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Based on Memory

IBPS Specialist Officer (IT)

Previous Solved Paper

Test I

REASONING ABILITY

Directions (Q. 1-2): Study the following information and answer the given questions.

Point F is 10m to the south of E

Point G is 3 m to the east of F.

Point H is 5m to the south of G.

Point I is 6m to the west of H.

Point J is 10m to the north of I.

Point K is 6m to the east of J.

Point L is 5m to the north of K.

1. Which of the following represents the direction of point G with respect to point J?

- 1) south-east 2) north-west
3) south-west 4) south
5) north-east

2. How far and in which direction is point E from point L?

- 1) 5 metres south 2) 3 metres east
3) 10 metres north 4) 3 meters west
5) 5 metres north

Directions (Q. 3-7): These questions consists of a question and two statements numbered I and II given below it. You have to decide whether the data given in the statements are sufficient to answer the question. Read both the statements and choose the most appropriate option.

3. In which month (of the same year) did Ravi join office?

I. Ravi's mother correctly remembers that he joined office after June but before October and that month had less than 31 days.

II. Ravi's father correctly remembers that he joined office after August but before December and the month had only 30 days.

- 1) The data in statement **II alone** are sufficient to answer the question, while the data in statement **I alone** are not sufficient to answer the question.

- 2) The data either in statement **I alone** or statement **II alone** are sufficient to answer the question.

- 3) The data in statement **I alone** are sufficient to answer the question, while the data in statement **II alone** are not sufficient to answer the question.

- 4) The data even in **both** the statements I and II together are **not sufficient** to answer the question.

- 5) The data in **both** the statements I and II together are **necessary** to answer the question.

4. Is M the mother of L?

I. T is the mother of M, M is married to J. K is the son of J. F is the sister of K. L is the sister of F.

II. K is the grandson of T. K is the brother of F. F is the sister of L. L is the daughter of J. J is the son-in-law of T.

- 1) The data either in statement **I alone** or statement **II alone** are sufficient to answer the question.

- 2) The data in **both** the statements I and II together are **necessary** to answer the question.

- 3) The data in statement **II alone** are sufficient to answer the question, while the data in statement **I alone** are not sufficient to answer the question.

- 4) The data in statement **I alone** are sufficient to answer the question, while the data in statement **II alone** are not sufficient to answer the question.

- 5) The data even in **both** the statements I and II together are **not sufficient** to answer the question.

5. Who among the six of them is the tallest if Geetha is taller than Shilpa and Deepa is taller than Meeta? (Sunita and Sadhana are the other two)

I. Sadhana is taller than Sunita.

II. Sadhana is taller than Shilpa and Meeta as well as Deepa.

- 1) The data either in statement **I alone** or statement **II alone** are sufficient to answer the question.
 - 2) The data in **both** the statements I and II together are **necessary** to answer the question.
 - 3) The data in statement **II alone** are sufficient to answer the question, while the data in statement **I alone** are not sufficient to answer the question.
 - 4) The data even in **both** the statements I and II together are **not sufficient** to answer the question.
 - 5) The data in statement **I alone** are sufficient to answer the question, while the data in statement **II alone** are not sufficient to answer the question.
6. How is the word 'plant' written in the given code language?
- I.** 'buy a new plant today' is written as '4 \$ % 7 2' and 'not the plant she said' is written as '@ # 5 \$ 9'.
- II.** 'plant is always good' is written as '> 6 3 \$' and 'is good buy always' is written as '3 > 2 6'.
- 1) The data in statement **I alone** are sufficient to answer the question, while the data in statement **II alone** are not sufficient to answer the question.
 - 2) The data in statement **II alone** are sufficient to answer the question, while the data in statement **I alone** are not sufficient to answer the question.
 - 3) The data in **both** the statements I and II together are **necessary** to answer the question.
 - 4) The data even in **both** the statements I and II together are **not sufficient** to answer the question.
 - 5) The data either in statement **I alone** or statement **II alone** are sufficient to answer the question.
7. Among six people A, B, C, D, E and F each having a different height, who is the second tallest?
- I.** Only two people are shorter than D. Only two people are taller than A. E is shorter than C. B is taller than only F.
- II.** Only three people are shorter than A. B is shorter than D but not the shortest. C is the tallest amongst them.
- 1) The data in **both** the statements I and II together are **necessary** to answer the question.
 - 2) The data in statement **II alone** are sufficient to answer the question, while the data in statement **I alone** are not sufficient to answer the question.
 - 3) The data even in **both** the statements I and II together are **not sufficient** to answer the question.
 - 4) The data either in statement **I alone** or statement **II alone** are sufficient to answer the question.
 - 5) The data in statement **I alone** are sufficient to answer the question, while the data in statement **II alone** are not sufficient to answer the question.
- Directions (Q. 8-13): Study the information carefully and answer the questions.**
- A, B, C, D, E, F, G and H are sitting around a circular area at equal distances between each other, but not necessarily in the same order. Some of the people are facing the centre while some face outside (i.e., in a direction opposite to the centre.)
- B sits third to left of H. H faces the centre. F sits second to right of B. E sits second to left of D. D is neither an immediate neighbour of B nor H. Both the immediate neighbour of C face outside. A is not an immediate neighbour of H. Immediate neighbours of A face opposite directions (opposite directions means if one neighbour faces the centre then the other faces outside and vice-versa). Both the immediate neighbours of D face the same direction as F. (i.e., F faces the centre then both the immediate neighbours of D also face the centre and vice versa). A faces same direction as B (i.e., if A faces the centre then B also faces the centre and vice-versa).
8. How many people in the given arrangement face the centre?
- 1) Three
 - 2) One
 - 3) Two
 - 4) Four
 - 5) Five
9. Which of the following is true regarding G as per the given seating arrangement?
- 1) C sits second to left of G.
 - 2) Only two people sit between G and D
 - 3) A sits to immediate right of G
 - 4) B is one of the immediate neighbours of G
 - 5) G faces the centre
10. Four of the following five are alike in a certain way based on the given seating arrangement and so form a group. Which is the one that does not belong to that group?

- 1) G 2) A
 3) C 4) F
 5) D
11. What is A's position with respect of H?
 1) Third to the left
 2) Third to the right
 3) Fourth to the right
 4) Second to the left
 5) Fifth to the left
12. Who is sitting to immediate right to E?
 1) H 2) G
 3) C 4) F
 5) B
13. Who amongst the following sits exactly between F and B?
 1) G 2) C
 3) E 4) A
 5) H

Directions (Q. 14-19): Study the following information carefully and answer the questions.

Each of the seven friends viz. P, Q, R, S, T, U and V joined seven different courses viz. MBA, MBBS, Law, Engineering, Arts, Science and Commerce (None of the given information is necessarily in the same order) on seven different days of the same week i.e., Monday to Sunday.

Only three people joined after S. Only two people joined between S and the one who joined Law. Only three people joined between the one who joined Law and the one who joined Engineering. Only one person joined between V and the one who joined Arts. V joined before the person who joined Arts. V neither joined on Tuesday nor Wednesday. V did not join Engineering. Only three people joined between V and R. P joined on the day immediately before the one who joined Commerce. Neither S nor T joined Commerce. Q joined MBBS. P did not join Science.

14. Who joined immediately before the day the person joined MBA?
 1) U
 2) P
 3) The person who joined MBBS
 4) V
 5) The person who joined Engineering
15. Who amongst the following joined on Tuesday?
 1) The one who joined Engineering
 2) S
 3) R

- 4) The person who joined MBBS
 5) U
16. On which of the following days did the person join Commerce?
 1) Friday 2) Sunday
 3) Saturday 4) Wednesday
 5) Monday
17. The one who joined Science, joined in which of the following days?
 1) Wednesday 2) Saturday
 3) Monday 4) Thursday
 5) Friday
18. How many people joined between the one who joined Arts and P?
 1) Two 2) Three
 3) None 4) One
 5) Five
19. Who joined immediately between the days on which V and the one who joined Science?
 1) Q and the one who joined Engineering
 2) T and the one who joined MBBS
 3) R and S
 4) T and P
 5) The one who joined Law and R

Directions (Q. 20-24): In each of the questions below are given two/three statements followed by two conclusions numbered I and II. have been given. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

(20-21)

Statements:

- All kites are birds.
 No bird is an animal.
 All animals are clouds.

20. **Conclusions:**

- I** Atleast some birds are clouds.
II All clouds being birds is a possibility.
- 1) Only Conclusion II is true
 2) Neither Conclusion I nor II is true
 3) Both Conclusions I and II are true
 4) Either Conclusion I or II is true
 5) Only Conclusion I is true

21. **Conclusions:**

- I** No kite is an animal.
II All kites being clouds is a possibility.

- 1) Either Conclusion I or II is true
- 2) Only Conclusion I is true
- 3) Both Conclusions I and II are true
- 4) Neither Conclusions I nor II is true
- 5) Only Conclusion II is true

(22-23):

Statements:

Some forces are energies.

All energies are powers.

All powers are strengths.

22. **Conclusions:****I** Atleast some forces are strength.**II** All energies are strengths.

- 1) Only Conclusion II is true
- 2) Either Conclusion I or II is true
- 3) Only Conclusion I is true
- 4) neither Conclusion I nor II is true
- 5) both Conclusions I and II are true

23. **Conclusions:****I** All forces being powers is a possibility.**II** All powers are energies.

- 1) Only Conclusion I is true
- 2) Either Conclusion I or II is true
- 3) Only Conclusion II is true
- 4) Both Conclusions I and II are true
- 5) Neither Conclusion I nor II is true

24. **Statements:**

Some circles are rectangles.

All squares are rectangles.

Conclusions:**I** Atleast some squares are circles.**II** All rectangles are circles.

- 1) Only Conclusion I is true
- 2) Either Conclusion I or II is true
- 3) Both Conclusions I and II are true
- 4) Only Conclusion II is true
- 5) Neither Conclusions I nor II is true

Directions (Q. 25-27): Study the following information carefully to answer the given questions.

Each of the six friends, A, B, C, D, E and F scored different marks in an examination. C scored more than only A and E, D scored less than only B. E did not score the least. The one who scored the third highest marks scored 81 marks. E scored 62 marks.

25. Which of the following could possibility be C's score?

- 1) 70
- 2) 94
- 3) 86
- 4) 61
- 5) 81

26. Which of the following is **TRUE** which respect to the given information?

- 1) D's score was definitely less than 60
- 2) F scored the maximum marks.
- 3) Only two people scored more than C
- 4) There is a possibility that B scored 79 marks
- 5) None is true

27. The person who scored the **maximum** scored 13 marks more than F's marks. Which of the following can be D's score?

- 1) 94
- 2) 60
- 3) 89
- 4) 78
- 5) 81

Directions (Q. 28-32): Study the information and answer the given questions.

In a certain code language:

'make good finance plans' is written as 'zt mn lo xy'

'good economy helps finance' is written as 'dn oj mn zt'

'make good progress now' is written as 'xy fs zt br'

'progress helps develop country' is written as 'oj rt cl br'

(All the codes are two letter codes only)

28. Which of the following represents the code for 'make plans now' in the given code language?

- 1) oj xy zt
- 2) lo fs xy
- 3) lo oj mn
- 4) fs oj xy
- 5) xy lo mn

29. Which of the following represents the code for 'helps progress' in the given code language?

- 1) dn oj
- 2) oj mn
- 3) zt mn
- 4) dn br
- 5) br oj

30. What is the code for 'finance' in the given code language?

- 1) lo
- 2) xy
- 3) dn
- 4) mn
- 5) zt

31. What is the code for 'good' in the given code language?

- 1) mn
- 2) oj
- 3) zt
- 4) br
- 5) xy

32. What does the code 'cl' stand for in the given code language?

- 1) Either 'country' or 'helps'
- 2) Develop
- 3) Either 'develop' or 'country'
- 4) Helps
- 5) Country

Directions (Q. 33-35): Read the following information carefully and answer the given questions.

There have been numerous appeals to a local newspaper to publish a story by angry parents of children who require remedial help, about protection of Child Rights, highlighting the fact that XY High School has allegedly been demanding fees over and above the annual fees for conducting remedial classes for special children i.e., children who need additional help.

- (A) As per the government rules, it is the teacher's responsibility to assess the learning ability of each child not accordingly supplement additional instructions, if any, as required.
- (B) Parents should file a complaint in the local police station and collectively appeal in the court of law in order to ensure that all special students receive remedial help.
- (C) Many private schools are known for charging extra fee for remedial classes.
- (D) Some parents are considering other schools for their children as they do not wish to pay the extra charge levied by the school for remedial education.
- (E) Providing remedial education to students is very expensive and the management of the school charges a minimum amount, apart from school fees, to ensure that best possible help is provided to students.
- (F) Despite the fact that the annual fee of XY high school is over ₹ 30000/-, the parents are forced to pay the extra fees and if they are unable to do so, the child is not allowed to attend the remedial classes.

33. Which of the following strengthens the stands of the parents who are angry because of the school's decision to charge an extra amount as fees for remedial education?

- 1) Only (D)
- 2) Only (A)
- 3) Both (C) and (F)
- 4) Only (C)
- 5) Both (A) and (F)

34. Which of the following may be the course of action for the parents who wish to ensure that their children receive remedial help without any extra charge?

- 1) Only (C)
- 2) Only (B)
- 3) Both (D) and (C)
- 4) Both (B) and (D)
- 5) Only (D)

35. Which of the following may be a reason for XY high school charging an extra fee from the parents despite charging a considerable amount as the annual fee?

- 1) Only (C)
- 2) Only (E)
- 3) Both (C) and (A)
- 4) Only (A)
- 5) Both (E) and (C)

Direction (Q. 36): Read the following information carefully and answer the question which follows.

The total sale of air-conditioners in country X in the first 6 months of the calendar has been 108 lakh units. This is already 67.5% of the total air-conditioners sold in the entire year for the previous year. Hence, this year the air conditioner sales will be much higher as compared to last year.

36. Which of the following is true, weakens the above conclusion?

- 1) As per unit electricity cost has recently been increased by the government
- 2) Attractive EMI schemes are now available for air conditioner purchase
- 3) Around 75% of air conditioners sales happen during the summer season which is typically during April-June
- 4) Total number of air conditioners sold in the previous year was lower than the number of air conditioners sold in the year before that
- 5) Total number of air conditioners sold has witnessed a sharp rise this quarter as compared to same quarter of the last year

Direction (Q. 37): Read the following information carefully and answer the question which follows.

The popularity of hand drawn black and white pencil sketch portraits is set to decline sharply as now computers are available which can draw pencil sketch portraits as well.

37. Which of the following is an underlying assumption in the above conclusion?

- 1) People prefer coloured portraits now a days as compared to pencil sketch portraits
- 2) With availability of good cameras at affordable prices, people prefer photographs now a days

- 3) Computer drawn portraits have option of colour fillings as well
- 4) Good artists who can draw pencil sketch portraits have been giving up their professions now a days
- 5) Sketches drawn by computer look absolutely like the hand drawn sketches and it is difficult to make out any difference with the naked eyes

Direction (Q. 38): Read the following information carefully and answer the question which follows.

Incidences of crime have significantly increased in City X in the current year as compared to that of last year. Activists are now up in arms against the authorities saying that law and order situation has drastically declined in City X owing to inefficiency of law enforcement agencies.

38. Which of the following facts will weaken the conclusion being drawn by the activists?
- 1) Many crime cases could not be reported or registered earlier which are now being reported owing to administrative efficiency
 - 2) A substantial increase in crimes has been in the unorganized ones like theft, chain snatching etc.
 - 3) The start of the year saw the appointment of Mr. A as the Police Commissioner who is known for his proficiency.
 - 4) Most of the crimes have been committed by individuals who came from the neighbouring state
 - 5) The number of police stations and police personnel has been increased by 40% this year

Directions (Q. 39-43): In these questions, relationship between different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statement and select the appropriate answer.

39. **Statements:**

$$E < C = U > T;$$

$$B > C > A$$

Conclusions:

I $A < E$ **II.** $T < B$

- 1) Neither Conclusion I nor II is true
- 2) Either Conclusion I or II is true
- 3) Only Conclusion I is true
- 4) Both Conclusions I and II are true
- 5) Only Conclusion II is true

40. **Statements:**

$$E < C = U > T$$

$$B > C > A$$

Conclusions:

I $B > E$ **II.** $A < T$

- 1) Both Conclusions I and II are true
- 2) Neither Conclusion I nor II is true
- 3) Either Conclusion I or II is true
- 4) Only Conclusion II is true
- 5) Only Conclusion I is true

41. **Statement:**

$$Q > R < S = T < L > V$$

Conclusions:

I $Q < V$ **II.** $L > R$

- 1) Only Conclusion I is true
- 2) Neither Conclusion I nor II is true
- 3) Either Conclusion I or II is true
- 4) Only Conclusion II is true
- 5) Both Conclusions I and II are true

42. **Statements:**

$$N > L < Z; \quad P > L; \quad Q > Z$$

Conclusions:

I $Q > L$ **II.** $Z > N$

- 1) Neither Conclusion I nor II is true
- 2) Both Conclusions I and II are true
- 3) Only Conclusion II is true
- 4) Only Conclusion I is true
- 5) Either Conclusion I or II is true

43. **Statements:**

$$N > L < Z; \quad P > L; \quad Q > Z$$

Conclusions:

I $P > N$ **II.** $Z > P$

- 1) Only Conclusion I is true
- 2) Either Conclusion I or II is true
- 3) Only Conclusion II is true
- 4) Neither Conclusion I nor II is true
- 5) Both Conclusion I and II are true

Directions (Q. 44-45): Read the information carefully and answer the given questions.

$P + Q$ means P is the sister of Q.

$P \# Q$ means P is the husband of Q.

$P \$ Q$ means P is the daughter of Q.

$P \% Q$ means P is the mother of Q.

$P @ Q$ means P is the brother of Q.

44. What should come in place of the question mark, to establish that B is the child of K in the expression?

T % K # F % L + N ? B

- 1) Only % 2) Either + or @
3) Only # 4) Either @ or %
5) Only +

45. Which among the given expressions indicate that J is the wife of F?

- 1) P \$ J % R + K % F 2) F @ R + K + P % J
3) J % P + K @ R \$ F 4) J % P # K + R \$ F
5) R @ P + K \$ F @ J

Directions (Q. 46-50): Study the given information and answer the questions.

When a word and number arrangement machine is given an input line of words and numbers, it arranges them following a particular rule. The following is an illustration of input and rearrangement : (All the numbers are two digits numbers).

Input : prepare 14 21 a new method 72 38 97 for studies 68

Step I : for a prepare 14 21 new method 72 38 97 studies 68

Step II : 21 14 for a prepare new method 72 38 97 studies 68

Step III : new method 21 14 for a prepare 72 38 97 studies 68

Step IV : 68 38 new method 21 14 for a prepare 72 97 studies

Step V : studies prepare 68 38 new method 21 14 for a 72 97

Step VI : 97 72 studies prepare 68 38 new method 21 14 for a

Step VI is the last step of the above arrangement as the intended arrangement as the intended arrangement is obtained. As per the rules followed in the given steps, find out the appropriate steps for the given input.

Input : developing 44 markets 38 27 economic practice required 16 83 72 today

46. Which of the following is step five of the given input?

- 1) today 44 required 38 practice 27 markets 16 economic 83 developing 72
2) required 44 today 38 markets 27 practice 16 developing 83 economic 72
3) required today 44 38 markets practice 27 16 developing economic 83 72
4) 44 38 required today 27 16 markets practice 83 72 developing economic
5) today required 44 38 practice markets 27 16 economic developing 83 72

47. In which step are the elements '72 today required 44' found in the same order?

- 1) Sixth
2) The given order of elements is not found in any step
3) Second
4) Fourth
5) First

48. What is the position of 'markets' from the left end in the first step?

- 1) Fourth 2) Third
3) Eighth 4) Ninth
5) Fifth

49. Which element is exactly between '38' and 'required' in the second step of the given input?

- 1) 27
2) There is no element in between
3) practice
4) economic
5) 44

50. Which element is fifth to the left of the element which is ninth from the left end of the fourth step?

- 1) 16 2) Practice
3) 27 4) Economic
5) Markets

Test II

ENGLISH LANGUAGE

Directions (Q. 51-60): Read the following passage carefully and answer the questions given below. Certain words/phrases have been given in BOLD to help you locate them while answering some of the questions.

Europe's slow emergence from its second recession in the last five years is raising new questions about whether the euro currency is doing more harm than good.

Five years of crisis have laid bare deep differences in national policies, politics and priorities across the European Union. the 28-member bloc is increasingly confronting a more fundamental problem : whether it is too unwieldy to address the multiplying array of challenges it faces. And in many ways, the most divisive issues involve the 17 member subset of the union that was supposed to give them something in common – the euro currency.

The notion that the European Union has structural deficiencies has been debated almost since its founding. The tension between economic integration and political harmonization is nothing new. But as the global financial crisis is beginning to **fade**, Europe's troubles persist, exacerbated by the fissures of the currency union that have impeded the region's economic recovery.

The strains are evident at many levels. Hopes for greater political cooperation are falling victim to domestic economic stress in many countries and the rise of populist politics heading into European parliamentary elections next spring. An interest rate cut by the European Central Bank last week reportedly came over the objections of the German members of the bank's governing council.

And there are deep divisions within the European Union over a plan to unify the process for identifying and closing down troubled banks – and paying the costs of doing so. Those disagreements could get a further airing this week when euro zone finance ministers meet.

The core of the trouble, critics say, stems from the structure of the euro currency union. Unlike a single currency country like the United States or Britain, it lacks a common treasury and the ability to issue common debt. That has created a poisonous dynamic between creditor nations, like Germany and debtor nations, like Greece.

True, there have been **glimmers of** good news lately. Consumer confidence among Europeans has improved, and recession has ended in countries like France and Spain. European stock indexes are up for the year. And yes, the euro in recent months has risen in value against other main currencies – although that is more curse than blessing, because it makes exports relatively more expensive outside the euro zone.

But the big worry lately is the specter of deflation, a doom loop of falling prices, wages and profits that, once underway, is a **tailspin hard to pull out of**. The fear of years of stagnation was the main impetus for the European Central Bank's decision to reduce interest rates, over the objections of Germany, which worries that looser money will only encourage profligacy by its weaker euro neighbours.

It is not evident, though that anything has been gained by the austerity policies that Germany long preached, which have been a drag on economic growth; government debt in the euro zone has risen sharply over the last half decade.

Perhaps worst of all, the various economic afflictions have reinforced the kind of nationalism and xenophobia that the broader European Union project was supposed to chase away.

51. Which of the given proverbs can possibly state the condition of Europe as portrayed in the passage _____.
- 1) Count one's chicken before they hatch
 - 2) Back to square one
 - 3) Tough as old boots
 - 4) Going down like a lead balloon
 - 5) Feeling on top of the world
52. Which of the following is most nearly the SAME in meaning as the words 'GLIMMERS OF' as used in the passage?
- 1) abundance of
 - 2) lack of
 - 3) rays of
 - 4) shine faintly
 - 5) options of
53. According to the critics in the passage, the real culprit behind the problems faced by the European Union is/are _____.
- (A) the inability to issue common debt
 - (B) the structure of euro currency
 - (C) the decreasing value of euro currency
- 1) Only (B) and (C)
 - 2) Only (A) and (B)
 - 3) Only (C)
 - 4) Only (A)
 - 5) Only (B)
54. According to the passage, exports outside the euro zone are becoming an expensive affair. One of the reasons behind this could be _____.
- (A) the rising value of euro
 - (B) the rising value of other currencies of European Union
 - (C) increasing competition among the countries of European Union
- 1) Only (A)
 - 2) Only (B)
 - 3) Only (C)
 - 4) Only (A) and (B)
 - 5) Other than those given as options
55. Which of the following is/are TRUE in the context of the passage?
- (A) Europe has been facing the problem of deflation for the past five years.

- (B) Consumer confidence among Europeans has improved.
- (C) The European Union is facing recession for the second time in five years.
- 1) Only (B) and (C) 2) Only (A) and (B)
3) Only (C) 4) Only (A)
5) Only (B)
56. Which of the following is most nearly the SAME in meaning as the words 'FADE' as used in the passage?
- 1) discolour 2) discontinue
3) subside 4) close
5) pale
57. What is the author hinting at by the phrase 'tailspin hard to pull out of' as used in the passage for the euro currency?
- 1) a state of mental or emotional letdown or collapse
2) a situation in which something starts to fail and gets more and more out of control
3) to make progress with something
4) to do as well as possible under conditions that are not satisfactory or pleasant
5) other than those given as options
58. According to the passage, the European Union is not in sync with closing down troubled banks because ____.
- 1) it is a cumbersome process and some countries of the European Union are not in favour of devoting time to the same
2) some countries are hopeful that some of the banks may bounce back when the value of euro rises while others consider this a false belief.
3) some of these banks have their headquarters in some of the countries in the European Union, thus those countries do not wish to close these banks despite poor performance
4) the Finance Ministers of the European Union are not in favour of closing down of troubled banks.
5) other than those given as options.
59. In the given passage, the author is highlighting the following EXCEPT ____.
- 1) financial crisis faced by the European Union
2) problems created by the euro currency
3) recession and its after effects in the European Union
4) effective measures to come out of recession
5) effects of deflation on the economy of Europe
60. Which of the following is NOT TRUE in the context of the passage?
- 1) The economic policies followed by Germany have boosted economic growth in the European Union
2) The problems of European Union continue to exist even with the fading of global financial crisis
3) Germany objected to the European Central Bank's decision to cut down interest rates
4) Recession has come to end in some of the European countries
5) All the given options are true
- Directions (Q. 61-65): In these questions, a short paragraph containing five sentences (A), (B), (C), (D) and (E) is given. The paragraph contains a central theme in its content. You have to identify the sentence carrying the central theme of the passage and mark your answer accordingly.**
61. Which of the following statements carries the central theme of the passage?
- 1) If you wanted your spouse's picture on that dazzling gold chain or a dress in the colour, design and size of your choice, then you need look no further
2) Although, it may set you back by a few lakhs, the end result is sure to make you gasp in wonder.
3) Most luxury brands can make products that are tailor made to suit the whims and fancies of customers, though at a high price.
4) Cartier, for instance, reveals some rather unusual and extraordinary designs which were especially created to suit the fancy of its customers.
5) There are other examples when unconventional requests have been fulfilled to meet customer expectations.
62. Which of the following statements carries the central theme of the passage?
- 1) According to a study, frequent cell phone users were far more likely to forego or disrupt physical exercise and scored lower on fitness assessments than peers who used cell phones less frequently.
2) Cell phones provide an ever-present invitation to 'sit and play', thus turning users into couch potatoes.
3) Interestingly, participants who fell into the low phone usage category said the devices made them more active because they were able to coordinate recreational pursuits with friends.

- 4) However, once they were engaged in a physical activity, the low use participants were more like to shut off their phone or put it aside.
- 5) Heavy usage of cell phones also has negative effects on one's level of concentration.
63. Which of the following statements carries the central theme of the passage?
- 1) Data shows that students from low income families are 2.4 times more likely to dropouts of school than are children from middle income families.
 - 2) It's been known for years that young people who dropout school face many more problems later in life than people who graduate.
 - 3) On an average, dropouts are more likely to be unemployed than high school graduates and to earn less money when they eventually secure work.
 - 4) Dropouts are often placed into low paying service occupations offering little opportunity for upward mobility.
 - 5) Dropouts make up a disproportionate percentage of the nation's prisons and death row inmates.
64. Which of the following statements carries the central theme of the passage?
- 1) Road traffic accidents, the leading cause of death by injury, now make up a surprisingly significant portion of the worldwide burden of ill-health.
 - 2) An estimated 1.2 million people are killed in road crashes each year, and as many as 50 million are injured, occupying 30 percent to 70 percent of orthopaedic beds in developing countries hospitals.
 - 3) Road traffic injuries affect mainly males (73 percent of deaths) and those between 15 and 44 years old.
 - 4) This burden is creating enormous economic hardship due to the loss of family breadwinners.
 - 5) Developing countries bear a large share of this burden, accounting for 85 percent of annual deaths.
65. Which of the following statements carries the central theme of the passage?
- 1) There is a strong perception that with the rise of digital devices. The youth have turned away from television (TV)
 - 2) Recent study indicates that the age-group of 18-24 years watched an average of roughly twenty hours of traditional TV weekly.
- 3) The immediate trend that jumps out of those figures is that while TC viewing continues to fall, the decline appears to be slowing.
 - 4) The decrease in viewing is growing larger with every passing quarter.
 - 5) Particularly with the emergence of alternative viewing methods, one might expect that this decrease will continue among this age group.
- Directions (Q. 66-70): Rearrange the given six sentences (A), (B), (C), (D), (E) and (F) in a proper sequence so as to form a meaningful paragraph and then answer the given questions.**
- (A) Indeed, despite being the world's largest country, fewer than 200 million phones were being sold every year.
 - (B) With smart phone sales totalling 59% of the market and overall mobile phone sales boosted to 307 million, the Chinese smart phone market has seen a growth in sales of 108% in 2012.
 - (C) Unsurprisingly, the key driver of change was price, with numerous elements combining to drive down the cost of both producing and buying smart phones.
 - (D) But what factors are behind this vast and sudden uptake of smart phones?
 - (E) In 2008, smart phones accounted for just 9% of all mobile phone sales in China.
 - (F) Move forward to 2012 and there has been a seismic shift in the market.
66. Which of the following should be the **FIRST** sentence after the rearrangement?
- 1) A
 - 2) B
 - 3) C
 - 4) D
 - 5) E
67. Which of the following should be the **SECOND** sentence after the rearrangement?
- 1) A
 - 2) B
 - 3) F
 - 4) D
 - 5) E
68. Which of the following should be the **THIRD** sentence after the rearrangement?
- 1) A
 - 2) B
 - 3) C
 - 4) F
 - 5) E
69. Which of the following should be the **SIXTH (LAST)** sentence after the rearrangement?

- 1) F 2) D
3) B 4) C
5) E

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

- 1) A 2) D
3) B 4) C
5) F

Directions (Q. 71-75): Which of the phrase given against the sentence should replace the word/phrase given in BOLD in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, select 'No correction required' as the answer.

71. **In a bid** to stimulate demand during the lean travel season that has now set in most Indian airlines have slashed fares by up to half.

- 1) In bidding 2) For a bid
3) At bidding 4) Bidding
5) No correction required

72. The unhurried tone of his voice **is reflecting** the philosophical nature of the dialogues he wrote for the four films he had made.

- 1) reflecting 2) reflects
3) reflected 4) was reflected
5) No correction required

73. How can one **begin towards addressing** these challenging facts?

- 1) addressing
2) begin to address
3) beginning addressing
4) begin at address
5) No correction required

74. In a candid conversation he talks about his journey as a writer and why he **prefers for** write for characters and not for himself.

- 1) prefers 2) prefers to
3) is preferring at 4) preferred
5) No correction required

75. Whether it is familial and societal expectations, inflexible organization is or the **sheer lack of** suitable employment, it has become extremely challenging for women to remain in the workforce.

- 1) sheered lack for 2) sheered lack of
3) sheer lacking in 4) sheer lack in
5) No correction required

Directions (Q. 76-85): Read the sentence to find out whether there is any grammatical mistake/error in it. The error, if any, will be in

one part of the sentence. Mark the part with the error as your answer. If there is no error, mark 'No error' as your answer. (Ignore the errors of punctuation, if any)

76. 1) India's largest passenger / 2) carrier slashed its fares / 3) by 50 percent for a 30-day / 4) advance purchase made on its website. / 5) No error.

77. 1) The usage of the term 'recession' / 2) has never been so common / 3) as it has been / 4) in the past few months. / 5) No error.

78. 1) A compound found in / 2) chocolate and red wine may be guard / 3) people against / 4) the risk of diabetes. / 5) No error.

79. 1) Some of us are afraid of the dark / 2) while others dread high altitudes / 3) and there is usually / 4) a genuine reason behind it. / 5) No error.

80. 1) Forecasters are confident that / 2) a hurricane, packed with wind speeds / 3) nearing 100 miles per hour, will hit / 4) the city from Monday morning. / 5) No error.

81. 1) People enthusiastically participated / 2) in the 'Run for Ganga' programme organized to creating / 3) awareness about the need / 4) for a pollution free river. / 5) No error.

82. 1) Sukesh, who was born on / 2) the marina's shore, says / 3) he can judge the depth / 4) of water by its colour. / 5) No error.

83. 1) Officials in Las Vegas are / 2) harnessing the power / 3) of the sun to lit / 4) the city's iconic welcome sign. / 5) No error.

84. 1) During planning your / 2) investments, you must / 3) guard against becoming / 4) too conservative. / 5) No error.

85. 1) Dissatisfaction levels among employees / 2) have increased / 3) since 2009 when / 4) the economic slowdown set upon. / 5) No error.

Directions (Q. 86-90): These questions have two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fits the meaning of the sentence as a whole.

86. While there products, which _____ from ethical to humorous, may vary, they're all giving the discerning Indian shopper a great _____ to foreign footwear.

- 1) start, option
2) vary, start
3) differentiate, access
4) range, alternative
5) collection, choice

87. Though, the city routinely receives _____ for its traffic issues, ranging from the never ending queues at the toll booth to the rush hour jams, it seems to be serious about doing its _____ to solve this problem.

- 1) flak, bit 2) criticism, spot
3) compliments, part 4) disapproval, tad
5) adulation, share

88. The actress _____ at the manner in which such despicable social customs _____ to thrive in teh society.

- 1) happy, remain
2) shocked, allowed
3) appalled, continue
4) embarrassed, persist
5) touched, prolong

89. Corporate mentorship programmes and earn and learn vocational schemes can _____ more Indian women to _____ the work force.

- 1) encourage, enter 2) make, join
3) allow, leave 4) succumb, become
5) get, make

90. _____ a dialogue writer to the most sought after screenplay and scriptwriter, he has come a long _____.

- 1) Being, distance 2) Starting, time
3) To, road 4) From, way
5) Alone, approach

Directions (Q. 91-100): In the given passage, there are blanks, each of which has been numbered. Against each, five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

(91) late there is an unusual enthusiasm in creating a research culture in many institutions of higher learning in India. This is (92) due to the growing awareness that educational institutions must focus on research if they want to be on (93) Added to this awareness are the strict directions from MHRD and UGC to strengthen the research outputs in the deemed to be universities. Many reputed institutions have embarked on programmes like research linked incentives. Recently a top-notch University has introduced a performance measurement system, in which research will be given as much weightage as teaching in the annual (94) of its faculty. Most IIMs in India have recognized the importance of research and want their faculty to (95) as much time to research as they do to teaching.

Research should be at the core and must be (96) in generating a major interface with the academic and business world it must provide a new theoretical framework that (97) reassessment and refinement of current practices and thinking. Research is used to establish or (98) facts, reaffirm the results of previous work solve new existing problems, support theorems or (99) new theorems. Its empowers the faculty for an in depth approach in teaching. It has the (100) to enhance the consultancy capabilities or the researcher.

91. 1) Since 2) Now
3) By 4) At
5) of
92. 1) flatly 2) mainly
3) compulsory 4) absolutely
5) primary
93. 1) toes 2) ahead
3) top 4) front
5) guard
94. 1) appraisals 2) pays
3) functions 4) salaries
5) records
95. 1) limit 2) establish
3) dedicate 4) donate
5) allow
96. 1) contributed 2) instrumental
3) caused 4) capable
5) done
97. 1) possesses 2) takes
3) exists 4) enables
5) creates
98. 1) deactivate 2) confirm
3) place 4) design
5) deviate
99. 1) develop 2) enlarge
3) built 4) fluctuate
5) revolve
100. 1) dream 2) limitation
3) encouragement 4) courage
5) potential

Test III

QUANTITATIVE APTITUDE

101. What will come in place of both the question mark (?) in the following equation?

$$\frac{7^{0.8}}{49} = \frac{189}{7^{2.2}}$$

- 1) 18 2) 23
3) 24 4) 21
5) 28

102. Find the value of $\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{4}\right)\dots\left(1 - \frac{1}{n}\right)$

- 1) n 2) $\frac{2}{n}$
3) $\frac{n(n-1)}{n}$ 4) 1
5) None of these

103. Lokesh bought an article for ₹ 2500. He spent ₹ 320 on its shopping. He then sold it ₹ 4089. What was the percent profit he gained in this transaction?

- 1) 38 2) 45
3) 46 4) 35
5) 48

Directions (Q. 104-108): Study the following table and answer the given questions.

Percent of shares sold by a six companies in four cities

T = Shares available in that city of each company

(Note: Equal numbers of shares is available of each company in a percent)

| | Mumbai T=300 | Chennai T=500 | Surat T=250 | Delhi T=420 |
|-----------|-----------------|------------------|----------------|----------------|
| Company A | 45 | 56 | 62 | 65 |
| Company B | 53 | 49 | 68 | 35 |
| Company C | 28 | 44 | 26 | 50 |
| Company D | 38 | 38 | 36 | 40 |
| Company E | 35 | 65 | 54 | 25 |
| Company F | 55 | 60 | 58 | 45 |

104. What is the approximate percent of shares sold by Company A in all four cities together?

- 1) 46 2) 56
3) 70 4) 50
5) 66

105. What is the respective ratio between the shares sold by Company A and B together in Delhi and Company E and F together in the same city?

- 1) 12 : 7 2) 11 : 8
3) 11 : 7 4) 10 : 7
5) 10 : 3

106. What is the difference between the shares sold by companies A, B and C together in Surat and companies D, E and F together in the same city?

- 1) 20 2) 12
3) 9 4) 13
5) 11

107. The shares sold by company D in Chennai are what percent less than the shares sold by company C in the same city? (Rounded off two digits after the decimal).

- 1) 13.64 2) 18.45
3) 16.89 4) 12.22
5) 14.45

108. What are the average shares sold by all the companies in Mumbai?

- 1) 122 2) 128
3) 120 4) 115
5) 127

109. The respective ratio between the present ages of Parag and Sapna is 21 : 19. Six years ago the respective ratio between their ages was 9 : 8. How old is Lina if her present age is 12 years less than Sapna's present age?

- 1) 38 years 2) 28 years
3) 26 years 4) 30 years
5) 42 years

Directions (Q. 110-114): What approximate value should come in place of the question mark (?) in the given questions ?

(Note : You are not expected to calculate the exact value).

110. $\sqrt{1230} + \sqrt{4230} = ?$

- 1) 50 2) 200
3) 100 4) 150
5) 250

111. $7\frac{3}{11} \times 626 - 7\frac{2}{3} = ?$

- 1) 4445 2) 4545
3) 4495 4) 4595
5) 4515

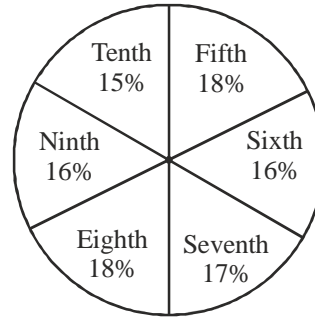
112. 49% of 5051 - $\frac{3}{7}$ th of 999 = ?

- 1) 2145 2) 2045
 3) 1945 4) 1905
 5) 2165
113. $4329 \div 19 + 6464 \div 13 = ?$
 1) 725 2) 625
 3) 925 4) 525
 5) 825
114. $(4.012)^3 + (29.997)^2 = ?$
 1) 1025 2) 965
 3) 745 4) 765
 5) 805
115. The average speed of a truck is $\frac{4}{5}$ th the average speed of car. The car covers 520 kms in 8 hours. How much distance (in kms) will the truck covers in 9 hours?
 1) 459 2) 486
 3) 468 4) 450
 5) 477
116. The cost of tiling a rectangular room is ₹ 6448 at the rate of ₹ 62 per square ft. The length of the room is 6 ft less than the side of a square room whose area is 361 square ft. What is the breadth of the rectangular room?
 1) 8 ft 2) 13 ft
 3) 7 ft 4) 9 ft
 5) 12 ft
117. Salim takes 8 days to finish a piece of work. Manoj takes 12 days to finish the same piece of work. Raj works twice as fast as Salim. How many days will all three of them together take to finish the same piece of work?
 1) $2\frac{3}{11}$ 2) $3\frac{8}{13}$
 3) $3\frac{9}{13}$ 4) $2\frac{9}{13}$
 5) $2\frac{2}{11}$
118. The sum of two odd numbers is 38 and their product is 325. What is three times the larger number?
 1) 42 2) 39
 3) 75 4) 72
 5) 78

Directions (Q. 119-123): Study the pie chart along with the table to answer the given questions.

Distribution of number of students in standard fifth to tenth in a school.

Total number of students = 4500



Ratio between number of boys and girls

| Standard | Ratio between number of boys and girls respectively |
|----------|-----------------------------------------------------|
| Fifth | 4 : 5 |
| Sixth | 5 : 3 |
| Seventh | 8 : 9 |
| Eighth | 3 : 2 |
| Ninth | 5 : 4 |
| Tenth | 7 : 8 |

119. Total number of boys in standards sixth and seventh together is approximately what percent of the total number of boys in the school?
 1) 38 2) 31
 3) 30 4) 34
 5) 39
120. What is the difference between total number of boys and total number of girls studying in all the standards together?
 1) 242 2) 224
 3) 244 4) 246
 5) 252
121. What is the ratio between total number of boys in standards seventh and ninth together and the total number of girls in standards fifth and sixth together respectively?
 1) 19 : 18 2) 16 : 15
 3) 19 : 16 4) 19 : 17
 5) 18 : 17
122. What is the ratio between number of girls in seventh standard and number of boys in tenth standard respectively?
 1) 8 : 5 2) 9 : 7
 3) 9 : 5 4) 4 : 3
 5) 7 : 4
123. Total number of boys in standards fifth, sixth and seventh together is what percent of the total number of girls in standards eighth, ninth

and tenth together? (rounded off to nearest integer)

- 1) 119 2) 117
3) 86 4) 114
5) 93

124. The average height of 13 girls in a class is $114\frac{8}{13}$ cms. The average height of 11 boys in a class is $169\frac{5}{11}$ cms. There are only 24 students in the class. What is the overall average height (in cms) of all the students together in the class?

- 1) $156\frac{3}{4}$ 2) 156
3) 153 4) 159
5) $153\frac{3}{5}$

Directions (Q. 125-129): In these questions, a number series is given. In each series, only one number is wrong. Find out the wrong number.

125. 115 151 139 119 90 55

- 1) 55 2) 119
3) 90 4) 139
5) 151

126. 1 4 12 30 68 148 304

- 1) 4 2) 12
3) 30 4) 68
5) 148

127. 45 15 6 3 2 1 4

- 1) 15 2) 3
3) 2 4) 1
5) 6

128. 445 444 436 409 343 220

- 1) 409 2) 343
3) 436 4) 444
5) 220

129. 80 76.5 69.5 59 48 27.5

- 1) 27.5 2) 59
3) 76.5 4) 48
5) 69.5

Directions (Q. 130-134): These questions are given followed by the information in three statements. You have to decide, the information in which of the statements necessary and sufficient to answer the question and mark answer accordingly.

130. What is the present age of Radhika?

- I** Radhika's present age is $\frac{2}{11}$ th of her mother's age at present.
II Radhika is older than her brother by 4 years.
III After four years Radhika's age will be one-fourth of her mother's age that time.
- 1) All of the above
2) Any two of the three
3) Question cannot be answered even with information in all three statements.
4) Only II and III
5) Only I and III

131. What is the cost of milk in the completely filled up cylindrical tank?

- I** Area of the base of the tank is 2464 cm².
II Area of the square with side equal to one-third of the tank's height of 841 cm².
III Cost of milk per litre is ₹ 45
- 1) Question cannot be answered even with information in all three statements.
2) Only III and either I or II
3) All of the above
4) Only II and III
5) Only I and III

132. What was the population of state 'A' in 2007?

- I** Population of state 'A' in 2007 increased by 12% from its population in 2006.
II In 2006, population of states 'A' and 'B' were in the ratio of 2 : 3 respectively.
III Population of state 'B' which was 12 lakhs in 2006, increased by 8% in 2007.
- 1) All I, II and III
2) Question cannot be answered even with information in all three statements.
3) Only I and III
4) Only II and either I or III
5) Only II and III

133. What is Suchitra's present age.

- I** Suchitra's present age is double the age of her son.
II The ratio of the present ages of Suchitra and her mother is 2 : 3.
III four years hence the ratio of Suchitra's age to her son's will be 24 : 13.

- 1) Only III 2) Only II
 3) Either I or II 4) Either II or III
 5) None of these
134. What is the labeled price of the music system?
- I.** Rehana purchased the music system for ₹ 2450 and spent ₹ 250 on its transportation.
- II.** Rehana earned a profit of 20% by selling the music system offering a discount of 5% on labeled price.
- III.** Selling price of the article after offering a discount of 5% on the labeled price is ₹ 3240.
- 1) Any two of the three
 2) All of the above
 3) Only I and III
 4) Only II and III
 5) Only III or only I and II

Directions (Q. 135-139): In these questions, two equations numbered I and II are given. You have to solve both the equations and mark answer.

135. **I.** $6x^2 + 5x + 1 = 0$
- II.** $15y^2 + 8y + 1 = 0$
- 1) $x \geq y$ 2) $x \leq y$
 3) $x < y$ 4) $x > y$
 5) relationship between x and y cannot be established
136. **I.** $x^2 + 5x + 6 = 0$

- II.** $4y^2 + 24y + 35 = 0$
- 1) $x \geq y$ 2) $x \leq y$
 3) $x < y$ 4) $x > y$
 5) relationship between x and y cannot be established
137. **I.** $2x^2 + 5x + 3 = 0$
- II.** $y^2 + 9y + 14 = 0$
- 1) $x \geq y$ 2) $x > y$
 3) $x \leq y$ 4) $x < y$
 5) relationship between x and y cannot be established
138. **I.** $88x^2 - 19x + 1 = 0$
- II.** $132y^2 - 23y + 1 = 0$
- 1) $x \geq y$ 2) $x > y$
 3) relationship between x and y cannot be established
 4) $x < y$ 5) $x \leq y$
139. **I.** $6x^2 - 7x + 2 = 0$
- II.** $20y^2 - 31y + 12 = 0$
- 1) $x \geq y$
 2) $x < y$
 3) $x > y$
 4) relationship between x and y cannot be established
 5) $x \leq y$

Directions (Q. 140-144): Study the table to answer the given questions.

Number of items manufactured (in thousands) by six units of a company and percentage of defective items over the years.

| Unit | H | | J | | K | | L | | M | | P | |
|------|----|-----|----|-----|----|------|----|-----|----|-----|----|-----|
| | N | % D | N | % D | N | % D | N | % D | N | % D | N | % D |
| 2007 | 12 | 1.5 | 15 | 0.8 | 10 | 0.75 | 16 | 1.2 | 18 | 2.2 | 17 | 1.6 |
| 2008 | 16 | 1.2 | 21 | 1.8 | 14 | 1.1 | 20 | 2.3 | 17 | 1.4 | 22 | 2.2 |
| 2009 | 14 | 0.6 | 19 | 1.3 | 16 | 0.45 | 18 | 0.8 | 21 | 1.1 | 20 | 1.4 |
| 2010 | 15 | 0.4 | 20 | 1.5 | 19 | 1.1 | 21 | 1.1 | 22 | 0.8 | 23 | 1.8 |
| 2011 | 18 | 1.4 | 24 | 1.7 | 25 | 1.6 | 23 | 0.5 | 19 | 0.2 | 25 | 1.3 |
| 2012 | 21 | 2.2 | 22 | 1.5 | 28 | 1.4 | 26 | 1.2 | 23 | 0.7 | 27 | 1.6 |

N: Number of items manufactured

%D: Percentage of defective items

140. Approximately, what is the average number of defective items manufactured by all the units together in 2011?

- 1) 260 2) 180
3) 220 4) 200
5) 240

141. Total number of non-defective items manufactured by units J and K together in 2008 is what percent of the total number of items manufactured by these two units together in the same year?

- 1) 98.12 2) 98.28
3) 98.48 4) 98.55
5) 97.88

142. What is the total number of number of non-defective items manufactured by unit M in 2008 and 2012 together?

- 1) 22674 2) 16927
3) 39601 4) 36901
5) 40628

143. What is the difference between number of defective items manufactured by unit L in 2009 and number of defective items manufactured by unit P in 2012?

- 1) 576 2) 288
3) 432 4) 144
5) 384

144. What is the ratio between number of non-defective items manufactured by unit H in 2010 and number of non-defective items manufactured by unit H in 2007 respectively?

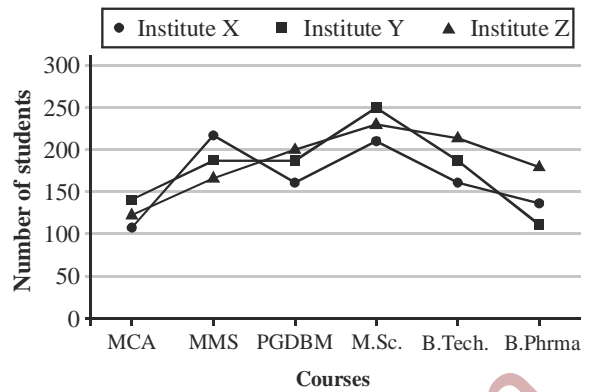
- 1) 249 : 198 2) 249 : 199
3) 247 : 199 4) 247 : 197
5) 249 : 197

145. Ganesh's monthly income is $\frac{4}{5}$ th of Suresh's monthly income. The respective ratio between Suresh's and Sunil's monthly income is 13 : 17. Sunil spends 12% of his monthly income on food expenses which is ₹ 8160. What is the annual income of Ganesh?

- 1) ₹ 499100 2) ₹ 492900
3) ₹ 499200 4) ₹ 499300
5) ₹ 494900

Directions (Q. 146-150): Study the graph carefully to answer the given questions.

Number of students studying different courses from three different institutes



146. What is the ratio between total number of students studying MCA from all three institutes together and the total number of students studying M.Sc. from all three institutes together?

- 1) 13 : 22 2) 13 : 23
3) 14 : 23 4) 13 : 24
5) 12 : 23

147. Number of students studying MMS from institute 'X' is what percent of the total number students studying all six courses together from the same institute?

- 1) 22 2) 24
3) 21 4) 16
5) 25

148. What is the difference between total number of students studying all six courses together from institutes 'X' and 'Z'?

- 1) 110 2) 80
3) 120 4) 100
5) 90

149. Number of students studying M.Sc. and PGDBM together from institute 'X' is approximately what percent of the total number of students studying these two courses together from all three institutes?

- 1) 36 2) 24
3) 34 4) 30
5) 26

150. What is the respective ratio between number of students studying MCA and B.Tech together from institute 'Y' and the number of students studying B. Tech. from institute 'Z'?

- 1) 12 : 5 2) 12 : 7
3) 11 : 8 4) 11 : 7
5) 11 : 6

Test IV**PROFESSIONAL KNOWLEDGE**

151. What type of virus uses computer hosts to reproduce itself?
- 1) Worm
 - 2) Time bomb
 - 3) Melissa virus
 - 4) Micro virus
 - 5) Macro virus
152. the internet has resulted in a(n) _____ communication costs.
- 1) freeze of
 - 2) lowering of
 - 3) status quo of
 - 4) increase in
 - 5) elimination of
153. HTML commands, such as <H1> are known as
- 1) browser requests
 - 2) labels
 - 3) tags
 - 4) tickets
 - 5) flags
154. In order to connect one's computer through the internet from another location _____ should be used.
- 1) an attachment
 - 2) Telnet
 - 3) instant message
 - 4) FTP
 - 5) e-mail
155. The _____ stores information about the data in the database.
- 1) Data dictionary
 - 2) Data warehouse
 - 3) Data mine
 - 4) Administrative data systems
 - 5) Data depository
156. The offer of after sales services to customers over the internet is a _____ activity.
- 1) C2C
 - 2) B2C
 - 3) spam
 - 4) hacking
 - 5) B2B
157. A web facility that helps to find sites with the information and/or services that is desired _____.
- 1) A blog
 - 2) The top-level domain
 - 3) A search engine
 - 4) A network access point
 - 5) A hyperlink
158. _____ is the measurement of body parts such as fingerprints and retinal scans used for security access.
- 1) Biometrics
 - 2) Physio-measures
 - 3) Smart weapon machinery
 - 4) Bio-measurement
 - 5) Computer security
159. Open standards refer to _____.
- 1) standards not owned by any company
 - 2) standards used by all countries
 - 3) standards that are free to all parties
 - 4) software standards for a particular organization
 - 5) software programs running on different types of operating systems
160. Security procedures can _____.
- 1) reduce but not eliminate risks
 - 2) eliminate all computer security risks
 - 3) be prohibitively expensive
 - 4) be inaccessible for the average home user
 - 5) dissuade computer usage
161. CRM uses information about _____ to establish long term relationships.
- 1) industry contacts
 - 2) customers
 - 3) competitions
 - 4) countries
 - 5) culture
162. Broadband connections include all of the following except _____.
- 1) DSL
 - 2) cable modems
 - 3) telephone modems
 - 4) USB modems
 - 5) satellites
163. FTP stands for
- 1) Field Transfer Protocol
 - 2) First Transfer Preference
 - 3) File Transfer Protocol
 - 4) File Transactions Processes
 - 5) Folder Transfer Protocol
164. TCP / IP stands for
- 1) Translation Computing Procedures / International Protocols
 - 2) Transmission Control Protocol / Internet Protocol
 - 3) Transmission Control Procedures / Internet Procedures
 - 4) Transaction Computing Printing / Internet Processing
 - 5) Transmitter Control Protocol / Internet Protocol
165. This address changes temporarily as the applications connect to the internet _____.
- 1) static IP address
 - 2) unique IP address
 - 3) dynamic IP address
 - 4) common name and number
 - 5) derived IP address
166. _____ tags on goods enable the tracking of the goods electronically.

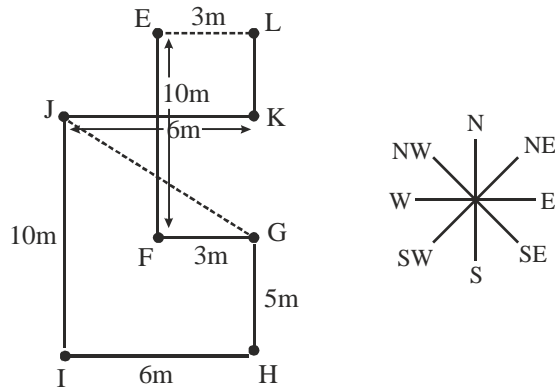
- 1) RFID 2) ISP
 3) GPS 4) IMD
 5) ASTM
167. Web pages can be created using _____.
 1) only Web authoring software
 2) only Microsoft products
 3) only Microsoft Front Page
 4) only Macromedia Dreamweaver
 5) any word processor
168. A list of web pages visited during the current session is kept in the browser's _____.
 1) favourites 2) trail
 3) cache 4) dump
 5) history
169. An IDS does not _____.
 1) try to identify attempts to hack into a computer system
 2) monitor packets passing over the network
 3) transmit message packets to the correct destination
 4) set up deception systems that attempt to trap hackers
 5) provide any form of security to a computer system
170. T1 and T3 connections are considered _____.
 1) direct satellite connections
 2) complex connections
 3) dial-up connections
 4) direct connections
 5) broadband
171. The _____ key in a relational database links one table to another.
 1) secondary 2) relational
 3) operational 4) linker
 5) foreign
172. URL stands for
 1) Unique Representation Location
 2) Uniform Resource Locator
 3) Uniform Resource Location
 4) Unique Resource Locator
 5) Universal Resource Location
173. A text or on image which, when clicked, takes the user to another Web site / page _____.
 1) A Wiki 2) A hyperlink
 3) The top-level domain
 4) An e-mail 5) A blog
174. A(n) _____ accesses the database and data dictionary in a DBMS as they exist on a storage device.
 1) application generation sub system
 2) DBMS engine
 3) Data engine
 4) data administration system
 5) data definition sub system
175. Which of the following is a small program embedded within a GIF image?
 1) web bug 2) cookie
 3) web deceiver 4) spam
 5) spyware application
176. _____ allows the use of an internet connection for making phone calls.
 1) VoIP 2) FTP
 3) DSL 4) F2b2C
 5) TCP/IP
177. The scrambling of code is known as
 1) password proofing
 2) deception 3) encryption
 4) Fix walling 5) Scrambling
178. The hierarchical database organizes data in a(n) _____.
 1) flat file 2) tuple
 3) OODBMS 4) relation file
 5) treelike structure
179. The formal set of rules, through which computers communicate, are called
 1) protocols 2) patterns
 3) standards 4) algorithms
 5) controller
180. The main interface in Windows and OS X is a(n) _____ interface.
 1) command line
 2) embedded
 3) graphical
 4) embedded and neural
 5) neural
181. Web servers should be configured so that _____.
 1) unauthorized access is always possible
 2) unauthorized access is restricted
 3) any form of access is impossible
 4) unauthorized access is sometimes possible
 5) unauthorized access is unrestricted
182. Downloadable software extensions that add new features to a browser are known as
 1) plug-in 2) cookies
 3) framers 4) link
 5) spam
183. _____ is defined as any crime completed through the use of computer technology.
 1) Computer forensics
 2) Cracking 3) Networking
 4) Digital crashing 5) Computer crime

184. A _____ is a computer connected to two networks.
- 1) bridge way
 - 2) server
 - 3) link
 - 4) gateway
 - 5) modem
185. Unauthorized access to computers is called _____.
- 1) other than those given as options
 - 2) hacking
 - 3) blasting
 - 4) a worm
 - 5) a virus
186. A _____ store(s) data in two-dimensional tables.
- 1) Hierarchical Database
 - 2) Table Database
 - 3) Relational Database
 - 4) Network and Hierarchical
 - 5) Network Database
187. Collecting personal information and effectively posing as another individual is known as the crime of _____.
- 1) spoofing
 - 2) identify theft
 - 3) hacking
 - 4) personality theft
 - 5) spooling
188. Bookmarks can be organized by using _____.
- 1) containers
 - 2) folders
 - 3) menus
 - 4) tables
 - 5) structures
189. What markup language includes all of the features of HTML and programming extensions?
- 1) Applets
 - 2) HTTP
 - 3) SML
 - 4) XML
 - 5) FTP
190. A table in a relational database terminology is synonymous with _____.
- 1) a value
 - 2) a row
 - 3) an attribute
 - 4) a column
 - 5) a relation
191. Metadata does not enable database designers users to _____.
- 1) understand what the data mean
 - 2) know what the fine distinctions are between similar data items
 - 3) understand what data exist
 - 4) sample data
 - 5) know more about the data
192. Which of the following is true of client-side extensions? They add functionally to the _____.
- 1) network
 - 2) server
 - 3) browser
 - 4) firewall
 - 5) firewall and network
193. A(n) _____ is a method that will automatically execute when an object is instantiated.
- 1) inheritor
 - 2) destructor
 - 3) parameter
 - 4) constructor
 - 5) overloaded method
194. An internet diary or grouping of ongoing commentaries is known as a(n) _____.
- 1) blog
 - 2) electronic email
 - 3) mail box
 - 4) cookie
 - 5) plug-in
195. Gain entry to a network pretending to be at a legitimate computer is referred to as _____.
- 1) ID theft
 - 2) Network gate crashing
 - 3) spoofing
 - 4) IP spoofing
 - 5) forging
196. A program that performs a useful task while simultaneously allowing destructive acts is a _____.
- 1) micro virus
 - 2) virus
 - 3) Trojan horse
 - 4) worm
 - 5) macro virus
197. When you visit certain Websites spyware may be automatically downloaded. This is called a _____.
- 1) drive by download
 - 2) logic bomb
 - 3) spybot
 - 4) drive in download
 - 5) virus
198. The program that allows the OS to work with a printer or a video card is a(n) _____.
- 1) utility
 - 2) driver
 - 3) applet
 - 4) contractor
 - 5) system call
199. A ROLLBACK command in a transaction _____.
- 1) undoes the effects of the last UPDATE command
 - 2) restores the content of the database to its state at the end of the previous day
 - 3) does nothing
 - 4) makes sure that all changes to the database are in effect
 - 5) undoes all changes to the database resulting from the execution of the transaction
200. _____ refers to the contracting of a specific business task to a third-party service provider.
- 1) Outer sourcing
 - 2) Offshore outsourcing
 - 3) In sourcing
 - 4) Business process outsourcing
 - 5) Cross functioning

SOLUTIONS

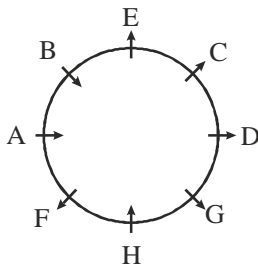
IBPS Specialist Officer (IT)

(1-2)



1. (5) 2. (4) 3. (5) 4. (2) 5. (4)
6. (1) 7. (5)

(8-13)



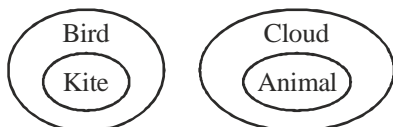
8. (1) 9. (1) 10. (2) 11. (4) 12. (3)
13. (4)

(14-19):

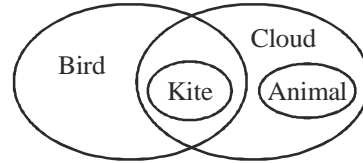
| | Day | Course |
|---|-----------|-------------|
| V | Monday | Law |
| Q | Tuesday | MBBS |
| T | Wednesday | Arts |
| S | Thursday | Science |
| R | Friday | Engineering |
| P | Saturday | MBA |
| U | Sunday | Commerce |

14. (5) 15. (4) 16. (2) 17. (4) 18. (1)
19. (2)

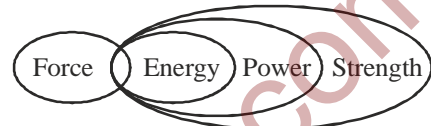
20. (2)



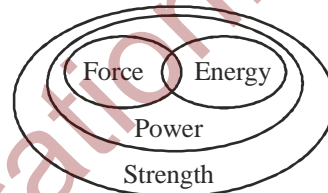
21. (3)



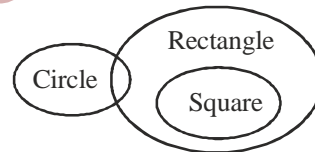
22. (5)



23. (1)



24. (5)



(25-27):

Highest marks

Lowest marks

| Friends | Marks |
|---------|-------|
| B | 94 |
| D | |
| F | 81 |
| C | 70 |
| E | 62 |
| A | |

25. (1) 26. (5) 27. (3)

(28-32):

| Word | Code |
|----------|-------|
| make | xy |
| good | zt |
| finance | mn |
| plans | lo |
| economy | dn |
| helps | oj |
| progress | br |
| now | fs |
| develop | rt/cl |
| country | rt/cl |

28. (2) 29. (5) 30. (4) 31. (3) 32. (3)

33. (2) 34. (4) 35. (2) 36. (1) 37. (5)

38. (5)

39. (5) **Conclusions:**

I $A < E \rightarrow \text{False}$
 { \therefore Relationship does not exist }

II $T < B \rightarrow \text{True}$
 { $\therefore B > C > T \Rightarrow B > T$ }

40. (5) **Conclusions:**

I $B > E \rightarrow \text{True}$
 { $\therefore B > C > E \Rightarrow B > E$ }

II $A < T \rightarrow \text{False}$
 { \therefore Relationship does not exist }

41. (4) **Conclusions:**

I $Q < V \rightarrow \text{False}$
 { \therefore Relationship does not exist }

II $L > R \rightarrow \text{True}$
 { $\therefore L > T > R \Rightarrow L > R$ }

42. (4) **Conclusions:**

I $Q > L \rightarrow \text{True}$
 { $\therefore Q > Z > L \Rightarrow Q > L$ }

II $Z > N \rightarrow \text{False}$
 { \therefore Relationship does not exist }

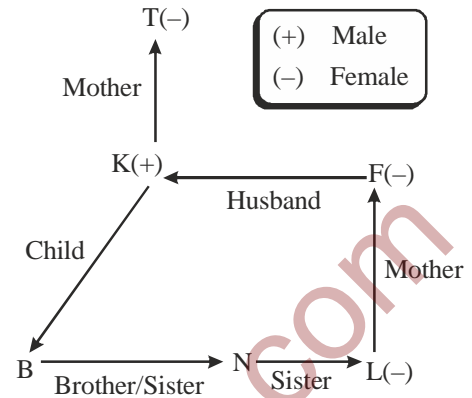
43. (4) **Conclusions:**

I $P > N \rightarrow \text{False}$
 { \therefore Relationship does not exist }

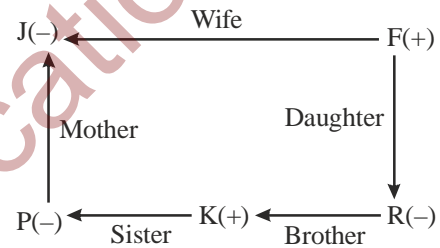
II $Z > P \rightarrow \text{False}$

{ \therefore Relationship does not exist }

44. (2)



45. (3)



(46-50):

Input : developing 44 markets 38 27 economic practice required 16 83 72 today

Step I : economic developing 44 markets 38 27 practice required 16 83 72 today

Step II : 27 16 economic developing 44 markets 38 practice required 83 72 today

Step III : practice markets 27 16 economic developing 44 38 required 83 72 today

Step IV : 44 38 practice markets 27 16 economic developing required 83 72 today

Step V : today required 44 38 practice markets 27 16 economic developing 83 72

Step VI : 83 72 today required 44 38 practice markets 27 16 economic developing

46. (5) 47. (1) 48. (1) 49. (3) 50. (5)

51. (4) 52. (3) 53. (2) 54. (1) 55. (1)

56. (3) 57. (4) 58. (5) 59. (4) 60. (1)

61. (3) 62. (2) 63. (2) 64. (1) 65. (1)

66. (5) 67. (1) 68. (4) 69. (4) 70. (3)

71. (5) 72. (2) 73. (2) 74. (2) 75. (5)
 76. (4) 77. (5) 78. (2) 79. (5) 80. (4)
 81. (2) 82. (3) 83. (3) 84. (1) 85. (4)
 86. (1) 87. (1) 88. (3) 89. (1) 90. (4)
 91. (5) 92. (2) 93. (3) 94. (1) 95. (3)
 96. (2) 97. (4) 98. (2) 99. (1) 100. (5)

101. (4) $\frac{?^{0.8}}{49} = \frac{189}{?^{2.2}}$

$$?^{0.8+2.2} = 189 \times 49$$

$$?^3 = 9261$$

$$? = 21$$

102. (2) $\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{4}\right)\left(1 - \frac{1}{5}\right) \dots \left(1 - \frac{1}{n}\right)$

$$= \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \dots \frac{n-1}{n} = \frac{2}{n}$$

103. (2) Cost price of an article = ₹ 2500

Total cost price of an article

$$= 2500 + 320 = ₹ 2820$$

Selling price = ₹ 4089

$$\text{Profit} = 4089 - 2820 = ₹ 1269$$

$$\text{Profit percent} = \frac{1269 \times 100}{2820} = 45\%$$

104. (2) Total shares sold by company A in all four cities together

$$= 300 \times \frac{45}{100} + 500 \times \frac{56}{100} \\ + 250 \times \frac{62}{100} + 420 \times \frac{65}{100}$$

$$= 135 + 280 + 155 + 273 = 843$$

Required percent

$$= \frac{843}{1470} \times 100 \approx 56\%$$

105. (4) Required ratio

$$= \frac{420 \times \frac{(65+35)}{100}}{420 \times \frac{(25+45)}{100}} = \frac{10}{7}$$

106. (1) Required difference

$$= 250 \times \frac{(62+68+26)}{100} - \frac{250 \times (36+54+58)}{100}$$

$$= \frac{250}{100} [156 - 148]$$

$$= \frac{250}{100} \times 8 = 20\%$$

107. (1) Required percent

$$= \frac{500 \times \frac{44}{100} - \frac{500 \times 38}{100}}{500 \times \frac{44}{100}} \times 100$$

$$= \frac{44 - 38}{44} \times 100 = 13.64\%$$

108. (5) Required average

$$= \frac{1}{6} [45 + 53 + 28 + 38 + 35 + 55] \times \frac{300}{100}$$

$$= \frac{1}{6} [254] \times 3 = 127$$

109. (3) Let the present age of Parag = x years

Present age of Sapna = y years

$$\therefore \frac{x}{y} = \frac{21}{19} \quad \dots (i)$$

According to question,

$$= \frac{x-6}{y-6} = \frac{9}{8}$$

$$8x - 48 = 9y - 54$$

$$8x - 9y = -6 \quad \dots (ii)$$

Solving equation (i) and (ii),

$$x = 42, y = 38$$

Lima's age = 38 - 12 = 26 years

110. (3) $\sqrt{1230} + \sqrt{4230}$

$$= 35.07 + 65.03 \approx 100$$

111. (5) $7\frac{3}{11} \times 621 - 7\frac{2}{3}$

$$= \frac{80}{11} \times 621 - \frac{23}{3}$$

$$= 4516.36 - 7.67 \approx 4515$$

112. (2) 49% of $5051 - \frac{3}{7}$ th of 999

$$= 5051 \times \frac{49}{100} - 999 \times \frac{3}{7}$$

$$= 2475 - 428.14 \approx 2045$$

113. (1) $4329 \div 19 + 6464 \div 13$

$$= 227.84 + 497.23 \approx 725$$

114. (2) $(4.012)^3 + (29.997)^2$

$$= 64.57 + 899.82 \approx 965$$

115. (3) Let the speed of car = x km/hr
Speed of truck

$$= \frac{4x}{5} \text{ km/hr}$$

Speed of car

$$= \frac{520}{8} = 65 \text{ km/hr}$$

\therefore Speed of truck

$$= \frac{4}{5} \times 65 = 52 \text{ km/hr}$$

Distance covered by truck

$$= 52 \times 9 = 468 \text{ km}$$

116. (1) Area of room

$$= \frac{6448}{62} = 104 \text{ sq.ft}$$

Side of square

$$= \sqrt{361} = 19 \text{ ft}$$

\therefore Length of room

$$= 19 - 6 = 13 \text{ ft}$$

Breadth of room

$$= \frac{104}{13} = 8 \text{ ft}$$

117. (5) Salim takes to complete the work = 8 days
Manoj takes to complete the work = 12 days

Raj takes to complete the work = $\frac{8}{2} = 4$ days

Required days to complete the work by all of the together

$$= \frac{8 \times 12 \times 4}{(8 \times 12) + (12 \times 4) + (8 \times 4)}$$

$$= \frac{8 \times 12 \times 4}{96 + 48 + 32} = 2 \frac{2}{11}$$

118. (3) Let the two odd number be x and y
According to question,

$$x + y = 38 \quad \dots (i)$$

$$\text{and } xy = 325 \quad \dots (ii)$$

\therefore Three times of larger number

$$= 25 \times 3 = 75$$

(119-123)

| Class | Students (4500) | Boys (2371) | Girls (2129) |
|---------|-----------------|-------------|--------------|
| Fifth | 810 | 360 | 450 |
| Sixth | 720 | 450 | 270 |
| Seventh | 765 | 360 | 405 |
| Eighth | 810 | 486 | 324 |
| Ninth | 720 | 400 | 320 |
| Tenth | 675 | 315 | 360 |

119. (4) Required percent

$$= \frac{450 + 360}{2371} \times 100 \approx 34\%$$

120. (1) Required difference

$$= 2371 - 2129 = 242$$

121. (1) Required ratio

$$= \frac{360 + 400}{450 + 270} = \frac{760}{720} = \frac{19}{18}$$

122. (2) Required ratio

$$= \frac{405}{315} = \frac{9}{7}$$

123. (2) Required percent

$$= \frac{360 + 450 + 360}{324 + 320 + 360} \times 100$$

$$= \frac{1170}{1004} \times 100 = 117\%$$

124. (2) Total height of girls

$$= 13 \times 144 \frac{8}{13} = 1880 \text{ cm}$$

Total height of boys

$$= 11 \times 169 \frac{5}{11} = 1864 \text{ cm}$$

Average height of all the students

$$= \frac{1880 + 1864}{24} = 156 \text{ cm}$$

125. (3)

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 155 | 151 | 139 | 119 | 91 | 55 |
| | | | | | |
| └── | └── | └── | └── | └── | └── |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| -4 | -12 | -20 | -28 | -36 | |
| | | | | | |
| └── | └── | └── | └── | └── | |
| ↑ | ↑ | ↑ | ↑ | ↑ | |
| -8 | -8 | -8 | -8 | | |

126. (5)

| | | | | | | |
|-----|-----|-----|-----|-----|------|-----|
| 1 | 4 | 12 | 30 | 68 | 146 | 304 |
| | | | | | | |
| └── | └── | └── | └── | └── | └── | └── |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| +3 | +8 | +18 | +38 | +78 | +158 | |
| | | | | | | |
| └── | └── | └── | └── | └── | └── | |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | |
| +5 | +10 | +20 | +40 | +80 | | |

127. (4)

| | | | | | |
|-----|------|-----|------|-----|-----|
| 45 | 15 | 6 | 3 | 2 | 2 |
| | | | | | |
| └── | └── | └── | └── | └── | └── |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| ÷3 | ÷2.5 | ÷2 | ÷1.5 | ÷1 | |

128. (2)

| | | | | | |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----|
| 445 | 444 | 436 | 409 | 345 | 220 |
| | | | | | |
| └── | └── | └── | └── | └── | └── |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| -1 ³ | -2 ³ | -3 ³ | -4 ³ | -5 ³ | |

129. (4)

| | | | | | |
|------|------|-------|------|-------|------|
| 80 | 76.5 | 69.5 | 59 | 45 | 27.5 |
| | | | | | |
| └── | └── | └── | └── | └── | └── |
| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| -3.5 | -7 | -10.5 | -14 | -17.5 | |
| | | | | | |
| └── | └── | └── | └── | └── | |
| ↑ | ↑ | ↑ | ↑ | ↑ | |
| -3.5 | -3.5 | -3.5 | -3.5 | | |

130. (5) 131. (3) 132. (1) 133. (5) 134. (5)

135. (1) **I** $6x^2 + 5x + 1 = 0$
 $6x^2 + 3x + 2x + 1 = 0$
 $3x(2x + 1) + 1(2x + 1) = 0$
 $(2x + 1)(3x + 1) = 0$
 $x = -\frac{1}{2}, -\frac{1}{3}$

II $15y^2 + 8y + 1 = 0$
 $15y^2 + 5y + 3y + 1 = 0$
 $5y(3y + 1) + 1(3y + 1) = 0$
 $(3y + 1) + (5y + 1) = 0$
 $y = -\frac{1}{3}, -\frac{1}{5}$

$\therefore x \geq y$

136. (5) **I** $x^2 + 5x + 6 = 0$
 $x^2 + 3x + 2x + 6 = 0$
 $x(x + 3) + 2(x + 3) = 0$
 $(x + 2)(x + 3) = 0$
 $x = -2, -3$

II $4y^2 + 24y + 35 = 0$
 $4y^2 + 10y + 14y + 35 = 0$
 $2y(2y + 5) + 7(2y + 5) = 0$
 $(2y + 5)(2y + 7) = 0$

$y = -\frac{5}{2}, -\frac{7}{2}$

137. (4) **I** $2x^2 + 5x + 3 = 0$
 $2x^2 + 2x + 3x + 3 = 0$
 $2x(x + 1) + 3(x + 1) = 0$
 $(x + 1)(2x + 3) = 0$

$x = -1, -\frac{3}{2}$

II $y^2 + 9y + 14 = 0$
 $y^2 + 2y + 7y + 14 = 0$
 $y(y + 2) + 7(y + 2) = 0$
 $(y + 2)(y + 7) = 0$
 $y = -2, -7$

$\therefore x > y$

138. (1) **I** $88x^2 - 19x + 1 = 0$
 $88x^2 - 11x - 8x + 1 = 0$
 $11x(8x - 1) - 1(8x - 1) = 0$
 $(11x - 1)(8x - 1) = 0$

$x = \frac{1}{11}, \frac{1}{8}$

II $132y^2 - 23y + 1 = 0$
 $132y^2 - 12y - 11y^2 + 1 = 0$
 $12y(11y - 1) - 1(11y - 1) = 0$
 $(11y - 1)(12y - 1) = 0$

$y = \frac{1}{11}, \frac{1}{12}$

$$\therefore x \geq y$$

139. (2) **I** $6x^2 - 7x + 2 = 0$
 $6x^2 - 3x - 4x + 2 = 0$
 $3x(2x - 1) - 2(2x - 1) = 0$
 $(2x - 1)(3x - 2) = 0$

$$x = \frac{1}{2}, \frac{2}{3}$$

II $20y^2 - 31y + 12 = 0$
 $20y^2 - 15y = 16y + 12 = 0$
 $5y(4y - 3) - 4(4y - 3) = 0$
 $(5y - 4)(4y - 3) = 0$

$$y = \frac{4}{5}, \frac{3}{4}$$

$$\therefore x < y$$

140. (1) Required number of items

$$= \frac{1}{6} \left[18 \times \frac{1.4}{100} + 24 \times \frac{1.7}{100} + 25 \times \frac{1.6}{100} \right. \\ \left. + 23 \times \frac{0.5}{100} + 19 \times \frac{0.2}{100} + 25 \times \frac{1.3}{100} \right] \times 1000$$

$$= \frac{1}{6 \times 100} [18 \times 1.4 + 24 \times 1.7 + 25 \times 1.6 \\ + 23 \times 0.5 + 19 \times 0.2 + 25 \times 1.3] \times 1000$$

$$= \frac{1}{600} [25.2 + 40.8 + 40 + 11.5 + 3.8 + 32.5] \times 1000$$

$$= \frac{1}{600} \times 153.8 \times 1000 \approx 260$$

141. (3) Required percent

$$= 100 - \left[\frac{21 \times \frac{1.8}{100} + \frac{14 \times 1.1}{100}}{21 + 14} \times 100 \right]$$

$$= 100 - \frac{0.378 + 0.154}{21 + 14} \times 100$$

$$= 100 - \frac{0.532}{35} \times 100$$

$$= 100 - 1.52 = 98.48\%$$

142. (3) Required number of items

$$= \left[17 \times \frac{98.6}{100} + 23 \times \frac{99.3}{100} \right] \times 1000$$

$$= [17 \times 98.6 + 23 \times 99.3] \times 10$$

$$= [1676.2 + 2283.9] \times 10 = 39601$$

143. (2) Required difference

$$= \left[18 \times \frac{0.8}{100} \sim 27 \times \frac{1.6}{100} \right] \times 1000$$

$$= [0.144 \sim 0.432] \times 1000$$

$$= [0.288] \times 1000 = 288$$

144. (5) Required ratio

$$\frac{15 \times 99.6}{12 \times \frac{98.5}{100}} = \frac{15 \times 99.6}{12 \times 98.5}$$

$$= \frac{1494}{1182} = \frac{249}{197}$$

145. (3) Sunil's monthly income

$$= \frac{8160 \times 100}{12} = ₹ 68000$$

Suresh's monthly income

$$= \frac{120000 \times 13}{30} = ₹ 52000$$

Ganesh's monthly income

$$= \frac{4}{5} \times 52000 = ₹ 41600$$

\therefore Ganesh's annual income

$$= 41600 \times 12 = ₹ 499200$$

146. (2) Required ratio

$$= \frac{120 + 130 + 140}{210 + 230 + 250} = \frac{390}{690} = \frac{13}{23}$$

147. (1) Required percent

$$= \frac{220}{120 + 220 + 160 + 210 + 160 + 130} \times 100$$

$$= \frac{220}{1000} \times 100 = 22\%$$

148. (4) Required difference
 $= [120 + 220 + 160 + 210 + 160 + 130]$
 $\sim [130 + 170 + 190 + 230 + 210 + 170]$
 $= [1000 \sim 1100] = 100$

149. (4) Required percent
 $= \frac{160 + 210}{(160 + 180 + 190) + (210 + 230 + 250)} \times 100$
 $= \frac{370}{1220} \times 100 \approx 30\%$

150. (4) Required ratio
 $= \frac{140 + 190}{210} = \frac{11}{7}$

151. (1) 152. (2) 153. (3) 154. (2) 155. (2)
 156. (2) 157. (3) 158. (1) 159. (3) 160. (2)
 161. (2) 162. (3) 163. (3) 164. (2) 165. (3)
 166. (1) 167. (1) 168. (5) 169. (3) 170. (4)
 171. (5) 172. (2) 173. (2) 174. (2) 175. (1)
 176. (3) 177. (3) 178. (5) 179. (1) 180. (3)
 181. (2) 182. (1) 183. (5) 184. (4) 185. (2)
 186. (3) 187. (2) 188. (2) 189. (4) 190. (5)
 191. (4) 192. (2) 193. (4) 194. (1) 195. (4)
 196. (3) 197. (1) 98. (2) 199. (5) 200. (4)