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## SNAP 2014 Question Paper

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## SECTION – I

### General English

Number of questions: 40

1. Which of these is not a compound word?
1. Hard-wired            2. Run-of-the-mill            3. Bottleneck            4. Minestrone
2. Find the antonym of 'Native' is
1. Tarnished            2. Characteristic            3. Intrinsic            4. Exotic
3. A shortfall in supplies would knock the bottom out of the engineering industry. What does "knock the bottom out of" stand for?
1. Make it baseless            2. Shake its foundation  
3. Cause it to collapse            4. None of the above
4. Choose the word with correct spellings
1. Demurrage            2. Demurage            3. Demmurrage            4. Demurragge

**DIRECTIONS for question 5 to 9:** Fill in the blanks with proper answers.

5. \_\_\_\_\_ the stable door after the horse has bolted.
1. Lock            2. Shut            3. Close            4. Open
6. There were \_\_\_\_\_ viewers than expected.
1. Fewer            2. Less            3. Many            4. Lesser
7. \_\_\_\_\_ when, after waiting for hours, we were told the tickets were sold out.
1. We were at the end of our tether            2. We were on edge  
3. Tempers frayed            4. Nerves frayed
8. Your proficiency in the French language depends on how hard you work \_\_\_\_\_ if you live in the culture of your target language, you will learn even more quickly.
1. Likewise            2. Hence            3. Furthermore            4. In fact
9. The government is planning to sell PSUs \_\_\_\_\_ BHEL, SAIL and NTPC \_\_\_\_\_ first wants a regulatory agency \_\_\_\_\_ the IRDA to assess their worth.
1. like/and/like            2. like/but/such as            3. such as/so/like            4. such as/but/like
10. Choose the sentence which is grammatically correct
1. I was struck in traffic jam            2. I struck in traffic jam  
3. I was struck up in traffic jam            4. I was struck upon traffic jam

11. Choose the option having correct word order in the following statements :-

1. Immigrant communities in the U.S have brought renewed pressure after the catastrophic terrorist attacks on the World Trade Center in New York in 2001.
2. The aftermath of the catastrophic terrorist attacks on the World Trade Center in New York in 2001 has brought renewed pressure on immigrant communities in the U.S.
3. The World Trade Center, after the catastrophic terrorist attacks in New York in 2001, has brought renewed pressures on immigrant communities in the US.
4. In 2001, the aftermath of the catastrophic terrorist attacks on the World Trade Center in New York has brought renewed pressures on immigrant communities in the US.

12. The football team travelled \_\_\_\_\_ Train.

1. in
2. by
3. from
4. On

13. Choose the correct synonym for: Attenuate

1. Enervate
2. Attention
3. Awaken
4. Trigger

14. Choose the antonym for: Cajole

1. Dissuade
2. Beguile
3. Flatter
4. Blandish

15. Choose the correct synonym for: Consanguinity

1. Affinity
2. Corpulent
3. Estrangement
4. Anarchy

**DIRECTIONS for question 16 to 22: Fill in the blanks with proper answers:-**

16. Autotomy is the ability of an animal to \_\_\_\_\_ a part of its body at will to save itself from predators and attackers.

1. Cast off
2. Cast away
3. Cut off
4. Cut down

17. They all stared \_\_\_\_\_ as the door of the dilapidated house swung open.

1. with bated breath
2. in beeline
3. in the same boat
4. a bone of contention

18. But at a time when business values are falling, stakeholders tend not to take kindly to a knock-down price.

1. Selling the family silver
2. Selling one's soul
3. Selling yourself short
4. Selling someone a pup

19. Although this political party has reputation for \_\_\_\_\_, its behaviour towards the public has always been \_\_\_\_\_, suggesting it may not be as insolent as has been projected by its competitor.

1. Vendibility, Impertinent
2. Secrecy, Uniform
3. Temerity, Courteous
4. Nepotism, Varied

20. The company believes in getting value for money and it is wrong of the employees to view its \_\_\_\_\_ as \_\_\_\_\_
- |                               |                           |
|-------------------------------|---------------------------|
| 1. Forehandedness, Stinginess | 2. Reserve, Levity        |
| 3. Insolence, Shortage        | 4. Indolence, Destitution |
21. In the midst of radiantly beautiful women, this homely woman looked strikingly \_\_\_\_\_ but it transpired later that she was an arbitrator and not \_\_\_\_\_
- |                                 |                              |
|---------------------------------|------------------------------|
| 1. unattractive, an adjudicator | 2. incongruous, a contestant |
| 3. dejected, a raconteuse       | 4. personable, an audience   |
22. This author is not outspoken on political issues and her writings are more famous for their aesthetic qualities than for their \_\_\_\_\_ ones.
- |              |               |                 |             |
|--------------|---------------|-----------------|-------------|
| 1. Polemical | 2. Commercial | 3. Contemporary | 4. Dramatic |
|--------------|---------------|-----------------|-------------|
23. Choose the word with correct spellings
- |               |               |              |               |
|---------------|---------------|--------------|---------------|
| 1. Perniceous | 2. Pernicious | 3. Pemicuios | 4. Pernecious |
|---------------|---------------|--------------|---------------|

**DIRECTIONS for questions 24 to 26:** Read the given passage and answer the questions.

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention. Some books may also be read by deputy, and extracts made of them by others; but that would be only in the less important arguments and the meaner sort of books; else distilled books are like common distilled waters, flashy things. Reading makes a full man, conference a ready man, and writing an exact man. And therefore if a man write little, he had need have a good memory; if he confer little, he had need have a present wit; and if he read little, he had need have much cunning to seem to know that he doth not.

Histories make men wise, poets witty, the mathematics subtle, natural philosophy deep, moral grave, logic and rhetoric able to contend.

(Source- *Of Studies*- Francis Bacon)

24. What should be the real object of reading?
- To distil the contents
  - To understand author's views and their application in day- to -day life
  - To have a good memory
  - To weigh and consider
25. The word 'confute' in the passage means
- |             |              |                  |             |
|-------------|--------------|------------------|-------------|
| 1. To argue | 2. To refuse | 3. To disapprove | 4. To doubt |
|-------------|--------------|------------------|-------------|
26. What can be done with regard to the 'meaner' sort of books?
- To be read but not to contradict and confute
  - To be read curiously
  - To be read, but not curiously
  - They can be "read by deputy and extracts made of them by others.

**DIRECTIONS for questions 27 to 32:** Read the given passage and answer the questions.

### **PROBLEMS FACING POTENTIAL EXPORTERS**

Many firms fail because when they begin exporting, they have not researched the target markets or have not developed an international marketing plan to be successful. A firm must clearly define goals objectives and potential problems. Secondly it must develop a definitive plan to accomplish its objective regardless of problems involved. Unless the firm is fortunate enough to possess a staff with considerable expertise, it may not be able to take this crucial first step without qualified outside guidance.

Often top management is not committed enough to overcome the initial difficulties and financial requirements of exporting. It can often take more time and effort to establish a firm in a foreign market than in domestic one. Although the early delays and costs involved in exporting may seem difficult to justify when compared to established domestic trade the exporter should take a more objective view of this process and carefully monitor international marketing efforts through these early difficulties. If a good foundation is laid for export business the benefits derived should eventually out-weigh the investment.

Another problem area is in the selection of foreign distributor. The complications involved in overseas communications and transportation require international distributors to act with greater independence than their domestic counterparts also since a new exporter's trademarks and reputation is usually unknown in the foreign market. Foreign customers may buy on the strength of distributing agent's reputation. A firm should therefore conduct a thorough evaluation of the distributor's facilities, the personnel handling its account and managements methods employed.

Another common difficulty for new exporter is the neglect of the export market once the domestic one booms: too many companies only concentrate on exporting when there is recession. Others may refuse to modify products to meet the regulations or cultural preferences of other countries. Local safety regulations cannot be ignored by exporters. If necessary modifications are not made at the factory the distributor must make them, this is usually at a greater cost and probably not as satisfactory as it should be. It should also be noted that the resulting smaller profit margin makes the account less attractive.

If exporters expect distributing agents to actively promote their accounts they must be trained and their performance must be continually monitored. This requires a company's marketing executive to be located permanently in the distributor's geographical areas until there is sufficient business to support the representative. The distributor should also be treated on an equal basis with domestic counterparts for e.g. special discount offers, sales incentive programmes and special credit terms should be available.

Considering a joint venture or licensing agreement is another option for new exporters. However, many companies still dismiss international marketing as unviable. There are a number of reasons for this. There may be import restrictions in the target market. The company may lack sufficient financial resources or its product line may be too limited. Yet many products that can compete on a national basis can be successful in the majority of world markets. In general, all that is needed for success is flexibility in using the proper combinations of marketing techniques.

**27.** In the first paragraph, the writer suggests that firms thinking about exporting should

- |   |   |
|---|---|
| 1. get professional advice              | 2. study international marketing                |
| 3. identify the most profitable markets | 4. have different objectives to other exporters |

**28.** The writer believes that if sufficient preparation is undertaken

1. initial difficulties can be easily avoided
2. the costs can be recovered quite quickly
3. management will become more committed
4. the exporter will be successful in the long term

- 29.** An exporter should choose a distributor who
1. has experienced personnel
  2. has good communication skills
  3. is well established in the target market
  4. is not financially dependent on import business
- 30.** New exporters often make the mistake of ignoring the export market when
1. distribution costs are too high
  2. their product is selling well at home
  3. there is a global economic recession
  4. distributors cannot make safety modifications
- 31.** For a distributor to be successful, the exporter must
1. focus on one particular region
  2. finance local advertising campaigns
  3. give the same support as to domestic agents
  4. make sure there are sufficient marketing staff locally
- 32.** The writer states that some companies are reluctant to export because
1. there is little demand for their products
  2. the importation of certain goods is controlled
  3. they do not have good marketing techniques
  4. they are not able to compete with local business
- 33.** The kids were all coming to the pool. The pool attracted kids like \_\_\_\_\_
1. rain to the desert sands
  2. elephants to water
  3. a balloons to helium
  4. flies to honey
- 34.** If thieves \_\_\_\_\_ our house, I \_\_\_\_\_ frightened to death.
1. will enter, would be
  2. enter, would be
  3. would enter, would be
  4. enter, would have been
- 35.** The enemy turned \_\_\_\_\_ and ran away as soon as it saw the brave warrior.
1. Back
  2. Tail
  3. Face
  4. Feet
- 36.** Vodafone \_\_\_\_\_ and initiated a fresh style in television advertising.
1. broke new ground
  2. cut the ground
  3. cut corners
  4. prepared the ground
- 37.** He took to \_\_\_\_\_ his impatience indiscriminately, on whoever happened to be at hand.
1. giving free rein to
  2. Airing
  3. Venting
  4. All of the above
- 38.** He provides a \_\_\_\_\_ sketch of the political values, strategy and practices of these diverse civilisations.
1. Thumbnail
  2. Thumbling
  3. Thumbprint
  4. None of the above

**39.** "This desk is more square than that one" is an erroneous Statement, the correct statement would be:

1. This desk is squarer than that one
2. This desk is more nearly square than that one.
3. This desk is most square than that one.
4. This desk is much more, square than that one.

**40.** "Haifa loaf is better than no bread" means

1. God helps those who help themselves
2. When a bad thing happens, there is always a positive side to it.
3. You should be happy with what you have even if it is less than what you want.
4. Don't be upset by trivialities

## SECTION – II

### Quantitative, Data Interpretation and Data Sufficiency

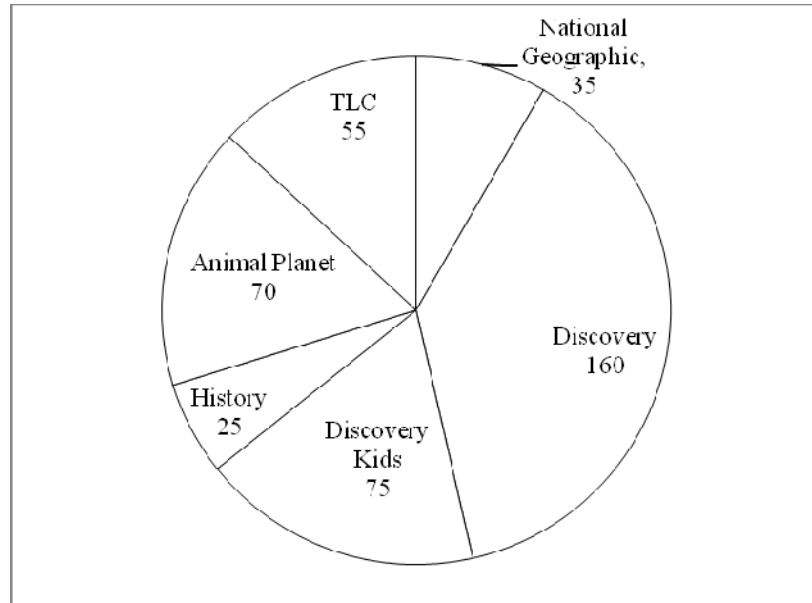
Number of questions: 40

41. The line joining the points (5, 2) and (6,-15) subtends a right angle at the point:
1. (-1,2)
  2. (0,7)
  3. (0,0)
  4. Insufficient Data
42. Find the least positive integer which when divided by 2 gives remainder 1, when divided by 3 gives remainder 2, when divided by 4 gives remainder 3 and when divided by 5 gives remainder 4?
1. 33
  2. 59
  3. 61
  4. 49
43. How many numbers exist between 100 and 1000 which are divisible by 7?
1. 142
  2. 138
  3. 60
  4. 128
44. Two athletes A and B are running on a 900m long track from opposite ends, their speeds are in the ratio of 4: 5, when will they cross each other:
1. 500m from A's end
  2. 400m from B's end
  3. 400m from A's end
  4. 100m from A's end
45. Find the domain of the expression  $Y = \sin x + \log x$
1.  $(-\infty, \infty)$
  2.  $(-\infty, 0)$
  3.  $(0, \infty)$
  4.  $(0, 1)$
46. The expression  $x^4 + 5x^2 + 36$  can be factorized as
1.  $(x^2 + x + 1)(x^2 - x + 36)$
  2.  $(x^2 - x + 6)(x^2 + 4x + 6)$
  3.  $(x^2 - x + 6)(x^2 + x + 6)$
  4. None of the above
47. There are 4 members in a committee. If one of them is replaced by a younger member such that the average age of the committee is as it was 6 years ago. The new member is how many years younger than the member replaced?
1. 42 years
  2. 24 years
  3. 6 years
  4. None of the above
48. The probability that a builder will get a construction contract is  $\frac{3}{4}$  and the probability that he will not get the electrical contract is  $\frac{7}{9}$ . If the probability of getting at least one contract is  $\frac{5}{6}$ , what is the probability that he will get both?
1.  $\frac{5}{36}$
  2.  $\frac{5}{6}$
  3.  $\frac{5}{9}$
  4. None of the above
49. In how many ways can 21 identical books on Literature and 19 identical books on Nature be placed in a row on a shelf so that two books on Nature may not be together?
1. 4620
  2. 3672
  3. 1540
  4. None of the above





**DIRECTIONS for question 59 to 63:** These questions are based on the following pie chart which shows the viewership of different knowledge based channels (in degrees) in the month of December, 2013. There are no overlaps in viewership of channels.



59. During the given period for how many channels is the viewership more than 25% of the total viewership?
1. 1                      2. 2                      3. 3                      4. None of the above
60. If 70,000 people watched National Geographic on an average per day in December, 2013 then how many more people watched Discovery than History on an average per day for the same period?
1. 3,60,000              2. 36,000              3. 2,70,000              4. None of the above
61. If the viewership of TLC on an average was 55,000 per day, then what was the viewership for all the channels on an average per day?
1. 3,60,000              2. 5,40,000              3. 6,30,000              4. None of the above
62. If the viewership of Discovery Kids channel for the first half of December is half of that of the second half of December, then what is the ratio of viewership of Discovery Kids for the second half to that of TLC for the whole month?
1. 8:9                      2. 10:11                      3. 9 : 10                      4. None of the above
63. By mistake the viewership of Discovery Kids has been under quoted by 25%. If this mistake is corrected then what is the correct share of viewership of Discovery?
1. 45 %                      2. 41.55%                      3. 39.15%                      4. None of the above
64. How many three digit positive integers exist that when divided by 6 leave a remainder of 4?
1. 149                      2. 150                      3. 151                      4. 152

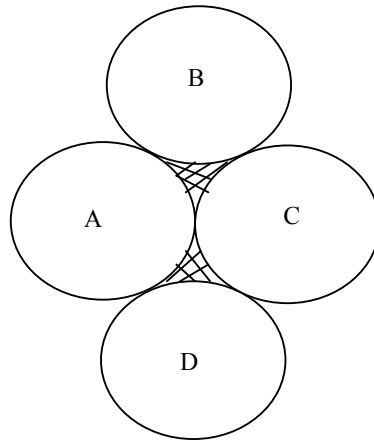
65. A person grows sunflowers in his Square Shaped farm. One sunflower takes 1 square feet of area in his farm. This year he has increased his output by 241 Sunflowers as compared to last year. The shape of the farm used for growing the Sunflowers has remained the same, both the years. How many Sunflowers did he in total produce this year?

1. 12544                      2. 12996                      3. 14641                      4. 15876

66. A box contains 11 cards with 1 to 11 consecutive numbers. If we take 5 cards in random without replacement from this box, what is the probability that the median of the numbers selected is 3?

1.  $\frac{13}{189}$                       2.  $\frac{11}{128}$                       3.  $\frac{14}{231}$                       4. None of the above

67. In the given figure if A, B, C, D are Centers of the Circles and the radius of each Circle is  $7\sqrt{3}$  units then what is the area of the shaded region?



1.  $74[\sqrt{3} - \pi/2]$                       2.  $49[\sqrt{3} - \pi/2]$                       3.  $300[\sqrt{3} - \pi/2]$                       4.  $294[\sqrt{3} - \pi/2]$

68. Instead of dividing Rs. 180/- among A, B,C in the ratio  $\frac{1}{3} : \frac{1}{4} : \frac{1}{6}$  respectively, it was divided in the ratio 3: 4: 6 by mistake. Who gained in this transaction?

1. Only A                      2. Only B                      3. Only C                      4. Both B and C

69. The sum of ages of mother and daughter is 42 years. After three years the age of mother will be three times that of the daughter. Then the mother's age after three years will be?

1. 28                      2. 33                      3. 36                      4. 38

70. Find the missing number in the series 2, 5, 11, 20, 32, 47, \_\_, 86

1. 60                      2. 65                      3. 58                      4. 62

71. One number in the given series is wrong. Find out the wrong one.  
91,74,59,47,35,26,19,

1. 47                      2. 35                      3. 26                      4. 19

72. A player can take a maximum of 4 chances to hit a bottle with a flying disc. The probability of hitting the bottle at the first, second, third and fourth shots are 0.1, 0.2, 0.35 and 0.45 respectively. What is the probability that the player hits the bottle with the flying disc?
1. 0.6573                      2. 0.2574                      3. 0.7426                      4. None of the above
73. If  $\log 2 = 0.30103$  and  $\log 3 = 0.4771$ , then number of digits in  $(10368)^6$  will be approximately equal to
1. 15 digits                      2. 25 digits                      3. 30 digits                      4. 40 digits
74. What is the measure of the angle between the hands of the clock at 8:24 p.m.?
1. 100 degree                      2. 102 degree                      3. 106 degree                      4. 108 degree
75. A train after travelling for a certain distance develops a problem and decreases its speed to half its original speed and reaches its destination 45 minutes late. Had the problem occurred 30 km further on, it would have reached its destination 15 minutes earlier. What is the speed of the train?
1. 30 km/hr                      2. 90km/hr                      3. 120km/hr                      4. 150km/hr
76. A manufacturer sells a good to a wholesale dealer at a profit of 18%. The wholesaler sells the same to a retailer at a profit of 20%. The retailer in turn, sells it to the customer for Rs. 30.09/- (Rupees thirty and paise nine only) thereby earning profit of 25%. What is the cost of the manufacturer?
1. Rs. 15.30/-                      2. Rs. 17.00/-                      3. Rs. 20.00/-                      4. Rs. 22.00/-
77. If Rs. 1000/- is invested at an interest rate of 5% p.a. and the interest earned is added to the principal every 10 years, then after how many years will the amount become Rs.2000/-?
1.  $\frac{20}{3}$                       2.  $\frac{50}{3}$                       3.  $\frac{25}{4}$                       4. None of the above
78. Two pipes of P and Q can fill a tank A in 10 hrs and 12 hrs respectively. A third pipe R can empty a tank B in 40 hrs. Tank B is two times in volume compared to tank A. If P and Q are kept open to fill tank A if R is connected to empty tank A at the same time such that all the pipes operate simultaneously, how long will take for the tank A to be fully filled?
1. 6 hrs 40 minutes                      2. 8 hrs 30 minutes                      3. 7 hrs 30 minutes                      4. None of the above
79. ABCD is a trapezium and AB is parallel to CD. AB has a length, which is two times the length of CD. If the diagonals of the trapezium intersect at O, then the ratio of areas of  $\triangle AOB$  and  $\triangle COD$  triangle is
1. 1: 4                      2. 4: 1                      3. 1: 2                      4. 2: 1
80. The MRP of a chocolate is Rs.65/-. A customer purchased the chocolate for Rs.56.16/- (Rupees fifty six and paise sixteen only). He got two successive discounts of which one is 10%. Find the other discount of the discount scheme that was given by the seller.
1. 3%                      2. 4%                      3. 5%                      4. None of the above

## GENERAL AWARENESS

- 81.** What is the full-form of RSVP?
1. rigorous session of voice protocol
  2. repondez, s'ilvous plait
  3. repondez, sans vous plaint
  4. response sought vous plaint
- 82.** The Callanish Stones, which are considered to be petrified giants, as per a folklore, who did not convert to Christianity, are located in which country:
1. Norway
  2. Wales
  3. Scotland
  4. Ireland
- 83.** Which of the following sites or monuments is not in the UNESCO list of World Heritage Sites?
1. Humayun's Tomb at Delhi
  2. Kaziranga Natural Park in Assam
  3. Tirupati Temple
  4. Agra Fort
- 84.** Mr. Ramon Magsaysay, in whose name the prestigious Magsaysay award is given, belonged to:
1. Malaysia
  2. Thailand
  3. Philippines
  4. Indonesia
- 85.** Indian musician noted for his exemplary skills at playing mandolin who died in 2014:
1. Uppalapu Srinivas
  2. Amjad Ali Khan
  3. Zarin Daruwalla
  4. Ustad Usman Khan
- 86.** In the Fifth meeting of SAARC Energy Ministers, which from the following has been the key area of discussion:
1. Telecom
  2. Environment
  3. Power Grid
  4. Education
- 87.** Malaysian Airlines Flight MH17 was a scheduled international passenger flight, presumed to have been shot down, crashed on 17 July 2014 killing all 283 passengers and 15 crew on board was flying,
1. from Amsterdam to Kuala Lumpur
  2. from Kuala Lumpur International Airport to Beijing Capital International Airport
  3. from Kuala Lumpur to Amsterdam
  4. from Beijing Capital International Airport to Kuala Lumpur International Airport
- 88.** Ukraine has been in news recently on account of conflict with Russia. The name of the Ukrainian President is:
1. Petro Poroshenko
  2. Viktor Yushebenko
  3. Yulia Timoshenko
  4. None of the above
- 89.** Oldest brand of the Tata Group is
1. The Taj Palace and Tower
  2. Ginger
  3. Taj Cape Town
  4. Quilon
- 90.** 'Gold fixing' refers to setting the price of gold. Where is the value of gold set?
1. New York
  2. London
  3. Tokyo
  4. Singapore



- 101.** The Giant Panda, world's most threatened species is a symbol of:
1. IFAW
  2. WWF
  3. CEE
  4. UNEP
- 102.** Acid rain is caused mainly due to the emissions of
1. Calcium oxide and sulfur dioxide
  2. Nitrogen oxide and sulfur dioxide
  3. Sodium oxide and nitrogen oxide
  4. Calcium oxide and carbon dioxide
- 103.** Which of the given rivers does not flow into River Ganga?
1. Brahmaputra
  2. Gomti
  3. Gandak
  4. Tapti
- 104.** The International agreement for control of Green House Gas (GHG) emissions is named
1. Adelaide Agreement
  2. Kyoto Protocol
  3. Manila Convention
  4. Kuala Lumpur Treaty
- 105.** The International Standard which checks the compliance of the environmental practices of an organization against the best practices followed in the industry is
1. ISO 9001
  2. TS 16949
  3. ISO 14001
  4. ISO 9002
- 106.** Comiket the world's largest comic festival is held in which country?
1. Japan
  2. France
  3. Korea
  4. Germany
- 107.** In \_\_\_\_\_ Infosys was listed in NASDAQ and in \_\_\_\_\_ Infosys became a part of NASDAQ 100
1. 1998,2009
  2. 1997,2008
  3. 1999,2006
  4. None of the above
- 108.** The Indian team finished with 8<sup>th</sup> position in the recent Asian games 2014 held at South Korea with a total tally of medals.
1. 57
  2. 37
  3. 56
  4. 58
- 109.** A full moon occurs once every
1. 14 days
  2. 30 days
  3. 21 days
  4. 15 days
- 110.** The River Danube empties in
1. The Dead Sea
  2. The Mediterranean Sea
  3. The Black Sea
  4. The Red Sea
- 111.** Cartography is the study of:
1. Cartilages and Bones
  2. Cartoons
  3. Maps
  4. Carrots

- 112.** Regional rural banks are jointly owned by
1. Central government, a commercial bank and Central bank of a country
  2. Central government, a commercial bank and a state government
  3. Central government, Central bank and a state government
  4. A commercial bank, Central bank of a country and a state government
- 113.** The famous Meenakshi Temple in Madurai was built by and beautified by the
1. Vakatakas, Nayaks
  2. Chalukyas, Chollas
  3. Satavahanas, Chollas
  4. Pandyas, Nayaks
- 114.** Which of the given statements is not correct as per Indian constitution?
1. There can be a single person as the Governor for two or more states.
  2. Governor is the Constitutional or nominal head of the State Executive and is bound by the advice of the State Council of Ministers.
  3. All executive actions of the State shall be expressed to be taken in the name of the Chief Minister.
  4. The President of India consults the Governor on appointment of the High Court judges.
- 115.** Kwan Yin has a special place in Buddhist tradition and is known:
1. To represent healing nature
  2. To bring in good luck charm
  3. As a Goddess of compassion
  4. As Related to higher psychological-scientific teachings from Buddha
- 116.** "Bachpan Bachao Andolan" was initiated by
1. Jawaharal Nehru
  2. Kailash Satyarthi
  3. Malala'Yusefzai
  4. Benejer Bhotto
- 117.** Dr Ram Manohar Lohia, the great freedom fighter and thinker, established a political party named
1. Samajwadi Party
  2. Samyukta Socialist Party
  3. Janata Party
  4. Praja Socialist Party
- 118.** The Nobel Prize in Physics 2014 was awarded jointly to three scientists "for the invention of efficient blue light-emitting diodes which has enabled bright and energy-saving white light sources". Who among the given four names was not in the team?
1. Isamu Akasaki,
  2. Hiroshi Amano
  3. Shuji Nakamura
  4. Takada Ekimano
- 119.** Chandrasekhar Venkat (CV) Raman was awarded the Nobel Prize for investigation into 'Raman Effect', a phenomenon that deals with
1. Change in the speed of light as it passes through a transparent medium
  2. Change in the atomic structure of the medium impacted by light
  3. Change in the wavelength of the light as it passes through a transparent medium
  4. Change of light in liquid crystals alone
- 120.** "Working towards a world free of poverty" is a motto of one of these International organizations:
1. UNESCO
  2. UNICEF
  3. WORLD BANK
  4. UNCTAD



## SECTION – IV

### Analytical & Logical Reasoning

Number of questions: 40

121. Vertex : Pyramid : \_\_\_\_\_ : \_\_\_\_\_

1. Strand : Hair      2. Rung : Ladder      3. Summit: Mountain      4. Frame : Picture

122. Piety : Pilgrim : Curiosity : \_\_\_\_\_

1. Explorer      2. Pinchpenny      3. Gamester      4. Monk

**DIRECTIONS for question 123 to 124:** Read the paragraphs carefully and determine the main point the author is trying to make. What conclusion can be drawn from the argument? Each paragraph is followed by four statements. One statement supports the author's argument better than the others do.

123. Nowadays people are so busy in their work that they do not take care of their health. A lot of diseases like diabetics, arthritis, heart attack, blood pressure are increasing due to unhealthy lifestyle. People do not find time to exercise. Stress is continuously increasing. The fast food is quick, easy and tastes better but it is not healthy. Habits like smoking and drinking alcohol have many side effects. Polluted city environment has also negative impact on the health of citizens. To live happy and healthy life; it is important to take care of oneself.

1. Nowadays everybody smokes and drinks.  
2. Diseases are increasing only because of pollution.  
3. People are happy and stress free because their life is too busy.  
4. Current city environment, life style and habits are affecting health of citizens.

124. Diwali is a festival of lights; which signifies that good will always be better than evil. In the present day many people have developed a lot of negativity in their minds and hearts, which has led to high corruption and higher crime rates. Value based education is the need of the day to eliminate darkness of cruelty, selfishness and greed and bring the light of wisdom, peace, kindness, truthfulness, right attitude, hard work and co-operation. Mahatma Gandhi also said that we should eradicate sins from hearts not the sinners. If a society has people with good heart, it will definitely flourish.

1. Nowadays nobody is good  
2. Nowadays everybody is corrupt and criminal.  
3. Value based education can save the society from crime and corruption.  
4. It is not possible to fight against corruption as everybody is corrupt.

125. If  $X + Y$  means X is the mother of Y;  $X - Y$  means X is the brother Y;  $X \% Y$  means X is the father of Y and  $X \times Y$  means X is the sister of Y, which of the following shows that P is the maternal uncle of Q?

1.  $Q - N + M \times P$       2.  $P + S \times N - Q$       3.  $P - M + N \times Q$       4.  $Q - S \% P$

126. In the following question, three statements numbered -I, II and III, and four conclusions are given. Select the correct answer from the options given.

**Statements:-**

- I. Some Newspapers are ACs.  
II. Some ACs are Trees.  
III. All Books are ACs.

**Conclusions:-**

- A. Some Books are Newspapers.
- B. All Books are Trees.
- C. All Trees are Books.
- D. Some Books are not Newspapers.

**Options:-**

- 1. Only A follows.
- 2. Only A or C follows.
- 3. Only either A or D follows.
- 4. Only B and C follows.

**DIRECTIONS for question 127 to 128:** A statement is given followed by several assumptions. An assumption is something assumed or taken for granted. Read the statement carefully and decide which of the assumptions are implicit in the statement.

**127. Statement:** "I think that she has gone mad. Last night I saw her barking like a dog." – A tells B about Madhu.

**Assumptions:**

- I. Madhu is a friend of A.
- II. B Knows Madhu.
- III. Some people do not bark like dogs.

- 1. I and II are implicit.
- 2. II and III are implicit.
- 3. I and III are implicit.
- 4. All are implicit.

**128. Statement:** "The Prime Minister is expected to announce an expansion in his ministry shortly." – A newspaper report

**Assumptions:**

- I. The newspaper has quoted authentic sources.
- II. The newspaper has reliable sources for the news.
- III. The Prime Minister has the power to expand his cabinet.

- 1. I and II are implicit
- 2. II and III are implicit
- 3. I and III are implicit
- 4. All are implicit

**129.** How many times in a day, do the hands of a clock coincide with each other?

- 1. 12
- 2. 24
- 3. 22
- 4. 44

**DIRECTIONS for question 130 to 134:** These questions are based on the data given below.

There are two circular tables in a room. Six Americans - A1, A2, A3, A4, A5, A6 are sitting at one table and six Germans - G1, G2, G3, G4, G5, G6 are sitting at the other table. A1 and A4 are sitting opposite to each other. A2 and A5 are also sitting opposite to each other. A3 sits to the right of A4. A2 is the only person who can translate English to German language; A3 is the only person who can translate German language to English, and none of them does the vice-versa, unless so stated. A5 and A6 sit adjacent to each other. Similarly, G1 sits opposite to G4; G6 sits opposite to G3 and G5 sits to the right of G6. G2 and G4 sit adjacent to G3. On the table, any person can talk to another person, only as stated below. The only conversations that took place are as given below:

A1 spoke to A2; A2 to G6; G6 to A3; G6 to G5; G5 to G4; G4 to G3; G3 to G2; G2 to G1; A3 to A4; A4 to A5; A6 to A1; G1 to G6; and A5 to A6.

The conversations are one-sided i.e., A1 spoke to A2 implies that A1 is the speaker and A2 is the listener and not vice-versa.

- 130.** If the person to the right of A1 wants to send a message to the person sitting to the left of G2, then the message has to pass through how many persons? (Excluding the first and the last)
1. 7                      2. 5                      3. 6                      4. None of the above
- 131.** If A3 wants to send a message to G1, then how many persons must the message pass through? (excluding the first and the last)
1. 6                      2. 4                      3. 10                      4. None of the above
- 132.** If the person sitting to the right of A2 wants to send a message to the person sitting two places to the left of A4, then what is the minimum number of people involved between them? (excluding the two people)
1. 6                      2. 10                      3. 4                      4. None of the above
- 133.** If every person is allowed to speak to the person who sits opposite to him directly, then what is the least number of persons involved in passing a message from A3 to G1? (excluding the two people)
1. 3                      2. 6                      3. 7                      4. None of the above
- 134.** If the order of conveying messages is reversed at both the tables i.e. "A1 speaks to A2 "now becomes "A2 speaks to A1", (and so on) and also A2 and A3 exchange their interpreting skills, then which of the following must be true?
1. A1 can send a message to G5 involving only 2 persons.
  2. The person sitting to the right of A6 can send a message to the person sitting to the left of G2, by involving only five persons.
  3. The person sitting to the right of A3, on the same table, can translate English to German language.
  4. The maximum number of persons involved in the longest message in this new arrangement is more than that in the previous arrangement.

**DIRECTIONS for question 135 and 137:** *There are 3 females A, B and E and 4 males C, D, F, and G standing in a straight line. No two females are together. B is to right of C, F and D are not together as A is placed between them. G is not near B or E but E and F are together. D is not to the right of B.*

- 135.** Who is in the extreme end?
1. G and B                      2. C and F                      3. B and D                      4. None of them
- 136.** Who is exactly in the middle?
1. A                      2. F                      3. E                      4. None of the above
- 137.** Look carefully at the sequence of letters and symbols to find the pattern. Select correct pattern.
- N<sub>2</sub>WF LT<sub>3</sub>G JQH<sub>4</sub> \_\_\_\_ FK<sub>6</sub>J
1. H<sub>5</sub>NI                      2. H<sub>5</sub>SI                      3. HR<sub>2</sub>I<sub>3</sub>                      4. H<sub>5</sub>NJ

**DIRECTIONS for question 138 and 141:** Answer the questions based on the details given in the paragraph.

There were 200 students who gave a competitive exam. The exam had three sections English, Maths and General Knowledge (GK). Ten students could not pass in any of the subjects. Number of students passed in English was 125, Maths was 95 and General Knowledge was 95. 55 students passed in English and Mathematics. 45 students passed in GK and Maths and 60 students passed in GK and English. 20 students passed in English and Maths but failed in GK.

**138.** How many students passed in GK and Maths, but failed in English?

1. 30                                      2. 60                                      3. 45                                      4. 10

**139.** How many students passed in English and GK but failed in Maths?

1. 60                                      2. 25                                      3. 20                                      4. 35

**140.** How many students passed only in Maths?

1. 30                                      2. 20                                      3. 25                                      4. 35

**141.** How many passed in all three Subjects?

1. 25                                      2. 35                                      3. 15                                      4. 20

**DIRECTIONS for question 142:** Answer the question based on the details given in the paragraph.

In a family of six, there are three men A, B and C and three women R, S and T. The six persons are Architect, Lawyer, CA, Professor, Doctor and Engineer by profession but not in the same order. There are two married couples and two unmarried persons. C is not R's husband. The Doctor is married to a Lawyer. R's grandfather is a Professor. B is neither A's son, nor he is an Architect or a Professor. The Lawyer is T's daughter-in-law. C is T's son and the Engineer's father. A is married to the CA.

**142.** Which among the following is the correct pair of married couples?

1. AS and CR                      2. AC and SR                      3. AT and CS                      4. AT and RB

**143.** Five friends A, B, C, D and E have different jobs. They work with either Bank or Cinema or Pharma or Sales or Jewellery. Pick the right job in which they are employed if:

B is neither concerned with Bank nor with Sales. E has nothing to do with Cinema or Jewellery. C is not in Bank or Cinema. D has nothing to do in Sales or Pharma. Cinema has not given a chance to B or D nor E is a bank employee. C is not in Sales nor B is in Jewellery.

1. A- Cinema; B-Sales; C-Jewellery; D-Pharma; E-Bank  
2. A- Cinema; B-Sales; C-Pharma; D-Bank; E-Jewellery  
3. A- Cinema; B-Sales; C-Jewellery; D-Bank; E-Pharma  
4. A-Cinema; B-Pharma; C-Jewellery; D-Bank; E-Sales

**DIRECTIONS for question 144:** In the following question, a statement or two are followed by two conclusions:-

**144. Statement:** Of all the television sets manufactured in India, the 'Solar' brand has the largest sale  
**Conclusions:**

- I. The volume of sales of all the brands of television sets manufactured in India is known.
- II. The production of no other television set in India is as large as that of 'Solar'.

- 1. Conclusion I follows
- 2. Conclusion II follows
- 3. Both I and II follow
- 4. Either I or II follows

**DIRECTIONS for question 145 to 148:** Read the information carefully and answer the questions:

Radhika, Neha, Rupa, Mahima, Sayali and Shobha joined six different renowned MBA institute – A, B, C, D, E and F and opted for six different specializations in Management – Finance, IT, Operations, HR, Marketing and General Management. Each of them has a different educational qualification out of BCA, B.Com, CA, BBM, B.Sc., and B.Tech.

The following information is available about them.

- I. Mahima joined institute B and did not take up Marketing or IT and is not a B.Tech.
- II. The person who joined institute E opted for HR and is not a CA or a B.Sc.
- III. The person, who is a BCA graduate, joined the institute D and took IT. Whereas, the person, who is B.Com graduate, took up General Management.
- IV. Shobha is a CA and has taken Finance.
- V. B.Tech graduate has taken Operations Management and didn't join institute A or C.
- VI. Radhika joined institute F, Rupa is a BCA graduate and Neha took up HR

**145.** What is the educational qualification of Mahima and what is the course she o

- 1. B.Sc. and Finance
- 2. B.Com. and General Management
- 3. BBM and HR
- 4. None of the above

**146.** Which Institute did the B.Tech Graduate join?

- 1. F
- 2. D
- 3. A
- 4. None of these

**147.** The education qualification of Sayali is

- 1. B.Sc.
- 2. BCA
- 3. BBM
- 4. CA

**148.** If Shobha joined the institute C, then the student who joined the institute A opted for

- 1. Finance
- 2. Marketing
- 3. General Marketing
- 4. HR

**149.** In a village there used to live three types of tribes SIM LIM & JIM. SIMs always tells the truth, JIM always Lie & LIMs tell the truth & Lie alternating. (They can tell truth & Lie in any sequence). Three persons (of different tribes) from these villages gave following statements.

- A. NICE says "RICE is of SIM tribe;
  - B. MICE says "NICE is of LIM tribe; I am of SIM tribe"
  - C. RICE say "MICE is of JIM tribe; I am of LIM tribe"
- Who among the following always speaks the truth?

- 1. NICE
- 2. MICE
- 3. RICE
- 4. None of the above

**150.** NICE belongs to which of the following tribe?

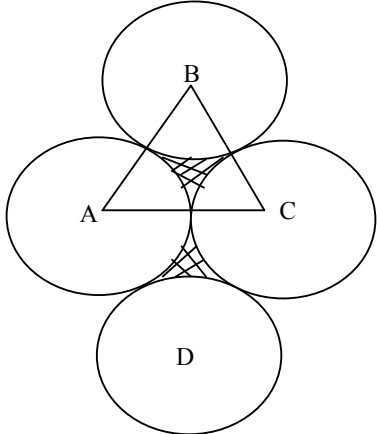
- 1. SIM
- 2. JIM
- 3. LIM
- 4. None of the above

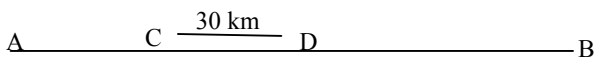
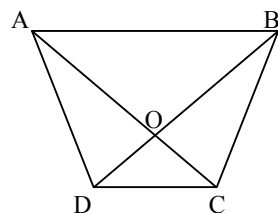
S. no	key	Explanations
1.	4	Minestrone is a type of thick Italian soup. Rest are made by joining words
2.	4	The word native means local , hence its opposite is exotic.
3.	2	This idiom means that it will shake the foundations of.
4.	1	The correct spellings are - DEMURRAGE.
5.	1	The correct word here will be lock.
6.	1	The correct word here is fewer as it is used for counting countable quantifiers.
7.	3	The correct idiom here would be temper frayed , which means losing temper.
8.	3	As per the tone of the passage the correct word is furthermore.
9.	2	The correct prepositions here would be that of option 2.
10.	1	The correct tense is in option 1.
11.	2	The correct wordings of a sentence is in option 2 - The aftermath of the catastrophic terrorist attacks on the World Trade Center in New York in 2001 has brought renewed pressure on immigrant communities in the U.S.
12.	2	The correct preposition here is by.
13.	1	Attenuate means to reduce , and hence it means the same as enervate which means to weaken.
14.	2	The word cajole means to flatter , hence its opposite is beguile
15.	1	Consanguinity means blood relations , and thus its synonym is affinity which means attraction.
16.	1	Cast off , means to remove , and hence this is the answer.
17.	3	The options are all idioms and the one to fit in the blank is option 3.
18.	3	A knock down price is an idiom which means selling yourself short, hence the answer is option 3.
19.	3	As per the sentence e, both the blanks are opposites and hence the answer is option 3.
20.	1	According to the tone of the sentence the answer is option 1.
21.	2	As per the sentence the answer is option 2
22.	1	The keyword here is aesthetic, and thus the answer is polemical.
23.	2	The correct spellings are - Pernicious.
24.	4	“Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider”
25.	3	To disapprove suits in the context because the author wants the reader to avoid being prejudiced
26.	4	“Some books may also be read by deputy, and extracts made of them by others; but that would be only in the less important arguments and the meaner sort of books”. Thus, option 4
27.	1	“Unless the firm is fortunate enough to possess a staff with considerable expertise, it may not be able to take this crucial first step without qualified outside guidance”. The author suggests this clearly.
28.	2	“If a good foundation is laid for export business the benefits derived should eventually outweigh the investment”. Thus, option 2 is the correct choice
29.	3	“Foreign customers may buy on the strength of distributing agent's reputation”. Thus, option 3
30.	1	“Another common difficulty for new exporter is the neglect of the export market once the domestic one booms”. Hence, option 2
31.	3	“Local safety regulations cannot be ignored by exporters”. Thus, option 3 makes sense
32.	2	“There are a number of reasons for this. There may be import restrictions in the target market”. Therefore, the answer is option 2.
33.	4	The correct answer here is option 4 , which is an idiom, which means- fascinated by.
34.	2	The correct tense would be option 2
35.	1	The correct word as per the text is back.
36.	1	This blank will be filled with an idiom, and thus the correct answer is option 1.
37.	4	All the options can fit , and thus the answer is option 4.
38.	1	It means brief
39.	1	The correct answer is - this desk is squarer than that one.
40.	3	This is an idiom which means that you be happy with what you have , even if its lesser than what you wanted.

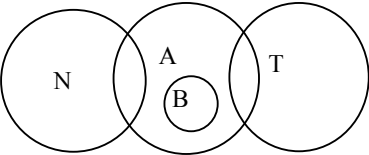
41.	4	<p>The equation of the line joining the points (5, 2) and (6, -15) is</p> $y - 2 = \frac{-15 - 2}{6 - 5}(x - 5)$ $\Rightarrow y - 2 = -17(x - 5)$ $\Rightarrow 17x + y - 87 = 0.$ <p>As no further information is given, so data is insufficient to solve the question.</p>
42.	2	<p>Here the divisors are 2, 3, 4 and 5 and the respective remainders are 1, 2, 3 and 4. The L.C.M. of (2, 3, 4, 5) = 60. The least number satisfying the given condition = L.C.M. of (2, 3, 4, 5) – the difference between the divisor and the respective remainder. = 60 – 1 = 59</p>
43.	4	<p>Total multiples of 7 between 1 and 1000 = <math>1000 / 7 = 142</math>. Total multiples of 7 between 1 and 100 = <math>100 / 7 = 14</math>. Hence total multiples of 7 between 100 and 1000 = <math>142 - 14 = 128</math>.</p>
44.	3	<p>Both the athletes have run for the same time. So the ratio of their distances will be the same as the ratio of their speeds. Hence the ratio of the distance covered by A and B, when they meet for the first time is 4: 5. Hence A has covered 400m and B has covered 500m. So they will meet at 400m from A's end.</p>
45.	3	<p>We have the function <math>Y = \sin x + \log x</math> The domain of <math>\sin x</math> is set of all real numbers. The function <math>\log x</math> is defined when <math>x &gt; 0</math>. Hence the domain of <math>Y</math> is <math>(0, \infty)</math>.</p>
46.	4	<p>If we multiply the terms given in the options one by one, we can check that none of them will give us <math>x^4 + 5x^2 + 36</math>. Hence answer is option 4.</p>
47.	2	<p>Let the present average age of committee is <math>x</math> years. So the total age is <math>4x</math> years. Let the age of the person replaced is <math>y</math> years and that of the new member is <math>z</math> years. Acc. to the question</p> $\frac{4x - y + z}{4} = (x - 6) \Rightarrow 4x - y + z = 4x - 24$ $\Rightarrow y - z = 24 \text{ years.}$
48.	1	<p>Let <math>P(A)</math> = Probability of getting construction contract = <math>\frac{3}{4}</math>  <math>P(B)</math> = Probability of getting electrical contract = <math>1 - \frac{7}{9} = \frac{2}{9}</math>.  <math>P(A \cup B)</math> = Probability of getting at least one contract = <math>\frac{5}{6}</math>  Now <math>P(A \cup B) = P(A) + P(B) - P(A \cap B)</math>  <math>\Rightarrow \frac{5}{6} = \frac{3}{4} + \frac{2}{9} - P(A \cap B)</math>  <math>\Rightarrow P(A \cap B) = \frac{5}{36}</math>.</p>
49.	3	<p>When 21 books of Literature are arranged in a row, there will create 22 places. Now we have to place 19 books of Nature at these 22 places which can be done in <math>{}^{22}C_{19} = 1540</math> ways.</p>
50.	2	<p>The volume of the water displaced is equal to the volume of the sphere.</p> $\frac{4}{3} \times \pi \times (4)^3 = \frac{256\pi}{3} \text{ cubic units.}$ <p>Now the volume of the sphere = <math>\frac{4}{3} \times \pi \times (4)^3 = \frac{256\pi}{3}</math> cubic units. Let the water surface be raised by 'h' meters.</p> $\pi(8)^2 \times h = \frac{256\pi}{3} \Rightarrow h = \frac{4}{3} \text{ units.}$ <p>Hence</p>
51.	2	<p>The volume of the cylinder = <math>\pi \times (5)^2 \times 12 = 300\pi \text{ cm}^3</math>.  <math>\frac{4\pi}{3} \times (0.1)^3 = \frac{0.004\pi}{3} \text{ cm}^3</math>.  The volume of one solid ball = <math>\frac{4\pi}{3} \times (0.1)^3 = \frac{0.004\pi}{3} \text{ cm}^3</math>.  Let there are 'n' balls. So we have</p>

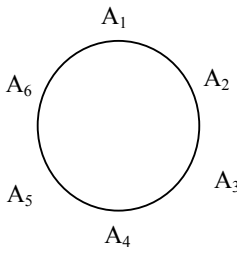
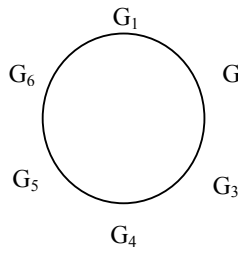
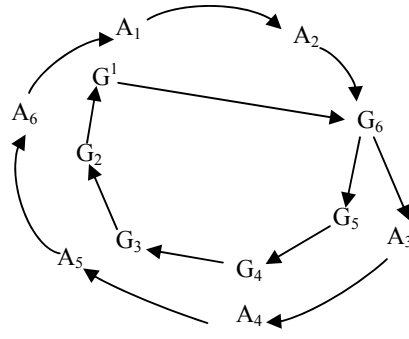
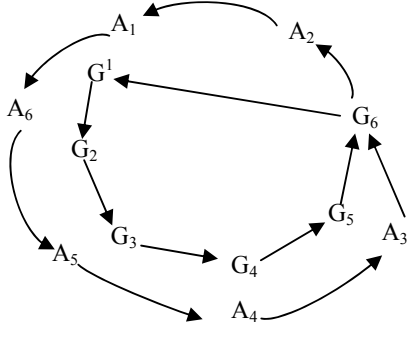
		$n \times \frac{0.004\pi}{3} = 300\pi$ $\Rightarrow n = \frac{900}{0.004} = 225000 = 2.25 \text{ lakh.}$
52.	4	$\log_{\frac{1}{4}} 256 = \frac{1}{\log_{256} \left(\frac{1}{4}\right)} = \frac{1}{\log_{4^4} 4^{-1}} = \frac{-1}{4 \log_4 4} = \frac{-1}{4}.$ <p>We have</p>
53.	1	<p>Let the total sales = Rs x</p> $\text{Total commission} = \frac{6}{100} \times 15000 + (x - 15000) \times \frac{4}{100} = 900 + 0.04x - 600 = 300 + 0.04x.$ <p>As he submitted Rs 30000 after deducting his commission, so we have</p> $x - (300 + 0.04x) = 30000$ $\Rightarrow 0.96x - 300 = 30000 \Rightarrow 0.96x = 30300$ $x = \frac{30300}{0.96} = \text{Rs } 31562.5$ <p><math>\Rightarrow</math></p>
54.	1	<p>We have 60% of (x - y) = 40% of (x + y)</p> $\Rightarrow \frac{3(x - y)}{5} = \frac{2(x + y)}{5}$ $\Rightarrow 3(x - y) = 2(x + y)$ $\Rightarrow 3x - 3y = 2x + 2y$ $\Rightarrow x = 5y$ $\Rightarrow x : y = 5 : 1$ <p>Hence y is 20% of x.</p>
55.	1	<p>The investment is in ratio 4: 5 and period of investment is 9: 8.</p> <p>Hence the profit will be in the ratio <math>4 \times 9 : 5 \times 8 = 9 : 10</math>.</p>
56.	2	<p>As minute hand and hour hand have changed, so hour hand is actually now minute hand. So it will show 6'o'clock again when it will first cover a gap of 1800 and then create further gap of 1800 i.e. total 3600. The relative speed is 5.50/ min. So required time = <math>360 \times \frac{11}{2}</math> min past 6'o clock i.e. at <math>5 \frac{5}{11}</math> minutes past 7'o clock.</p>
57.	1	
58.	1	
59.	1	<p>The given data is in degrees. So 25% of 3600 = 900. Now only Discovery channel has its sector more than 900. So there is only one such channel.</p>
60.	3	<p>National Geographic channels constitutes 350 of the total circle.</p> $\frac{70000}{35} \times 360 = 720000.$ <p>Hence total viewership per day =</p> <p>The difference of people who watched Discovery and History</p> $= \frac{135}{360} \times 720000 = 270000.$
61.	1	<p>TLC is 550 of the total viewership.</p> $\text{Hence total viewership} = \frac{55000}{55} \times 360 = 360000.$
62.	2	<p>Let total viewership for the whole month is 360. Then the viewership of Discovery kids for the whole month = 75 and of TLC = 55.</p> <p>The viewership of Discovery Kids for the second half = 50.</p> <p>Hence the required ratio is 50: 55 = 10: 11.</p>
63.	2	<p>As Discovery Kids is under quoted by 25%, so Discovery kids will be increased by 250.</p> $\text{Hence the viewership of Discovery} = \frac{160}{385} \times 100 = 41.55\%.$
64.	1	<p>The numbers which satisfy the given property are 106, 112, 118, .....994 which forms an</p>

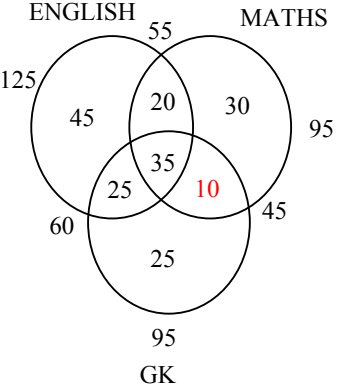
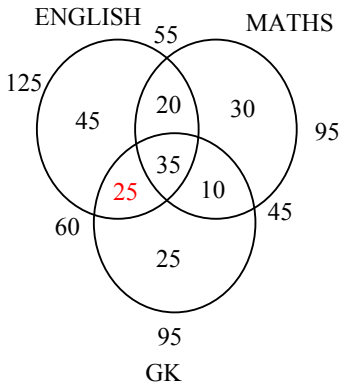
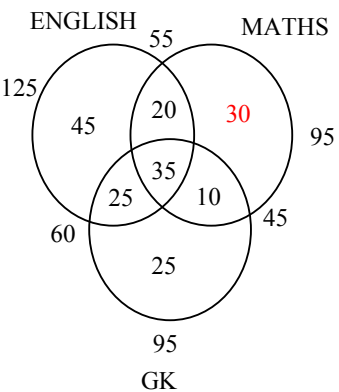


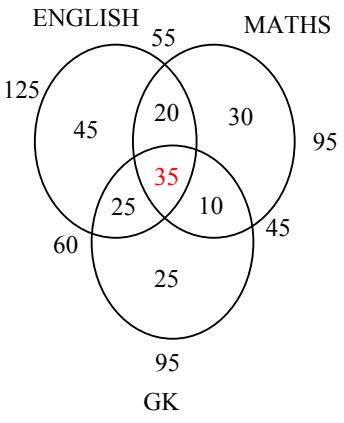
		A.P. with first term 106 and common difference 6. Let the total terms are 'n'. Hence $994 = 106 + (n - 1) \times 6$ $\Rightarrow 888 = (n - 1) \times 6 \Rightarrow n - 1 = 148 \Rightarrow n = 149$ .
65.	3	We will do it by options. Option in which on subtracting 241 becomes a perfect square should be the answer. Only 14641 satisfy it as $14641 - 241 = 14400$ is a perfect square.
66.	3	The total number of ways of selecting 5 cards out of 11 is ${}^{11}C_5 = \frac{11!}{5 \times 6!} = 462$ . Now for favourable case, the third number should be 3. The first two numbers should be 1 and 2. The last two numbers can be selected out of the remaining 8 numbers in ${}^8C_2 = 28$ ways. $\frac{28}{462} = \frac{14}{231}$ Hence the probability = $\frac{14}{231}$ .
67.	4	 <p>Here <math>\Delta ABC</math> is an equilateral triangle with side <math>14\sqrt{3}</math> units. So the area of <math>\Delta ABC = \frac{\sqrt{3}}{4} \times (14\sqrt{3})^2 = 147\sqrt{3}</math>.</p> <p>The area of the three minor sectors inside the <math>\Delta ABC = 3 \times \pi \times (7\sqrt{3})^2 \times \frac{60}{360} = \frac{147\pi}{2}</math>.</p> <p>Hence the area of the shaded region inside the <math>\Delta ABC = 147\sqrt{3} - \frac{147\pi}{2} = 147\left(\sqrt{3} - \frac{\pi}{2}\right)</math></p> <p>Hence the total area of the shaded region = <math>2 \times 147\left(\sqrt{3} - \frac{\pi}{2}\right) = 294\left(\sqrt{3} - \frac{\pi}{2}\right)</math></p>
68.	3	Actual ratio of distribution among A, B and C is $\frac{1}{3} : \frac{1}{4} : \frac{1}{6}$ or 4: 3: 2. So the actual share of A was Rs 80, of B was Rs 60 and of C was Rs 40. When the money was divided in the ratio 3: 4: 6 among A, B and C then they got Rs 41.52, Rs 55.36 and 83.04 respectively. Hence only share of C has increased.
69.	3	Let the age of mother is 'x' years and of daughter is 'y' years. So we have $x + y = 42$ .....(i) After 3 years, $x + 3 = 3(y + 3)$ $\Rightarrow x + 3 = 3y + 9$ $\Rightarrow x - 3y = 6$ .....(ii) Subtracting (ii) from (i), we get, $4y = 36 \Rightarrow y = 9$ years and $x = 33$ years. Hence mother's age after 3 years = 36 years.
70.	2	The difference between the terms is 3, 6, 9, 12, 15, 18 and 21 respectively. Hence the missing term is $47 + 18 = 65$ .
71.	1	The difference between the numbers is 17, 15, 13, 11, 9 and 7. Hence 47 is incorrect. It should be 46.
72.	3	Probability of hitting the target = $1 - (\text{probability of missing the target})$ $= 1 - (0.9 \times 0.8 \times 0.65 \times 0.55) = 1 - 0.2574 = 0.7426$ .

73.	2	<p>We have <math>\log(10368)^6 = 6 \times \log 10368 = 6 \times \log(27 \times 34)</math>  <math>= 6 \times \{\log 27 + \log 34\} = 6 \times (7 \log 2 + 4 \log 3)</math>  <math>= 6 \times (7 \times 0.30103 + 4 \times 0.4771) = 6 \times (2.10721 + 1.9084) = 24.09366</math>  Hence the number of digits is <math>24 + 1 = 25</math>.</p>
74.	4	<p>Angle between minute hand and hour hand at 8'o clock is <math>30 \times 8 = 2400</math>. It will decrease <math>5.5</math> per minute. So in 24 minutes, it will decrease by <math>5.5 \times 24 = 1320</math>. So the angle between minute hand and hour hand at 8: 24 p.m. is <math>2400 - 1320 = 1080</math>.</p>
75.	1	<p style="text-align: center;">  </p> <p>Let A be the starting point and B is the destination. C and D are places where the problems occurred.  Let the speed of the train is 'x' km/hr.  Now <math>\frac{30}{x} - \frac{30}{x} = 1</math>  <math>\frac{2}{x} = 1</math>  <math>\Rightarrow x = 30</math> km/hr.</p>
76.	2	<p>Let the cost of manufacturer is Rs 'x'. Then we have  <math>x \times 1.18 \times 1.2 \times 1.25 = 30.09</math>  <math>\Rightarrow x \times 1.77 = 30.09</math>  <math>\Rightarrow x = 30.09 / 1.77 = 17</math>.</p>
77.	2	<p>In the first 10 years the interest will be 50% of principle i.e. Rs 500. Hence the A = <math>1000 + 500 =</math> Rs 1500. Now this is the new principle. To make it Rs 2000, Rs 500 are more needed.  Now <math>500 = \frac{1500 \times 5 \times t}{100}</math>  <math>\Rightarrow t = \frac{500 \times 100}{1500 \times 5} = \frac{20}{3}</math>.  Hence total time required = <math>10 + \frac{20}{3} = \frac{50}{3}</math> years.</p>
78.	3	<p>Since tank B is two times the volume of tank A so pipe R will take 20 hrs to empty Tank A. When all the three pipes are connected to tank R then in one hour, water filled =  <math>\frac{1}{10} + \frac{1}{12} - \frac{1}{20} = \frac{6+5-3}{60} = \frac{8}{60} = \frac{2}{15}</math>  <math>\frac{15}{2}</math>  Hence it will take <math>\frac{15}{2}</math> hours or 7 hours 30 minutes to fill the tank.</p>
79.	2	<p style="text-align: center;">  </p> <p>The triangles AOB and COD are similar.  Hence the ratio of areas is equal to the ratio of square of the sides. Since AB is twice of CD, so ratio of areas of <math>\triangle AOB</math> and <math>\triangle COD</math> is 4: 1.</p>
80.	2	<p>Here MP = Rs 65 and SP = Rs 56.16.  <math>\frac{65 - 56.16}{65} \times 100 = 13.6\%</math>  Hence flat discount = <math>\frac{65 - 56.16}{65} \times 100 = 13.6\%</math>  Now the first discount is 10%. Let us try the question using options.  Let the second discount is 4%.  So the flat discount = <math>10 + 4 - \frac{40}{100} = 14 - 0.4 = 13.6\%</math> which is same as the actual value.  Hence the second discount is 4%.</p>
81	2	

82	3	
83	3	
84	3	
85	1	
86	3	
87	1	
88	1	
89	1	
90	2	
91	1	
92	2	
93	1	
94	2	
95	2	
96	3	
97	1	
98	2	
99	3	
100	1	
101	2	
102	2	
103	4	
104	2	
105	3	
106	1	
107	3	
108	1	
109	2	
110	3	
111	3	
112	2	
113	4	
114	4	
115	3	
116	2	
117	4	
118	4	
119	3	
120	3	
121	3	The vertex is the highest point of a pyramid; the summit is the highest point of a mountain.
122	1	Piety is found in a pilgrim. Likewise curiosity is found in an explorer
123	4	This is the essence of the passage
124	3	“Value based education is the need of the day to eliminate darkness of cruelty”. Thus, option 3
125	3	Since P is the brother of the mother of N & Q, hence P is the maternal uncle of Q.
126	3	 <p>Hence either A or D follows as A &amp; D form a complimentary pair.</p>
127	2	Both 2 <sup>nd</sup> and 3 <sup>rd</sup> are implicit in the given context as it is nowhere mentioned that Madhu is B's friend
128	2	Both 2 <sup>nd</sup> and 3 <sup>rd</sup> are implicit in the given context as we are not sure of the authenticity of the sources

129	3	As one coincidence occurs after the other at a gap of $65\frac{5}{11}$ minutes ( $60 \times \frac{12}{11}$ ) after the previous coincidence so in 12 hour period there occurs only 11 coincidences ( as a coincidence is missed between 11 & 1). So, in a period of 24 hours hands of the clock will coincide 22 times.
130	2	<div style="text-align: center;">   </div> <div style="text-align: center;">  </div> <p>We can observe from diagram 1 that person to the right of A1 is A6 and from diagram 2 that person sitting to the left of G2 is G3. Now, from diagram 3, A6 will pass message to A1, A1 to A2, A2 to G6, G6 to G5, G5 to G4 and G4 to G3. Thus, the message will pass through A1-A2-G6-G5-G4 i.e., 5 persons (except the first and last persons).</p>
131	3	From diagram 3, we can observe that route for sending the message will be A3 - A4 - A5 - A6 - A1 - A2 - G6 - G5 - G4 - G3 - G2 - G1. Thus, the message will pass through 10 persons (except the first and last persons).
132	4	We can observe from diagram 1 that person to the right of A2 is A1 and from diagram 2 that person sitting two places to the left of A4 is A6. Now, according to diagram 3, the message will pass through A1 - A2 - G6 - A3 - A4 - A5 - A6 i.e., 5 persons (excluding the 2 persons).
133	1	Since, we need to count the least number of persons, thus A3 will pass the message directly to A6, then the message will follow the normal route upto G6. Then again to get the least persons, message from G6 will pass directly to G3 and then the message will be transmitted through the normal route upto G1. Thus, the correct route will be A3 - A6 - A1 - A2 - G6 - G3 - G2 - G1 i.e., the least number of persons involved are 6 (excluding the 2 persons).
134	2	<div style="text-align: center;">  </div> <p>We can observe from diagram 1 that person to the right of A6 is A5 and from diagram 2 that person sitting to the left of G2 is G3. Now, according to diagram 4, the message will pass through A5 - A4 - A3 - G6 - G1 - G2 - G3 i.e., 5 persons (excluding the 2 persons). Thus, option 2 is correct.</p>
135	4	The correct order is E F A D G C B. It can be seen that B and E are at the extreme end.

136	4	D is placed in the middle, hence 4 <sup>th</sup> option is the answer.
137	1	The logic followed is that the first alphabet moves two places down in each term, the second moves three places down in each term and the third moves one place up. The numbers in subscript increase by one. Hence answer is H <sub>5</sub> NI.
138	4	 <p>ENGLISH 55 MATHS</p> <p>125 45 20 30 95</p> <p>60 25 35 10 45</p> <p>25</p> <p>95</p> <p>GK</p> <p>It is clear from the diagram that the number of students passed in GK and Maths, but failed in English are 10.</p>
139	2	 <p>ENGLISH 55 MATHS</p> <p>125 45 20 30 95</p> <p>60 25 35 10 45</p> <p>25</p> <p>95</p> <p>GK</p> <p>It is clear from the diagram that the number of students passed in GK and English, but failed in Maths are 25.</p>
140	1	 <p>ENGLISH 55 MATHS</p> <p>125 45 20 30 95</p> <p>60 25 35 10 45</p> <p>25</p> <p>95</p> <p>GK</p> <p>It is clear from the diagram that the number of students passed only in Maths are 30.</p>

141	2	 <p>It is clear from the diagram that the number of students passed in all three subjects are 35.</p>																																				
142	3	<p>A(Grandfather &amp; Professor) <math>\Leftrightarrow</math> T(Grandmother &amp; CA)</p> <p>C(Doctor) <math>\Leftrightarrow</math> S(Lawyer)</p> <p>B(Engineer) R(Architect)</p> <p>Hence AT and CS are pair of married couples.</p>																																				
143	4	<table border="1" data-bbox="472 909 1198 1207"> <thead> <tr> <th></th> <th>BANK</th> <th>CINEMA</th> <th>PHARMA</th> <th>SALES</th> <th>JEWELLERY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>×</td> <td>✓</td> <td>×</td> <td>×</td> <td>×</td> </tr> <tr> <td>B</td> <td>×</td> <td>×</td> <td>✓</td> <td>×</td> <td>×</td> </tr> <tr> <td>C</td> <td>×</td> <td>×</td> <td>×</td> <td>×</td> <td>✓</td> </tr> <tr> <td>D</td> <td>✓</td> <td>×</td> <td>×</td> <td>×</td> <td>×</td> </tr> <tr> <td>E</td> <td>×</td> <td>×</td> <td>×</td> <td>✓</td> <td>×</td> </tr> </tbody> </table> <p>Hence, option 4.</p>		BANK	CINEMA	PHARMA	SALES	JEWELLERY	A	×	✓	×	×	×	B	×	×	✓	×	×	C	×	×	×	×	✓	D	✓	×	×	×	×	E	×	×	×	✓	×
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144	1	There is no mention about the production being the highest. Thus, only option 1 is correct																																				
145	2	<table border="1" data-bbox="472 1287 1170 1497"> <thead> <tr> <th>Name</th> <th>Institute</th> <th>Specialization</th> <th>Educational Qualification</th> </tr> </thead> <tbody> <tr> <td>Radhika</td> <td>F</td> <td>Operations</td> <td>BTech.</td> </tr> <tr> <td>Neha</td> <td>E</td> <td>HR</td> <td>BBM</td> </tr> <tr> <td>Rupa</td> <td>D</td> <td>IT</td> <td>BCA</td> </tr> <tr> <td>Mahima</td> <td>B</td> <td>General Mgt.</td> <td>BCom.</td> </tr> <tr> <td>Sayali</td> <td>A/C</td> <td>Marketing</td> <td>BSc.</td> </tr> <tr> <td>Shobha</td> <td>C/A</td> <td>Finance</td> <td>CA</td> </tr> </tbody> </table> <p>Hence Mahima is BCom and doing General Mgt.</p>	Name	Institute	Specialization	Educational Qualification	Radhika	F	Operations	BTech.	Neha	E	HR	BBM	Rupa	D	IT	BCA	Mahima	B	General Mgt.	BCom.	Sayali	A/C	Marketing	BSc.	Shobha	C/A	Finance	CA								
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146	1	Hence Radhika is BTech and she joined institute F.																																				
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148	2	If Shobha joined Institute C then Sayali who joined A opted for Marketing.																																				
149	2	<p>Statements A &amp; C have a common second remark that “I am of LIM tribe”. If this remark is taken to be true then the person is an alternator ( LIM) and if false then he is a liar. This means in either case the person cannot be a truth teller. So, neither of NICE &amp; RICE can be a truth teller. Hence MICE is a truth teller and belongs to tribe SIM.</p> <p>As per the above discussion we get the following table:</p> <table border="1" data-bbox="472 1780 1393 1898"> <thead> <tr> <th>Name</th> <th>Statement I</th> <th>Statement II</th> <th>Tribe</th> </tr> </thead> <tbody> <tr> <td>NICE</td> <td>×</td> <td>✓</td> <td>LIM</td> </tr> <tr> <td>MICE</td> <td>✓</td> <td>✓</td> <td>SIM</td> </tr> <tr> <td>RICE</td> <td>×</td> <td>×</td> <td>JIM</td> </tr> </tbody> </table>	Name	Statement I	Statement II	Tribe	NICE	×	✓	LIM	MICE	✓	✓	SIM	RICE	×	×	JIM																				
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