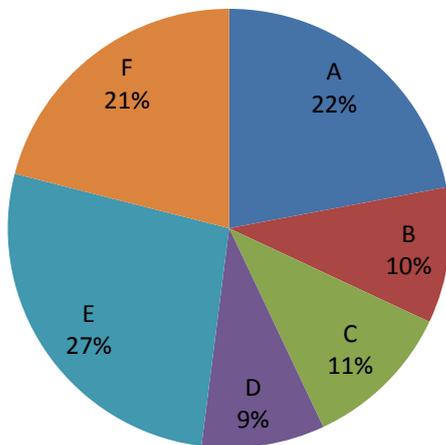
**Direction (156-160) :** Study the following graph carefully and answer the question given below.

Percentage of different types of employees in a company in two consecutive years



**2005**

**Total no. employees 42,980**



**2006**

**Total no. of employees  
48,640**

- 156.** In 2005 the total no. of which the following types of pairs of employees was approximately equal to A type of employees in 2006?
- (a) B and C
  - (b) A and C
  - (c) D and E
  - (d) C and D
  - (e) C and F
- 157.** From 2005 to 2006 in the case of which of the following types of employees the change was maximum?
- (a) B
  - (b) D
  - (c) C
  - (d) A
  - (e) None of these
- 158.** What was the approximate different in the number of B type of employees during 2005 and 2006?

- (a) 2285
  - (b) 2325
  - (c) 2085
  - (d) 2620
  - (e) 1825
- 159.** If the no. D type of employees in 2006 was 5000, what would have been its approximate percentage in the company?
- (a) 8
  - (b) 12
  - (c) 14
  - (d) 16
  - (e) 10
- 160.** The no. of A type of employees was approximately what per cent of the no. of A type of employees in 2005 ?
- (a) 115
  - (b) 140
  - (c) 125
  - (d) 130
  - (e) 95
- 161.** 12 men take 36 day to do a work while 12 women complete  $\frac{3}{4}$  th of the same work in 36 days. In how many days 10 men and 8 women together will complete the same work?
- (a) 6
  - (b) 27
  - (c) 12
  - (d) Data inadequate
  - (e) None of these
- 162.** Rs. 800 becomes Rs. 956 in 3 years at certain simple rate of interest. If the rate of interest is increased by 4%, what amount will Rs. 800 become in 3 years?
- (a) Rs. 1020.8
  - (b) Rs. 1025
  - (c) Rs. 1052
  - (d) Data inadequate
  - (e) None of these
- 163.** What least number would be subtracted from 427398 so that remaining number is divisible by 15?
- (a) 6
  - (b) 3
  - (c) 16
  - (d) 11
  - (e) None of these
- 164.** A car covers its journey at the speed of 80 km/hour in 10 hours. If the same distance is to be covered in 4 hours, by how much the speed of car will have to increase?
- (a) 8 km/hr
  - (b) 10 km/hr
  - (c) 12 km/hr
  - (d) 16 km/hr
  - (e) None of these
- 165.** What approximate value will come in place of the question mark (?) in the following equation ?
- $$33\frac{1}{3}\% \text{ of } 768.9 + 25\% \text{ of } 161.2 - 58.12 = ?$$
- (a) 230
  - (b) 225
  - (c) 235

- (d) 220  
(e) 240
- 166.** If on selling 12 notebooks any seller makes a profit equal to the selling price of 4 notebooks, what is his per cent profit?  
(a) 50  
(b) 25  
(c)  $16\frac{2}{3}$   
(d) Data inadequate  
(e) None of these
- 167.** Present age of Rahul is 5 years less than Ritu's present age. If 3 years ago Ritu's age was  $x$ , which of the following represents Rahul's present age?  
(a)  $x + 3$   
(b)  $x - 2$   
(c)  $x - 3 + 8$   
(d)  $x + 3 + 8$   
(e) None of these
- 168.** A grocer purchased 2 kg. of rice at the rate of Rs. 15 per kg. And 3 kg. of rice at the rate of Rs. 13 per kg. At what price per kg. should he sell the mixture to earn  $33\frac{1}{3}\%$  profit on the cost price.  
(a) Rs. 28.00  
(b) Rs. 20.00  
(c) Rs. 18.40  
(d) Rs. 17.40  
(e) None of these
- 169.** A boat takes 6 hours to travel from place M to N downstream and back from N to M upstream. If the speed of the boat in still water is 4 km/hr., what is the distance between the two places?  
(a) 8 kms.  
(b) 12 kms.  
(c) 6 kms.  
(d) Data inadequate  
(e) None of these
- 170.** Mr. Yadav spends 80% of his monthly salary on consumable items and 50% of the remaining on clothes and transport. He saves the remaining amount. If his Rs. 5370, how much amount per month he would have spent on clothes and transport?  
(a) Rs. 4,037  
(b) Rs. 8,0763  
(c) Rs. 9,691.20  
(d) Rs. 4,845.60  
(e) None of these

**Directions (176-180) :** In each question below one or two equation (s) is/are provided. On the basis of these you have to find out relation between  $p$  and  $q$ .

- (a) If  $p = q$   
(b) If  $p > q$   
(c) If  $p < q$   
(d) If  $p \geq q$  and  
(e) If  $q \leq p$

**171. I.**  $p^2 + 24 = 10p$

**II.**  $2q^2 + 18 = 12p$

**172.**  $pq + 30 = 6p + 5q$

**173. I.**  $q^2 + q = 2$       **II.**  $p^2 + 7q + 10 = 0$

**174. I.**  $p^2 + 16 = 8p$       **II.**  $4q^2 + 64 = 32q$

**175. I.**  $2p^2 + 12p + 16 = 0$       **II.**  $2q^2 + 14q + 24 = 0$

### GENERAL AWARENESS

- 176.** Why was Phillip Calderon is the new ?
- (a) He has been appointed the secretary General of European Union
  - (b) He has been relected the President of Mexico
  - (c) He has been awarded the international Astronaut of the Year Award by NASA.
  - (d) He has been relected the Prime Minister of Guyana
  - (e) None of these
- 177.** Where was ninth China-European Union summit held ?
- (a) Olso
  - (b) Sanya
  - (c) Helsinki
  - (d) Shanghai
  - (e) None of these
- 178.** 'Crown Prince Cup Basketball' in which India won a Bronze Medal was organised recently in-
- (a) India
  - (b) Thailand
  - (c) China
  - (d) Japan
  - (e) Singapore
- 179.** 'Jnanpith Award' is given for the excellence in the field of
- (a) Music
  - (b) Politics
  - (c) Literature
  - (d) Sports
  - (e) None of these
- 180.** Ozone gets depleted in the Stratosphere due to the presence of :
- (a) Active NO<sub>3</sub>
  - (b) Active NO<sub>2</sub>
  - (c) Active Cl
  - (d) Active SO<sub>2</sub>
  - (e) None of these
- 181.** This of the following countries has awarded Congressional Gold Medal to Dalai Lama, Tenzing Gyatso?
- (a) Britain
  - (b) France
  - (c) Italy
  - (d) USA
  - (e) None of these
- 182.** Who amongst the following is the author of the book 'Bearders-My Life in Cricket'?
- (a) Shane Warne
  - (b) Bill Frindall
  - (c) Brian Lara
  - (d) Imran Khan
  - (e) None of these
- 183.** Which step is taken first in designing a programme ?
- (a) Data validation
  - (b) Task analysis
  - (c) Input design
  - (d) Problem identification
  - (e) None of these
- 184.** The government offices of which country are now become paperless?
- (a) Holland
  - (b) Sweden
  - (c) New Zealand

- (d) Estonia
  - (e) None of these
- 185.** Who amongst the following is the author of the book "The city of Joy"?
- (a) Dominique Lapierre
  - (b) Guentarr Grass
  - (c) Daniel Steele
  - (d) Graham Green
  - (e) None of these
- 186.** Who amongst the following inaugurated the Hanover Technology Trade- 2006?
- (a) Dr. Manmohan Singh
  - (b) Dr. P. Chidambaram
  - (c) Mr. Kamal Nath
  - (d) Mr. Pranb Mukherjee
  - (e) None of these
- 187.** How many items are deserved recently from the reserved list of small scale Industries ?
- (a) 60
  - (b) 68
  - (c) 100
  - (d) 180
  - (e) None of these
- 188.** The Government of India decides the minimum support price of which of the following commodities?
- (a) Sugarcane
  - (b) Green vegetables
  - (c) Medicinal plants
  - (d) Milk
  - (e) None of these
- 189.** The Mid day Meal Scheme is launched by the Union Ministry of-
- (a) Home Affairs
  - (b) Social Welfare
  - (c) Human Resource Development
  - (d) Rural Development
  - (e) None of these
- 190.** The United Western Bank which was recently in news is a .
- (a) Nationalized Bank
  - (b) Co-operative Bank
  - (c) Private Bank
  - (d) Foreign Bank
  - (e) None of these
- 191.** Dr. Manmohan Sing was on a visit to Uzbekistan a few months back where he signed seven MoUs/ Pacts. Who amongst the following signed these MoUs/pacts on behalf Uzbekistan?
- (a) Mr. Islam Karimov
  - (b) Mr. Hamid Wazir
  - (c) Mr. Hassan Wirajuda
  - (d) Sultan Bin Kasim
  - (e) None of these
- 192.** Who amongst the following is the chairperson of the 'National Knowledge Commission'?
- (a) Mr. Sam Pitroda
  - (b) Dr. Ashok Ganguly
  - (c) Dr. Jayanti Ghosh
  - (d) Dr. Pratap Bhanu Mehta
  - (e) None of these

- 193.** The final of the Sultan Azlan Shah Hockey Tournament 2006 was organised recently (18 June, 2006) in .
- (a) Kuala Lumpur
  - (b) Jakarta
  - (c) Manila
  - (d) New Delhi
  - (e) None of these
- 194.** Ustad Bismillah Khan who died recently (21 August, 2006) was famous.
- (a) Classical Dancer
  - (b) Classical Singer
  - (c) Shehnai Player
  - (d) Tabla Player
  - (e) Santoor Player
- 195.** The two day meeting of the Finance Ministers of G-8 nations was organised recently in (10-11 June 2006)
- (a) St Petersburg
  - (b) Berlin
  - (c) Milan
  - (d) Moscow
  - (e) Paris
- 196.** Who amongst the following is the recipient of the 'Rajiv Gandhi Khel Ratna Award' given away recently (29 August, 2006)?
- (a) Mahesh Bhupathi
  - (b) Sania Mirza
  - (c) Rahul Dravid
  - (d) Anju Bobby george
  - (e) Pankaj Advani
- 197.** Who amongst the following won the French Open 2006 Tennis cup held recently (May-June 2006) ?
- (a) Roger Federer
  - (b) Rafael Nadal
  - (c) Bob Bryan
  - (d) Vera Zvonareva
  - (e) None of these
- 198.** Who amongst the following is the recipient of the 'Sahitya Shiromani Samman' given away recently ?
- (a) Javed Akhtar
  - (b) Gulzar
  - (c) Kamleshwer
  - (d) Malti Joshi
  - (e) None of these
- 199.** Which of the following is a graphic package ?
- (a) Adobe Page Maker
  - (b) Acrobat Reader
  - (c) Microsoft Word
  - (d) Corel Draw
  - (e) None of these
- 200.** Hardware that adds two numbers is .
- (a) The control unit
  - (b) An internal CPU register
  - (c) Arithmetic logical unit
  - (d) Browser
  - (e) None of these
- 201.** Which of the following statements is/are True about the integrated Anti Submarine Warfare (ASW) equipment ?

- (A) The Defence Research and Development Organisation (DRDO) handed over the integrated Anti Submarine Warfare equipment to Anti navy.
- (B) It has the ability to detect enemy usages while being underwater and also fire torpedoes or missiles.
- (C) The cost of this equipment is about Rs. 4 crores.
- (a) A and B
- (b) A and C
- (c) B and C
- (d) All are correct
- (e) None of these
- 202.** In which plane is the Brahmos missile fitted ?
- (a) Sukhoi-30MKI
- (b) Jaguar
- (c) Mirage
- (d) Mig-29
- (e) None of these
- 203.** From which date the wildlife (Protection) Amendment Act 2006 has come into effect after the president's approval?
- (a) 1<sup>st</sup> September, 2006
- (b) 4<sup>th</sup> September, 2006
- (c) 15<sup>th</sup> August, 2006
- (d) 15<sup>th</sup> July, 2006
- (e) 4<sup>th</sup> June, 2006
- 204.** At which place would the Indian navy set up the second naval base?
- (a) Vasakhapatnam
- (b) Mangalore
- (c) Tuticorin
- (d) Nellore
- (e) None of these
- 205.** How many agreements were signed between India and Brazil during the Prime Minister Manmohan Singh Brazil visit ?
- (a) 5
- (b) 7
- (c) 9
- (d) 11
- (e) None of these
- 206.** Who amongst the following was the head of the Investment commission which submitted its report to the Government of India recently?
- (a) Mr. Ratan Tata
- (b) Dr. Rakesh Mohan
- (c) Mr. Kurnar Mangalam Birla
- (d) Mr. Rahul Bajaj
- (e) None of these
- 207.** As per the report in the newspaper the old age pension is now raised to which of the following amounts from the present Rs. 75?
- (a) Rs. 100
- (b) Rs. 150
- (c) Rs. 175
- (d) Rs. 200
- (e) Rs. 250
- 208.** The interest rate at which the RBI lends against the Government Securities is known as
- (a) CRR
- (b) SLR
- (c) Bank Rate

- (d) Repo Rate
  - (e) None of these
- 209.** Which of the following is the abbreviated name of an Indian Organisation/agency associated with export of processed food products?
- (a) APEDA
  - (b) AAPSO
  - (c) AINEF
  - (d) AITUC
  - (e) None of these
- 210.** Which of the following Industries suffered a huge loss of almost Rs. 20 crore pre day due to floods in Gujarat ?
- (a) Oil and Natural gas
  - (b) Information Technology
  - (c) Sugar mills
  - (d) None of these
- 211.** Which of the following is NOT one of the core and identified under the Bhart Nirman Programme?
- (a) Irrigation
  - (b) Rural electrification
  - (c) Rural housing
  - (d) Computer education in schools
  - (e) Drinking water supply
- 212.** The Base II Accord for Banking Industry is base on three pillars. Which of the following is/are NOT included in the same ?
- (a) Minimum Capita Requirement
  - (b) Supervisory Review
  - (c) Market Discipline
  - (d) Credit Risk
- Codes :
- (a) Both (A) and (C)
  - (b) Only (D)
  - (c) (A), (B) and (C)
  - (d) Only (A)
  - (e) None of these
- 213.** 'Shequel' is the currency of-
- (a) Israel
  - (b) Kenya
  - (c) Iraq
  - (d) Iran
  - (e) None of these
- 214.** Indian Exports recorded an increase in May 2006. What was the increase in terms of percentage ?
- (a) 15 per cent
  - (b) 20 per cent
  - (c) 25 per cent
  - (d) 30 per cent
  - (e) None of these
- 215.** Who amongst the following is the first chairman of the newly Constituted National Statistical Commission ?
- (a) Prof. Suresh D. Tendulkar
  - (b) Dr. Ashok Lahiri
  - (c) Dr. Rakesh Mohan
  - (d) Prof. S.K. Ghosh
  - (e) None of these

- 216.** Government of India recently was decided to import wheat at a lower rate of custom duty. The effective rate of the duty was.
- (a) 15 per cent
  - (b) 12 per cent
  - (c) 10 per cent
  - (d) 5 per cent
  - (e) None of these
- 217.** As per the reports published recently in the newspapers banks surpassed the target set for farm credit was given in this sector in terms of percentage?
- (a) 15
  - (b) 20
  - (c) 26
  - (d) 33
  - (e) 43
- 218.** As per the reports published in the newspapers the National Housing Bank (NHB) is planning to launch a Reserve Mortgage scheme specially to held which of the following sections of society ?
- (a) People in rural India
  - (b) Senior Citizens
  - (c) People living in government accommodations
  - (d) Women who are sole bread winners
  - (e) None of these
- 219.** Which of the following companies has got two contracts to establish two power projects in Afghanistan ?
- (a) Bharat Heavy Electricals (BHEL)
  - (b) National Hydro Electric Power Corporation (NHPC)
  - (c) National Thermal Power Corporation (NTPC)
  - (d) Reliance Energy Ltd.
  - (e) None of these
- 220.** Government of India recently introduced some measures/incentives to improve tourism in India. Which of the following is one of these measures ?
- (a) Issuance of electronic visa
  - (b) Free stay for the three days in Government hotels in four metros for business travellers and frequent players
  - (c) Highly subsidised air travel on metro routes for frequent flyers
  - (d) Free trip to Agra, Delhi and Jaipur to those coming on educational/study tours
  - (e) None of these
- 221.** How much amount can the Postal Department invest in revenue generating instruments and/or stock market to reduce its budgetary deficit? (amount is from its insurance schemes).
- (a) Rs. 1,400 crore
  - (b) Rs. 2,500 crore
  - (c) Rs. 4,500 crore
  - (d) Rs. 7,400 crore
  - (e) Rs. 10,000 crore
- 222.** Plotter are very useful in applications such as.
- (a) Computer aided design
  - (b) Word Processing
  - (c) Financial Accounting
  - (d) Spell checking
  - (e) None of these
- 223.** Employees details is.
- (a) A master file for the payroll system
  - (b) A replica of the monthly pay slip
  - (c) Not related to the payroll system

- (d) A transaction file for monthly pay slip
  - (e) None of the
- 224.** A computerized business information system includes
- (a) Hardware
  - (b) Software
  - (c) Data facts
  - (d) All
  - (e) None of these
- 225.** Data processing cycle consists of –
- (a) Input cycle and output cycle
  - (b) Output cycle and processing cycle
  - (c) Input cycle, output cycle and processing cycle
  - (d) Only input cycle
  - (e) None of these

## Answers

1. (c)	2. (e)	3. (d)	4. (c)	5. (a)	6. (e)	7. (d)	8. (b)	9. (c)	10. (a)
11. (e)	12. (b)	13. (d)	14. (e)	15. (a)	16. (d)	17. (e)	18. (d)	19. (d)	20. (b)
21. (a)	22. (e)	23. (d)	24. (e)	25. (d)	26. (e)	27. (e)	28. (a)	29. (a)	30. (a)
31. (a)	32. (b)	33. (a)	34. (c)	35. (a)	36. (a)	37. (d)	38. (b)	39. (a)	40. (a)
41. (e)	42. (a)	43. (e)	44. (e)	45. (d)	46. (d)	47. (e)	48. (e)	49. (a)	50. (b)
51. (e)	52. (b)	53. (d)	54. (d)	55. (d)	56. (b)	57. (c)	58. (d)	59. (d)	60. (a)
61. (d)	62. (a)	63. (d)	64. (d)	65. (c)	66. (c)	67. (d)	68. (b)	69. (d)	70. (c)
71. (d)	72. (b)	73. (c)	74. (c)	75. (e)	76. (c)	77. (a)	78. (b)	79. (a)	80. (e)
81. (d)	82. (a)	83. (d)	84. (b)	85. (d)	86. (d)	87. (c)	88. (e)	89. (d)	90. (c)
91. (a)	92. (c)	93. (b)	94. (d)	95. (e)	96. (d)	97. (e)	98. (c)	99. (b)	100. (a)
101. (a)	102. (e)	103. (b)	104. (b)	105. (a)	106. (e)	107. (a)	108. (d)	109. (b)	110. (c)
111. (e)	112. (b)	113. (c)	114. (d)	115. (e)	116. (a)	117. (d)	118. (b)	119. (e)	120. (e)
121. (e)	122. (d)	123. (b)	124. (a)	125. (c)	126. (e)	127. (e)	128. (b)	129. (b)	130. (d)
131. (c)	132. (c)	133. (e)	134. (b)	135. (a)	136. (d)	137. (a)	138. (b)	139. (b)	140. (c)
141. (a)	142. (a)	143. (d)	144. (e)	145. (b)	146. (e)	147. (a)	148. (b)	149. (d)	150. (c)
151. (c)	152. (d)	153. (a)	154. (b)	155. (b)	156. (d)	157. (a)	158. (a)	159. (e)	160. (c)
161. (d)	162. (c)	163. (b)	164. (e)	165. (e)	166. (a)	167. (b)	168. (c)	169. (d)	170. (e)
171. (b)	172. (c)	173. (e)	174. (a)	175. (d)	176. (b)	177. (c)	178. (b)	179. (c)	180. (c)
181. (d)	182. (b)	183. (d)	184. (d)	185. (a)	186. (a)	187. (d)	188. (a)	189. (c)	190. (c)
191. (a)	192. (a)	193. (a)	194. (c)	195. (a)	196. (e)	197. (b)	198. (b)	199. (d)	200. (c)
201. (d)	202. (a)	203. (b)	204. (a)	205. (c)	206. (a)	207. (d)	208. (d)	209. (a)	210. (c)
211. (d)	212. (a)	213. (a)	214. (d)	215. (a)	216. (d)	217. (e)	218. (b)	219. (a)	220. (e)
221. (e)	222. (a)	223. (a)	224. (d)	225. (c)					

## Explanations

(1-5)

Person	City	Specialisation
P.	Hyderabad	Literature
Q.	Calcutta	Computers
R.	Mumbai	Marketing
S.	Chennai	Textile/ Economics
T.	Delhi	Textile / Economics
V	Trivandrum	Physics
X.	Bangalore	Information Technology

**(6-10).** After careful analysis of the given passcodes for successive batches we can conclude that the passcode for the next batch is generated by rearranging the words of the passcode of previous batch in the following manner:

BATCH I ( 9 AM TO 10 AM)

Passcode:

1 2 3 4 5 6 7

Course easy set for each year was

BATCH II ( 10 AM to 11 AM)

Passcode:

2 5 1 4 7 3 6

Easy each course for was set year

1 2 3 4 5 6 7

BATCH III (11 AM to 12 Noon)

Passcode:

2 5 1 4 7 3 6

Each was easy for year course set

1 2 3 4 5 6 7

BATCH IV (12 Noon to 1 PM)

Passcode:

2 5 1 4 7 3 6

Was year each for set easy course

1 2 3 4 5 6 7

BATCH V (2 PM to 3 PM )

Passcode:

2 5 1 4 7 3 6

Year set was for course each easy

1 2 3 4 5 6 7

BATCH VI (3 PM to 4 PM )

Passcode:

2 5 1 4 7 3 6

Set course year for easy was each

1 2 3 4 5 6 7

BATCH VII (4 PM to 5 PM)

Passcode :

2 5 1 4 7 3 6

Course easy set for each year was

1 2 3 4 5 6 7

BATCH VIII (5 PM to 6 PM )

Passcode :

2 5 1 4 7 3 6

Easy each course for was set year

1 2 3 4 5 6 7

BATCH IX (6 PM to 7 PM

Passcode :

2 5 1 4 7 3 6

Each was easy for year course set

1 2 3 4 5 6 7

BATCH X (7 PM to 8 PM)

Passcode :

2 5 1 4 7 3 6

Was year each for set easy course

Thus, we see that after Batch VI, the passcode for each subsequent batch is repeated starting from the Batch I. In other words, the following pairs of Batches have the same passcode.

- (a) Batch I and Batch VII
- (a) Batch II and Batch VIII
- (a) Batch III and Batch IX
- (a) Batch IV and Batch X

On the basis of above analysis we can write any required passcode directly from the given passcode in the following manner.

BATCH		PASSCODE					
I	1	2	3	4	5	6	7
	Course	Easy	set	for	each	year	was
II	2	5	1	4	7	3	6
III	5	7	2	4	6	1	3
IV	7	6	5	4	3	2	1
V	6	3	7	4	1	5	2
VI	3	1	6	4	2	7	5
VII	1	2	3	4	5	6	7
VIII	2	5	1	4	7	3	6
IX	5	7	2	4	6	1	3
X	7	6	5	4	3	2	1

6. BATCH IV (12 Noon to 1 PM)

7 6 5 4 3 2 1

She the girl is clever very good

BATCH VI (3 PM to PM)

3 1 6 4 2 7 5

Clever good the is very she girl

7. The passcode for the batch IX will be similar to the passcode for the batch III.

**8. BATCH (11 AM to 12 Noon )**

5 7 2 4 6 1 3

Pin to the point is sharp not

BATCH V ( 2 PM to 3 PM)

6 3 7 4 1 5 2

Is not to point sharp pin the

**9. BATCH II (10 AM to 11 AM )**

2 5 1 4 7 3 6

For the life is good change got

Passcode :

6 3 7 4 1 5 2

got change good is life he for

Clearly, this is the passcode for Batch V.

**10. BATCH IV (12 Noon to 1 PM)**

7 6 5 4 3 2 1

Do how will the you job now

BATCH II (10 AM to 11 AM)

2 5 1 4 7 3 6

Job will now the do you how

**11.** It is clear from the statement that both the assumptions are implicit. The statement clearly implies the first assumption. Again, if it is not desirable complete issue why such statement would have been made.

**12.** Only assumption II is implicit in the statement. If two months period is not sufficient to implement such policy decision, the Pensioner's Forum would not have made such a statement.

**13.** Neither of the assumption is implicit in the statement. On the basis of the precedent it is erroneous to hypothesise that the flyovers do not serve any public objective.

**14.** Both the assumptions are implicit in the statement. The point which is highlighted in an advertisement is liked by people and is also desirable.

**15.** Only assumption I is implicit in the statement. The traders of state 'K' resorted to observe bandh when other measures or efforts failed to resolve the problem. Note down the use of

phrase “the state has failed “ . It implies that the State ‘K’ made efforts to resolve the issue but failed. It does not imply that it is not interested in resolving the problem.

**(16-20).** First of all define each symbol clearly:

- I.  $A + B$  means  $A \leftarrow B$  or  $A \rightarrow B$   
It implies that  $A = B$
- II.  $A \times B$  means  $A = B$  or  $A < B$   
It implies that  $A > B$
- III.  $A ? B$  means  $A \not> B$  or  $A \neq B$   
It implies that  $A < B$
- IV.  $A @ B$  means  $A \geq B$
- V.  $A \$ B$  means  $A = B$   
It implies that  $A > B$  or  $A < B$

### 16. Statements

$C + D, D \$ M, M ? C$

After conversion

$C = D, D > M$  or  $D < M, M < C$

Or (i)  $C = D > M < C$

Or

(ii)  $C = D < M < C$

### Conclusions

**I.**  $M \$ C = M < C$  or  $M < C$

It is clear that M is smaller than C.

**II.**  $D + M = D = M$

It is clear that D is either greater or smaller than M.

### 17. Statements

$K \$ M, M \times B, K + B$

After conversion

$K > M$  or  $K < M, M > B, K = B$  or,  $M > B = K$

### Conclusions

**I.**  $M \times K = M > K$

K is equal to B and M is greater than B. Therefore, M is definitely greater than K.

**II.**  $K ? M = K < M$

It is clear that K is

### 18. Statements

$F @ G, G ? P, P \times H$

After conversion

$F \geq G, G < P, P > H$

Or (i)  $F > G < P > H$

Or

(ii)  $F = G < P > H$

### Conclusions

I.  $F @ H = F > H$

II.  $H \times G = H > G$

Neither conclusion I nor II is definitely true.

### 19. Statements

$M @ T, T \times R, R \$ Q$

After conversion

$M > T, T > R, R > Q$  or  $R < Q$

Or (i)  $M = T > R > Q$

(ii)  $M > T > R > Q$

(iii)  $M > T > R < Q$

(iv)  $M = T > R < Q$

### Conclusions

I.  $M ? R = M < R$

It is clear that M is greater than R.

Therefore, conclusion I is not true.

II.  $M ? Q = M < Q$

From statements (i) and (ii) M is greater than Q built is not possible to determine any definite relation between M and Q from statements (iii) and (iv).

### 20. Statements

$D \times G, G @ K, K + M$

After conversion

$$D > G, G > K, K = M$$

Or (i)  $D > G > K = M$

Or

**(ii)**  $D > G = K = M$

### Conclusions

**I.**  $M + G = M = G$

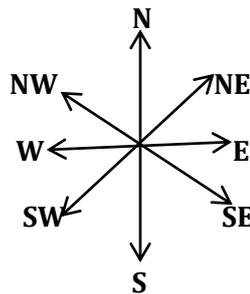
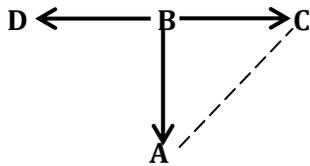
M is either equal to or smaller than G.

**II.**  $D > K = D > K$

It is clear that D is greater than K.

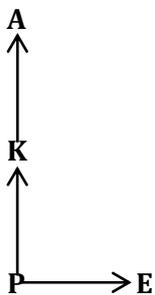
Therefore, only conclusion II is definitely true.

21. From statement I



It is clear that village C is to the North- East of village A

From statement



We cannot solve the question with the help of this diagram.

22. From both the statements it is clear that if Rohan retires from office 'X' in January 2006 he could not get full pension benefits.

23. From statements I

S > T > P and Q

From statements II

$\square > \square > \square > \square > R$

From both the statements

S > T > P and Q > R

Either P or Q will come at the third place.

24. From Statements I.

P is the husband of R, who is the daughter of J.

There is no information about the other daughter of J.

From statements II

Q is the mother of S and R.

S is daughter of Q and sister of R.

From both the statements

J is the husband of Q

Q is the wife of J.

J is father of R and S

R and S are daughter of J and Q.

Q is the mother of R and S

P is the husband of R and hence P is the son-law of Q.

25. From statement I.

De fu  $\square$  la  $\square$  pane = rose flower is  $\square$  beautiful

$\square$  la  $\square$  Quiz = beautiful tree

No answer.

From statement II

De la  $\square$  Chin  $\square$  =  $\square$  red  $\square$  rose flower

Pa  $\square$  Chin  $\square$  =  $\square$  red  $\square$  tea

Both the statements provide different coding pattern.

26. It is not judicious to regard asbestos industry as one of the largest industries in India considering the number of employees engaged in this industry and also the number of units of this industry in India.

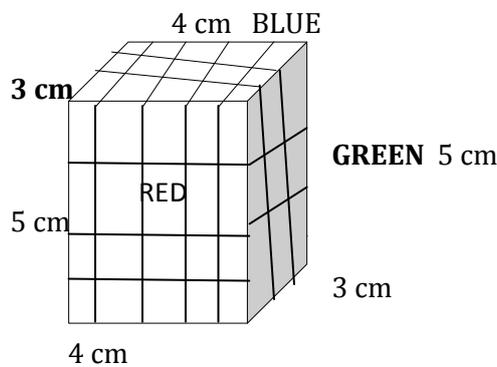
27. It is said that asbestos industries in India are located in several states.

28. Advanced countries are banning cancer causing asbestos products: it implies that advanced countries are concerned and careful to product health hazards o their people.

29. It can be safely assumed that if the industry is growing in India there certainly exists demand for its products.

30. Consider the statement "... indifference of government machinery...."

36- 38



36. The cubes located at the eight corners would have all the three colours.

37. The six inside cubes will have no face coloured.

38. Twelve cubes will have two colours red and green in their two sides.

39.

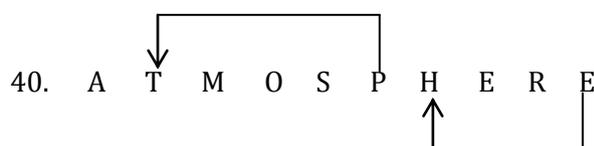
1, 2	(3) 4,5	6	7,8,9	10
A	B	C	D	A
2 Days	3 Days	1 Day	3 Days	Saturday

10<sup>th</sup> Day → Saturday

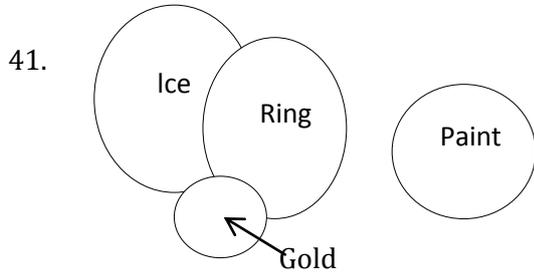
3<sup>rd</sup> Day → Saturday

Now, 2<sup>nd</sup> Day → Friday

1<sup>st</sup> Day → Thursday



Thus, there are two such pairs of letters.



The shaded portion represents doubtful proposition.

Since two of the premises are particular, the Universal conclusions can be discarded. Therefore, conclusions I, II and IV are invalid.

For conclusion III, the second and the third premises are relevant. We can align the premises by converting the third premise and changing the order of the premises. Thus,

Some gold are rings  
 ↗  
 No ring is paint

We know that

I + E = O type conclusion

Therefore, our derived conclusion would be :

“Some gold are paints”.

Similarly, we can take the first and the second premises. Thus,

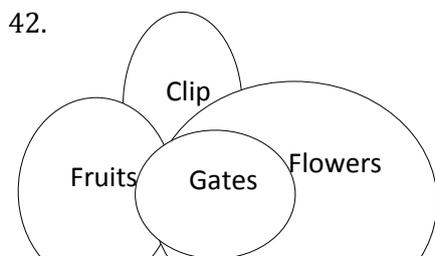
Some ice are rings  
 ↘  
 No ring is paint

We know that,

I + E = O type conclusion

Thus, our derived conclusion would be:

“Some ice are not paints”.



For conclusion I the first and the second premises are relevant. We can align these premises by converting the second premise and changing the order of the premise.

Some fruits are gates  
 ↗  
 All gates are flowers

We know that,

I + A = I type conclusion.

Thus, our derived conclusion would be:

“Some fruits are flowers”

Conclusion I is the conversion of our derived conclusion.

Since all the premises are Affirmative, no Negative conclusion can be derived from them. Therefore, conclusion IV is invalid.

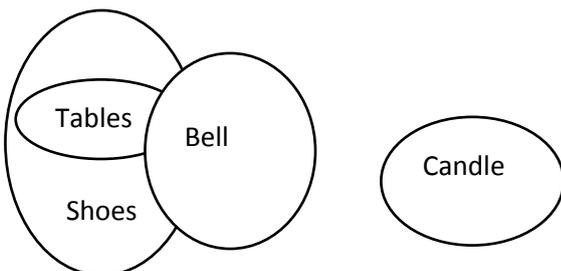
43. From the first to premises we can derive the conclusion:

“Some shoes are not candles”

No candle is bell  
 ↗  
 Some bells are shoes

We know that,

E + I = o, type conclusion



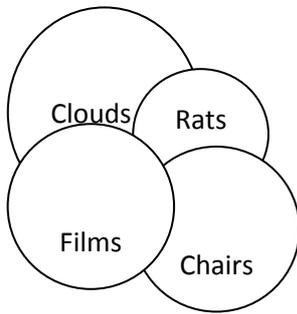
The shaded portion implies, doubtful proposition.

Conclusion I and II from complementary pair. Therefore, either conclusion I or II follows.

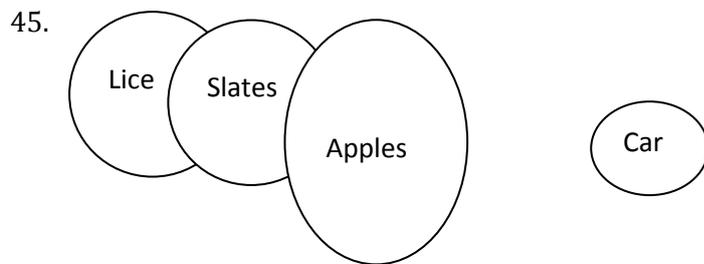
Similarly, conclusions III and IV form complementary pair.

44. All the three premises are Affirmative and hence the Negative conclusion is invalid.

Therefore, conclusions I dose not follow.



Conclusion III is the conversion of the second premise.



For conclusion III the first and the second premises are relevant Both the premises are already aligned

Some lice are slates



All slates are apples

We know that

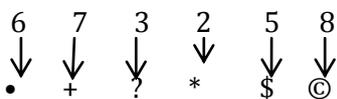
I + A = I type conclusion would be

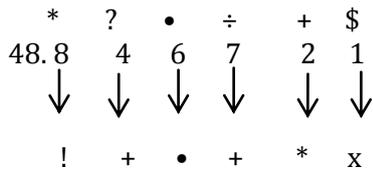
“Some lice are apples”.

Conclusion III is the conversion of the derived conclusion.

Conclusion II and IV form complementary pair. Hence conclusion II or IV follows.

46. The given number ends with an even number and hence the last even number will be symbolised as ©

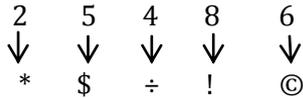




49. The number begins with odd number and hence 1 will be written as @ and the number ends with even number and hence 4 will be written as ©



50. The given number ends with even number and hence 6 will be written as ©.



51. According to question.

- 589 = 559 = 955
- 362 = 332 = 233
- 554 = 524 = 425
- 371 = 341 = 143
- 442 = 412 = 214

Descending order

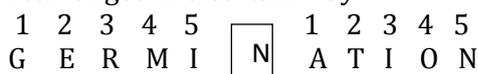
$$955 > 425 > \boxed{233} > 214 > 143$$

Middle Number

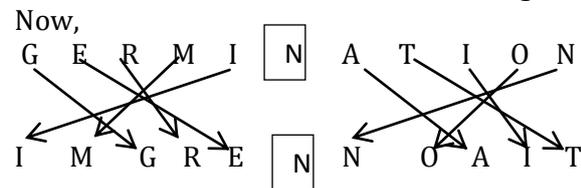
$$23\boxed{3}$$

Last digit

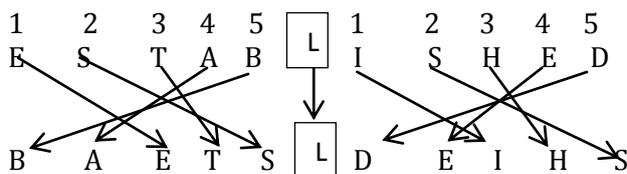
52. There are 11 letters each in the given word and its code. It means that there is one code letter for each letter of the given word. After careful observation of the given word and its code it is clear that the code has been generated by rearranging the letters of the given word. The middle letter of the given word remains at its position while other letters of both sides of it are rearranged in a certain way.



The letter in each half have been rearranged in the order: 54132



Similarly,



Therefore, our required answer is option (b).

53. There is one letter more in the code as compared to the letters of the given word.



	or			(iii)	or or			
	(i)	(ii)	(a)		(iv)	(c)	(v)	(b)
Deepali	√	—	√	√	√	—	√	—
Ajit	√	√	—	√	NG	—	√	—
Rajendra	√	√	—	√	—	√	√	—
Harish	√	N	G	√	—	√	√	—
Tarique	√	√	—	√	√	—	√	—

56. Deepali Mirza satisfies all the criteria except (ii) but she does satisfy (a) instead.

Therefore, her case may be referred to the Director.

57. In case of Ajit D'souza no information is given regarding the criterion (iv).

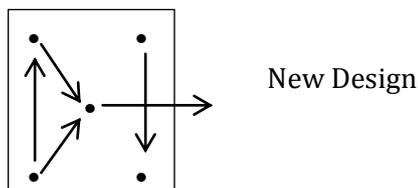
58. Rajendra Bhavde satisfy all the criteria except (iv) but he does satisfy (c) instead. Therefore, his case may be referred to the President.

59. In case of Harish Chheda complete information (Mark in Graduation) is not given regarding the criterion (ii) or (a).

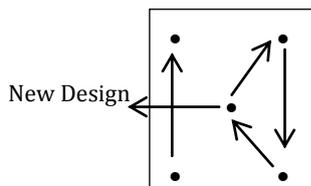
60. Tarique Answer satisfy all the criteria.

61. The movement and changes of designs in the subsequent figures can be shown as:

From Problem Figure (1) to (2)



From Problem Figure (2) to (3)



These two steps are repeated alternately and a new design appears in the centre in each subsequent figure.

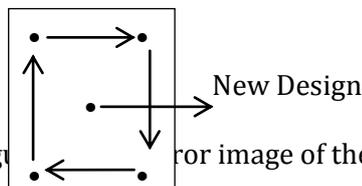
62. In the subsequent figures respectively one, one and half and half part (s) of triangle get (s) shaded in a set pattern.

63. From Problem Figure (1) to (2) the lower design ascends vertically and it is replaced by a new design, the left design moves anticlockwise and the right design moves to the left. Similar changes would occur from Problem Figure (5) to Answer figure.

64. From Problem Figure (1) to (2) the line segments at the left end rotate through  $45^\circ$  anticlockwise while that of upper line segments at the right end rotate through  $45^\circ$  anticlockwise. Similar changes occur from Problem Figure (3) to (4) and from Problem Figure (5) to Answer Figure.

65. From Problem Figure (1) to (2) all the designs moves half a step in clockwise direction and the first and the last designs interchange position while a new designs in introduced in front of the per-existing designs. From Problem Figure (2) to (3) all the designs move one step in clockwise direction and again the first and the last designs interchange position so as the two middle designs and a new design is introduced in front of the pre-existing designs. From Problem Figure (3) to (4) all the designs move  $1\frac{1}{2}$  step in clockwise direction and the first two designs interchange position with the last two designs and a new design is introduced in front of the pre-existing design. From problem Figure (4) to (5) all the designs move two step in clockwise direction and the first and the last designs have interchanged position so as the second and the two middle design have interchanged position while a new design is introduced in front of the pre-existing designs. Therefore, from Problem Figure (5) to Answer Figure all the designs would move two and one half steps in clockwise direction and also rearrangement of designs would take place and a new design will be introduced in front of the pre-existing designs.

66. Following changes occur from first figure to second figure:



67. Second figure is a mirror image of the first figure.

68. From first figure to second figure black leaflet rotates through  $45^\circ$  anticlockwise and the white leaflet rotates through  $90^\circ$  clockwise.

69. From first figure to second figure the line segment with triangle rotates  $90^\circ$  clockwise while the line segment with circle rotates  $135^\circ$  anticlockwise.

70. From first figure to second figure the diagonally opposite designs interchange position.

71. The main design rotates  $90^\circ$  anticlockwise. The inner and outer line segments move two steps anticlockwise.

72. Except in Figure (2) in all other pairs of figures the shaded portion ascends or descends.

73. Except in figure pair (3) in all other pairs of figures from element I to II the number of arrows is decreased by one while the number of equal signs is increased by one. Again the extreme left arrow rotates  $135^\circ$  clockwise but in figure (3) it has been rotated through  $180^\circ$  clockwise.

74. The smaller designs rotates  $90^\circ$  anticlockwise and the smaller designs become larger while the larger designs become smaller from element I to II Again the right design is inverted.

75. In all other pairs of figures there is one unshaded triangle to the left of shaded triangle.

**85.** The word **assiduously** (Adverb) comes from 'the words **assiduous** (Adjective). **Assiduous** means working hard and showing careful attention to detail.

For example

They planned their careers and worked **Assiduously** to see them achieved.

On the other hand deliberately means intentionally carefully. So, we can choose option (d) as the answer.

**86. Idiosyncrasy** means a person's particular way of thinking, behaving, etc. that is clearly different from that of others.

For example

One of her little idiosyncrasies is always washing in cold water.

As ideologies is closest in meaning to it so the answer is (d)

**87.** The lexical meaning of **shoddy** (Adjective) is of poor quality, done or made badly: Shoddy goods/workmanship.

In the passage **Shoddy** means **cheap**.

**88. Inducement** (Noue) means a thing that persuades somebody to do something, an incentive.

For example,

Estate agents are offering **inducements** to first time buyers.

In the passage also **inducements** means **incentive**.

As **impediment** means barrier, hurdled, so the answer is (e)

**89. Unscrupulous** means without moral principles; not honest or fair unscrupulous business methods.

**90. Contemptuous** (Adjective) means feeling or showing contempt. **Contemptuously** (Adverb) means with contempt.

**(91- 95).**

**First sentence (A)**

The application of economic, environmental and consumer pressures have on an increase in recent years.

**Second sentence (F)**

These have greatly influenced the development of the agriculture and food industries in our country.

**Third sentence (D)**

In turn, the support industries have developed to an equally advanced state.

**Fourth sentence (E)**

They have also equipped themselves with the necessary expertise to satisfy the most exacting requirements of the overseas markets

**Fifth sentence (C)**

They are thus able to provide expertise and technology to satisfy the needs of agro food production

**Sixth sentence (B)**

As a result, our agro- food production and technology are amongst the most advanced in the world

**96. I did neither** should be replaced by

**Nor did I.** Structure would be:

For example

... + neither/nor + auxiliary verb + subject
--

Ruth didn't turn up and Kate did neither,(x)  
Ruth didn't turn up and nor did Kate.(√)

Auxiliary Subject  
Verb

98. The sentence is in Past Perfect continuous. Hence extorted should be replaced by **extorting**.

99. Infinitive without 'to' is used after need.

For example,

He wondered whether they need send a deposit

He wondered whether they need to send a deposit (x)



Infinitive with 'to' He wondered whether they need send a deposit(√)

Infinitive without 'to'

111. generally an objective is made when a proposal is founded on a wrong principal and is inconvenient.

112. Journalists don't select; they judge. So, it is said- "The criterion for judging a player.."

"Recent" and "earlier" denote different periods of time.

So, option (b) is the correct one.

113. One devotes oneself in public affairs. So, we should use **devoted** in the first blank. **Without taking a holiday** denotes continuous services. So, without is the appropriate use in the second blank.

114. Sings of **industry** is an indication of prosperity. So, we can choose option (d)

115. One can be arrested on a particular charge of theft. But he can be released for the lack of evidence.

126. A. Total marks in 4 subject including English =  $4 \times 60 = 240$

B. Total marks in English and Maths = 170

C. Total marks in Maths and Science = 180

The question can't be answered because nothing has been said about the marks in the fourth subject.

Also, there are four unknowns but any three equations can be formed with given data.

127. Let the marked price be Rs. x

A. Cost price  $(1 - 0.15)x = \text{Rs. } 0.85x$

B. S.P. = Rs. 3060

C. Profit = 2% of x =  $0.02x$

Profit earned on the cost price

$$= \frac{0.02x}{0.85x} \times 100 = 2.35\%$$

$$0.02x = 3060 - 0.85x$$

$$0.87x = 3060$$

$$x = \frac{3060}{0.87}$$

Actual profit =  $0.02x$

$$= 0.02 \times \frac{3060}{0.87} = \text{Rs. } 70.34$$

128. A.  $x - y = 6$

$$B. 0.4y = 0.3x$$

$$\frac{x}{y} = \frac{4}{3}$$

$$C. \frac{x}{2} : \frac{y}{3} = 2:1$$

$$\frac{x}{y} \times \frac{3}{2} = \frac{2}{1}$$

$$\frac{x}{y} = \frac{4}{3}$$

B and C give the same expression/information and hence are equivalent.

$$x = \frac{4}{3} y$$

$$x - y = 6$$

$$\frac{4}{3} y - y = 6$$

$$\frac{4}{3} = 6$$

$$y = 18$$

$$x = \frac{4}{3} \times 18 = 24$$

$$129. \text{Hypotenuse} = \sqrt{5^2 + 12^2}$$

$$= \sqrt{25 + 144}$$

$$= \sqrt{169} = 13$$

$$\text{Base : Height : Hypotenuse} = 5 : 12 : 13$$

$$\text{Base : Height : Hypotenuse} = 30 \text{ cm}$$

$$\therefore \text{Base} = \frac{5}{5 + 12 + 13} \times 30 = 5 \text{ cm}$$

$$\text{Height} = \frac{12}{5 + 12 + 13} \times 30 = 12 \text{ cm}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$= \frac{1}{2} \times 5 \times 12 = 30 \text{ cm}^2$$

130. The question cannot be answered because R's share in investment is not given.

131. Percentage of candidates selected over appeared in 2000.

$$\frac{25}{850} \times 100 = 2.94\%$$

$$A = 850$$

$$\frac{35}{1050} \times 100 = 3.33\%$$

$$B = 1050$$

$$\frac{28}{990} \times 100 = 2.83\%$$

$$C = 990$$

$$\frac{36}{1050} \times 100 = 3.33\%$$

$$D = 1080$$

$$\frac{40}{1080} \times 100 = 3.57\%$$

$$E = 1120$$

The percentage is lowest for state C.

**132.** Passing percentage over appeared for state D in:

$$\frac{300}{1080} \times 100 = 27.7\%$$

2000 → 1080

$$\frac{320}{1150} \times 100 = 27.8\%$$

2001 → 1150

$$\frac{280}{995} \times 100 = 28.1\%$$

2002 → 995

$$\frac{260}{976} \times 100 = 26.67\%$$

2003 → 976

$$\frac{240}{888} \times 100 = 27\%$$

2004 → 888

$$\frac{216}{864} \times 100 = 25\%$$

2005 → 864

The required percentage is highest in the year 2002.

**133.** Total no of candidates selected from state 'A'

$$= 25 + 20 + 22 + 36 + 32 + 28$$

$$= 163$$

Total no. of candidates selected from state 'B'

$$= 35 + 30 + 28 + 32 + 40 + 38$$

$$= 203$$

$$\therefore \text{Required \%} = \frac{163}{203} \times 100 = 80\%$$

**134.** Percentage of candidates selected over passed for state 'B' in

$$\frac{35}{245} \times 100 = 14.3\%$$

2000 → 245

$$\frac{30}{230} \times 100 = 13\%$$

2001 → 230

$$\frac{28}{210} \times 100 = 13.3\%$$

2002 → 210

$$\frac{32}{190} \times 100 = 16.8\%$$

2003 → 190

$$\frac{40}{225} \times 100 = 17.8\%$$

2004 → 225

$$\frac{38}{200} \times 100 = 19\%$$

2005 → 200

Required percentage is lowest in 2001

**135.** No. of candidates passed from state A in

$$1996 = 240$$

No. of candidates passed from state E in

$$1999 = 280$$

$$\therefore \text{Required ratio} = 240 : 280 \\ = 6 : 7$$

**136.** Production of company C in 1999 = 45 lakh tonnes  
 Production of company A in 2004 = 58 lakh tonnes

$$\therefore \text{Required difference} = 50 - 45 \\ = 5 \text{ lakh tonnes}$$

**137.** Required percentage

$$\frac{55 - 40}{40} \times 100 = \frac{75}{2} = 37.5\%$$

**139.** Total production of company C in 2001 and 2002 = 120 lakh tonnes  
 Total production of company A in 1999 and 2000 = 90 lakh tonnes

$$\therefore \text{Required percentage} \\ = \frac{120}{90} \times 100 \\ = 133 \frac{1}{3}\%$$

**140.** Average production of company A

$$= \frac{50 + 40 + 55 + 45 + 60 + 50}{6} \\ = \frac{300}{6} = 50 \text{ lakh tonnes}$$

Average production of company B

$$= \frac{55 + 60 + 50 + 55 + 50 + 55}{6} \\ = \frac{325}{6} = 54.17 \text{ lakh tonnes}$$

Average production of company C

$$= \frac{45 + 60 + 60 + 45 + 40}{6} \\ = \frac{300}{6} = 50 \text{ lakh tonnes}$$

$$\therefore \text{Required difference} = 54.17 - 50 \\ = 4.17 \text{ lakh tonnes.}$$

**141.** No. of students who left in the beginning of 2002 = 400

No of students who joined in the beginning of 2002 = 500

$\therefore$  There was net increase of 100 (=500 - 400) students in the strength of the school from 2001 to 2002.

**142.** We can come to this conclusion even without performing complete exact calculation, simply by looking / comparing the terms written within the brackets.

**143.** Total no. of students who joined till 2003

$$= 300 + 250 + 500 + 450 = 1500$$

Total no. of student who left till

$$2003 = 250 + 350 + 400 + 300 = 1300$$

Net increase in the strength of the school

$$= 1500 - 1300 = 200$$

Initial strength of the school in 1999 = 1500

$\therefore$  Strength of school during 2003

$$= 1500 + 200 = 1700$$

Year	Strength
1999	1500
2000	1500 + 300 - 150 = 1550

144.

2001	$1550 + 250 - 350 = 1450$
2002	$1450 + 500 - 400 = 1550$
2003	$1550 + 450 - 300 = 1700$
2004	$1700 + 400 - 500 = 1600$
2005	$1600 + 550 - 500 = 1650$

Strength of the school was equal in 2000 and 2002.

**145.** From solution to Q. No. 159 we have no. of students in 2003 = 1700  
and students in 2001 = 1450

$$\begin{aligned} \therefore \text{Required \%} &= \frac{1700}{1450} \times 100 \\ &= 117\% \text{ (approx.)} \end{aligned}$$

146. The given series is based on the following pattern:

$$9 \times 2 + 1.5 = 19.5$$

$$19.5 \times 2 + 2 = 41$$

$$41 \times 2 + 2.5 = 84.5$$

Therefore, the new series is as follows:

$$12 \times 2 + 1.5 = 25.5 \quad \dots \text{(a)}$$

$$25.5 \times 2 + 2 = 53 \quad \dots \text{(b)}$$

$$53 \times 2 + 2.5 = \boxed{108.5} \quad \dots \text{(c)}$$

$$108.5 \times 2 + 3 = 220 \quad \dots \text{(d)}$$

$$220 \times 2 + 3.5 = 443.5 \quad \dots \text{(e)}$$

Therefore, the number 108.5 will come in place of (c) in the new series.

147. The series is based on following pattern

$$4 \times 1 + 1 = 5$$

$$+ 3$$

$$5 \times 4 + 2 = 22$$

$$+ 5$$

$$22 \times 9 + 3 = 201$$

Similarly the new series is as follows:

$$7 \times 1 + 1 = 8 \quad \dots \text{(a)}$$

$$8 \times 4 + 2 = 34 \quad \dots \text{(b)}$$

$$34 \times 9 + 3 = 309 \quad \dots \text{(c)}$$

$$309 \times 16 + 4 = 4948 \quad \dots \text{(d)}$$

Therefore, the number  $\boxed{4948}$  will come in place of (d) in the new series

148. The series is based on following pattern:

$$5 \times 1 + 0.25 \times 1 = 5.25$$

$$+ 3$$

$$5.25 \times 2 + 0.25 \times 4 = 11.5$$

$$+ 5$$

$$11.5 \times 3 + 0.25 \times 9 = 36.75$$

Similarly, the new series is as follows:

$$3 \times 1 + 0.25 \times 1 = 3.25 \quad \dots \text{(a)}$$

$$3.25 \times 2 + 0.25 \times 4 = 7.5 \quad \dots \text{(b)}$$

$$7.5 \times 3 + 0.25 \times 9 = 24.75 \quad \dots \text{(c)}$$

Therefore, the number  $\boxed{24.75}$  will come in place of (c) in the new series.

149. The series is based on following pattern:

$$38 \times 0.5 = 19$$

$$19 \times 1.5 = 28.5$$

$$28.5 \times 2.5 = 71.25$$

Similarly, the new series is as follows:

$$18 \times 0.5 = 9 \quad \dots (a)$$

$$9 \times 1.5 = 13.5 \quad \dots (b)$$

$$13.5 \times 2.5 = 33.75 \quad \dots (c)$$

$$33.75 \times 3.5 = \boxed{118.125} \quad \dots (d)$$

Therefore, the number 118.125 will come in place of (d) in the new series.

150. The series is based on following pattern:

$$25 + (11)^2 = 25 + 121 = 146$$

$$146 - (9)^2 = 146 - 81 = 65$$

$$65 + (7)^2 = 65 + 49 = 114$$

Similarly, the new series is as follows:

$$39 + (11)^2 = 39 + 121 = 160 \quad \dots (a)$$

$$160 - (9)^2 = 160 - 81 = 79 \quad \dots (b)$$

$$79 + (7)^2 = 79 + 49 = 128 \quad \dots (c)$$

$$128 + (5)^2 = 128 + 25 = 153 \quad \dots (d)$$

$$153 + (3)^2 = 153 + 9 = 162 \quad \dots (e)$$

Therefore, the number 162 will come in place of n(e) in new series.

151. There are 9 women and 8 men. A committee of 12, consisting of at least 5 women, can be formed by choosing:

(i). 5 women and 7 men

(ii) 6 women and 6 men

(iii) 7 women and 5 men

(iv) 8 women and 4 men

(v) 9 women and 3 men

∴ Total number of ways of forming the committee

$$= {}^9C_5 \times {}^8C_7 + {}^9C_6 \times {}^8C_6 + {}^9C_7 \times {}^8C_5 + {}^9C_8 \times {}^8C_4 + {}^9C_9 \times {}^8C_3$$

$$= 126 \times 8 + 84 \times 28 + 36 \times 56 + 9 \times 70 + 1 \times 56 = 6062$$

152. Women are in majority in (iii), (iv) and (v) cases as discussed in question 151.

∴ Total number of such committees

$$= {}^9C_5 \times {}^8C_5 + {}^9C_6 \times {}^8C_4 + {}^9C_7 \times {}^8C_3$$

$$= 36 \times 56 + 9 \times 70 + 1 \times 56 = 2702$$

153. Men are in majority in only (i) case as discussed in question 151.

∴ Total number of such committees

$$= {}^9C_5 \times {}^8C_7 = 126 \times 8 = 1008$$

154. There are 20 balls in the turn out of which 2 balls can be drawn in  ${}^{20}C_2$  ways

∴ Total number of elementary events

$$= {}^{20}C_2 = 190$$

There are 9 red balls out of which 2 balls can be drawn in  ${}^9C_2$  ways.

∴ Favourable number of elementary events

$$= {}^9C_2 = \frac{9 \times 8}{1 \times 2} = 36$$

∴ Required probability

$$\frac{36}{190} = \frac{18}{95}$$

155. There are 9 letters in the word ALLAHABAD out of which 4 are As, 3 are Ls and the rest are all distinct.

So, the requisite number of words

$$= \frac{9!}{4! 2!} = 7560$$

156. No. of A type of employees in 2006.  
 $= 0.22 \times 48640$   
 $= 10700$

In 2005, A =  $0.20 \times 42980 = 8596$   
 B =  $0.06 \times 42980 = 2579$   
 C =  $0.10 \times 42980 = 4298$   
 D =  $0.15 \times 42980 = 6447$   
 E =  $0.27 \times 42980 = 11605$   
 F =  $0.22 \times 42982 = 9455$   
 C + D =  $4298 + 6447 = 10745$

157. In 2006,

A : 10700  
 B :  $0.10 \times 48640 = 4864$   
 C :  $0.11 \times 48640 = 5450$   
 D :  $0.09 \times 48640 = 4377$   
 E :  $0.27 \times 48640 = 13133$   
 F :  $0.21 \times 48640 = 10214$

% change during 2005-2006

A :  $\frac{10700 - 8596}{8596} \times 100 = 24.5\%$

B :  $\frac{4864 - 2579}{2579} \times 100 = 88.6\%$

C :  $\frac{5350 - 4298}{4298} \times 100 = 24.5\%$

D :  $\frac{6447 - 4377}{6447} \times 100 = 32.1\%$

E :  $\frac{13133 - 11605}{11605} \times 100 = 13.2\%$

F :  $\frac{10214 - 9455}{9455} \times 100 = 8\%$

The % change was maximum for B.

158.  $4864 - 2579 = 2285$

159.  $\frac{5000}{48640} \times 100 = 10.3\% = 10\%$

160.  $\frac{10700}{8596} \times 100 = 125\%$

161. In 36 days 12 men can do 1 complete work.

In 36 days 12 women can do  $\frac{3}{4}$  th of the work.

Since time and the no. of persons is the same in both cases.

1 women's daily work =  $\frac{3}{4}$ th of 1 men's daily work\

8 women's daily work

$$= \frac{3}{4} \times 8 = 6 \text{ men's daily work}$$

(10) men + 8 women daily work)

$$= (10 \text{ men} + 6 \text{ men})$$

$$= 16 \text{ men's daily work.}$$

12 men can do the work in 36 days

∴ 16 men can do the work in

$$36 \times \frac{12}{16} = 27 \text{ days}$$

162. Increase in interest in 3 years due to increase in rate by 4%  
 $= \frac{800 \times 3 \times 4}{100} = \text{Rs. } 96$

Total amount at the end of 3 years  
 $= \text{Rs. } 956 + \text{Rs. } 96$   
 $= \text{Rs. } 1052$

163.  $427398 = 15 \times 28493 + 3$

$\therefore$  The least number which should be subtracted from 427398 so that it becomes divisible by 15 = 3.

164. Initial speed = 80 km/hr

Total distance =  $80 \times 10 = 800$  km.

Now speed =  $\frac{800}{4} = 200$  km/hr

Increase in speed =  $200 - 80 = 120$  km/hr.

165.  $33 \frac{1}{3}\%$  of 768.9 +  $25\%$  of 161.2 - 58.12

$$= \frac{100}{3 \times 100} \times 768.9 + \frac{25}{100} \times 161.2 - 58.12$$

$$= 256.3 + 40.3 - 58.12$$

$$= 238.48 = 240 \text{ (approx.)}$$

166. Profit = Selling price of 4 notebooks

Cost price = selling price of (12 - 8)  
 $= 4$  notebooks.

$\therefore$  %profit =  $\frac{4}{8} \times 100 = 50$

167. 3 years ago Ritu's age = x

$\therefore$  Ritu's present age = x + 3

Rahul's present age = Ritu's present age - 5  
 $= x + 3 - 5 = x - 2$

168. Mixture : 2 kg of rice at Rs. 15 kg + 3 kg of rice at Rs. 13/kg

Total weight =  $2 + 3 = 5$  kg

Total cost price =  $(2 \times 15) + (3 \times 13)$   
 $= 30 + 39 = \text{Rs. } 69$

Cost price per kg of the mixture  
 $= \frac{69}{5} = \text{Rs. } 13.80$

Selling price to get  $33 \frac{1}{3}\%$  profit

$$= \frac{100 + 33 \frac{1}{3}}{100} \times \text{Rs. } 13.80$$

$$= \frac{400}{3 \times 100} \times \text{Rs. } 13.80$$

$$= \frac{4}{3} \times \text{Rs. } 13.80$$

$$= \text{Rs. } 18.40$$

169. Total time = 6 hours.

Speed of the both in still water = 4 km/hr let the distance between M and N be D and the speed of the stream be x.

$$D \left[ \frac{1}{4+x} + \frac{1}{4-x} \right] = 6$$

$$D \frac{4-x+4+x}{(x+x)(4-x)} = 6$$

$$D \left[ \frac{8}{4^2 - x^2} \right] = 6$$

$$\frac{8D}{16-x^2} = 6$$

$$D = \frac{6}{8}(16-x^2) = \frac{3}{4}(16-x^2)$$

Since the speed of the stream (x) is not given, the distance D cannot be determined.

170. Let Mr. Yadav's annual salary be x.

Amount spent on consumables = 0.80x

Amount spent on clothes and transport

$$= 0.50(x-0.80x)$$

$$= 0.50 \times 0.20x$$

$$= 0.10x$$

Savings = x - 0.80x - 0.10x = 0.10x

∴ 0.10x = Expenditure on clothes and transport = Rs. 5370

∴ Monthly expenditure =  $\frac{5370}{12}$

$$= \text{Rs. } 447.50$$

$$171. \text{ I. } p^2 + 24 = 10p$$

$$p^2 - 10p + 24 = 0$$

$$p^2 - 6p - 4p + 24 = 0$$

$$p(p-6) - 4(p-6) = 0$$

$$(p-6)(p-4) = 0$$

$$P = 4, 6$$

$$\text{II. } 2p^2 + 18 = 12q$$

$$q^2 + 9 = 0$$

$$q^2 - 6q + 9 = 0$$

$$(q-3)^2 = 0$$

$$q = 3$$

Thus,  $p > q$

$$172. \text{ I. } pq + 30 = 6p + 5q$$

$$6q + 5q - pq = 30$$

$$\frac{p}{5} + \frac{q}{6} - \frac{pq}{20} = 1$$

$$\frac{P}{5} + \frac{q}{6} - \frac{(p+q)}{5} = 1$$

∴ P = 5 and q = 6

$$q > p$$

$$173. \text{ I. } q^2 + q = 2$$

$$q^2 + q - 2 = 0$$

$$q^2 - q + 2q - 2 = 0$$

$$q(q-1) + 2(q-1) = 0$$

$$(q-1)(q+2) = 0$$

$$\begin{aligned}
 & q = -2, 1 \\
 & p^2 + 7p + 10 = 0 \\
 & p^2 + 5p + 10 = 0 \\
 & p^2 + 5p + 2p + 10 = 0 \\
 \text{II. } & p(p+5) + 2(p+5) = 0 \\
 & (p+5)(p+2) = 0 \\
 & P = 5, -2 \\
 \text{Thus, } & q > p
 \end{aligned}$$

$$\begin{aligned}
 174. \text{ I. } & p^2 + 16 = 8p \\
 & p^2 - 8p + 16 = 0 \\
 & (p-4)^2 = 0 \\
 & P = 4
 \end{aligned}$$

$$\begin{aligned}
 \text{II. } & 4q^2 + 64 = 32q \\
 & q^2 + 16 = 8q \\
 & q^2 - 8q + 16 = 0 \\
 & (q-4)^2 = 0 \\
 & q = 4
 \end{aligned}$$

$$\text{Thus, } p = q$$

$$\begin{aligned}
 175. & 2p^2 + 12p + 16 = 0 \\
 & p^2 + 6p + 8 = 0 \\
 & p^2 + 2p + 4p + 8 = 0 \\
 & p(p+2) + 4(p+2) = 0 \\
 & (p+2)(p+4) = 0 \\
 & P = -2, -4
 \end{aligned}$$

$$\begin{aligned}
 \text{II. } & 2q^2 + 14q + 24 = 0 \\
 & q^2 + 7q + 12 = 0 \\
 & q^2 + 3q + 4q + 12 = 0 \\
 & q(q+3) + 4(q+3) = 0 \\
 & (q+3)(q+4) = 0
 \end{aligned}$$

$$\begin{aligned}
 & q = -3, -4, \\
 \text{Thus,, } & p \geq q
 \end{aligned}$$