



SYMBIOSIS NATIONAL APTITUDE TEST (SNAP) 2010

Instructions:

This test is divided into the following sections

Sections	Total Marks	No. of Questions
General Knowledge	40	40
General English	40	40
Quantitative & Data Interpretation & Data Sufficiency	40	40
Analytical & Logical Reasoning	60	30
Total	180	150

***For every wrong answer, you will score 25% negative marks. You will be given 120 minutes to complete the test.**



SECTION I GENERAL KNOWLEDGE

For all questions in this section, correct answers carry 1 mark each.

1. Name the jailed Chinese pro-democracy activist who won this year's Nobel Peace Prize for his 'long and non-violent struggle for fundamental human rights in China'.
(a) Went Xiabo (b) Wen Jiabao
(c) Liu Jiabao (d) Liu Xiaobo
2. Which government is behind the 'The Nalanda Proposal', proposing Nalanda as an ideal site for establishing a 21st century learning institution.
(a) Singapore (b) India
(c) U.K. (d) China
3. Jimmy Wales and Larry Sanger are known for founding
(a) Facebook (b) Orkut
(c) Wikipedia (d) Google
4. The year 2010 is represented in Roman Numerals as
(a) LLX (b) MMX
(c) IIXX (d) CCXX
5. In which country is the seat of the United Nations International Court of Justice?
(a) France (b) Norway
(c) Britain (d) Netherlands
6. In 1965 Gordon Moore, Co-founder of Intel, made a prediction about the future of computer processing. What does his prediction, known as Moore's Law say?
(a) As technology continues to advance, computer chips will become obsolete.
(b) Computer-processing power will double every 18 months to two years.
(c) There will eventually be no need for transistors in high-tech electronics.
(d) As the number of transistors increases, computer-processing power will be reduced by half in every two years.



7. 'At 60 miles an hour the loudest noise in this new Rolls-Royce comes from the electric clock.' – Who wrote this famous advertising headline?
- (a) David Ogilvy (b) Walter Thompson
(c) Leo Burnett (d) Salman Rushdie
8. His life's motto was 'simple living and high thinking' He was one of the greatest intellectual and activists of the 19th century and one of the pillars of the Bengal Renaissance. He was a polymath, Sanskrit pundit, educator, social reformer, writer and philanthropist. Due to his relentless efforts, on 26th July 1856, widow re-marriage was legalized by the then Government of India. Who is this towering personality?
- (a) Ishwar Chandra Vidyasagar (b) Raja Ram Mohan Roy
(c) Rabindranath Tagore (d) Bankim Chandra Chatterjee
9. Eustace Fernandes, who passed away in early 2010 was the much-admired creator of
- (a) Tom and Jerry (b) Amul Girl
(c) Air India Maharaja (d) Snow White
10. Find the mismatch
- (a) Somdev Devvaraman Badminton
(b) Gagan Narang Shooting
(c) Arjun Atwal Golf
(d) Anita Sood Swimming
11. Who designed the new rupee symbol?
- (a) Dilip Chhabria (b) D. Udaya Kumar
(c) Tarun Tahiliani (d) S. Arun Kumar
12. What exactly is cloud computing?
- (a) A way to organize desktop computers
(b) Lightweight software that takes up little space on a hard drive
(c) Computing resources that can be accessed on demand, like electricity from a utility
(d) The World Wide Web
13. What is NDM-1?



- (a) National Defence Missile 1, developed by Defence Research and Development Organisation (DRDO) as a part of the comprehensive missile shield for India.
- (b) A bacterial gene called New Delhi Mettallo-lactamase-1, dubbed the 'superbug' because of it being resistant to most antibiotics.
- (c) New Directions in Management 1- the first among a series of international conferences on Management, to be inaugurated by Bill Gates in Mumbai in January 2012.
- (d) A vision document on Disaster Management, released by Planning Commission.

14. 'Niyamgiri Hills' was in the news because of

- (a) Vedanta's failed mining proposal in the area inhabited by Dongria Knodh triabls.
- (b) The helicopter crash and death of Y.S. Rajasekhara Reddy.
- (c) Headquarters of the Naxalite Red corridor.
- (d) Conde Nast Traveller magazine selected it as the best trekking holiday spot in the world.

15. Match the following husband-and-wife team with the awards they have received for exemplary work:

- | | |
|----------------------------------|--------------------------------|
| 1. Bill and Melinda Gates | (i) Right to Livelihood Awards |
| 2. Sankaralingam and Krishnammal | (ii) UN Population Award |
| 3. Prakash and Mandakini Amte | (iii) Kyoto Prize |
| 4. Peter and Rosemary Grant | (iv) Magsaysay Award |
| (a) 1-ii, 2-i, 3-iii, 4. iv | (b) 1-ii, 2-i, 3-iv, 4. iii |
| (c) 1-iv, 2-iii, 3-ii, 4. i | (d) 1-ii, 2-iv, 3-iii, 4. i |

16. What is Renminbi?

- (a) It is the official currency of the People's Republic of China (PRC), whose principal unit is the Yuan.
- (b) Low cost car being developed by Volkswagen in China, at prices lower than Nano.
- (c) New aircraft Company floated by Brazil to challenge Boeing and Airbus.
- (d) New currency mooted for the entire ASEAN region like Euro for Europe.



- 17.** Embraer is one of the world leaders in the manufacturing of corporate/business jets. Embraer belongs to which country?
- (a) Germany (b) Japan
(c) Brazil (d) France
- 18.** The Unique Identification (UID) Project, headed by Nandan Nilekani has been renamed as
- (a) Adhaar (b) Sambhav
(c) Sambhandh (d) Alekh
- 19.** India's first Special Economic Zone dedicated to the Aerospace Industry has been launched at
- (a) Hyderabad (b) Hallargi
(c) Shimla (d) Ahmedabad
- 20.** The prime purpose of WTO is to promote:
- (a) Financial Support (b) Global Peace
(c) Unilateral Trade (d) Multilateral Trade
- 21.** On March 5, 2010, which of the following personalities from India is among 19 members chosen by UN chief Ban Ki-moon for a high-level advisory group on Climate Change Financing tasked with mobilizing funds pledged during the Copenhagen meet to tackle global warming?
- (a) Shyam Saran (b) Montek Singh Ahluwalia
(c) Chandrashekhar Dasgupta (d) Pradipto Ghosh
- 22.** Prime Minister Manmohan Singh has termed the 11th Five Year Plan as:
- (a) India's health plan
(b) India's poverty eradication plan
(c) India's rural prosperity plan
(d) India's education plan
- 23.** Which of the following milestones was achieved by New Zealand Cricket Team Captain Daniel Vettori recently?
- (a) 2,000 runs and 200 wickets in Test Cricket.
(b) 3,000 runs and 300 wickets in One-day International (ODIs)
(c) 3,000 runs and 300 wickets in Test Cricket.



- (d) 2,000 runs and 200 wickets in One-day International (ODIs)
- 24.** What is the full form of the term 'NPA' as used in banking environment?
- (a) Not Profitable Assets (b) New Potential Accounts
(c) Non Performing Assets (d) Net Performing Assets
- 25.** Which of the following contributes to the highest share of revenue earned by the Government of India?
- (a) Income Tax (b) Excise Duty
(c) Value Added Tax (d) Corporate Tax
- 26.** Which country was world's largest exporter with merchandise export worth \$1.47 trillion in 2008, according to the World Trade Organisation?
- (a) USA (b) China
(c) Germany (d) Russia
- 27.** Where in India, recently has the Clinton Foundation, founded by former US President Bill Clinton, firmed up its plans to set up world's largest solar park (3,000 to 5,000 MW capacity)?
- (a) Bihar (b) Orissa
(c) Gujarat (d) Rajasthan
- 28.** Which three public sector lenders have entered recently into a joint venture agreement for setting up a banking subsidiary, India BIA Bank (Malaysia) Bhd, in Malaysia?
- (a) Bank of India, Indian Overseas Bank and Andhra Bank
(b) Bank of Baroda, Indian Overseas Bank and Bank of India
(c) Bank of Baroda, Indian Overseas Bank and Andhra Bank
(d) Bank of Baroda, Indian Bank and Andhra Bank
- 29.** What is the campaign of Union and State Governments against the Naxalite movement called?
- (a) Operation Red Alert (b) Operation Green Hunt
(c) Operation Cobra Den (d) Operation Clean Corridor
- 30.** The instrument used to measure the speed of the wind is
- (a) Altimeter (b) Anemometer
(c) Chronometer (d) Dosimeter
- 31.** Which of the following countries is the first in the world to propose a carbon tax for its people to address global warming?



- (a) Finland (b) Japan
(c) Germany (d) Australia
- 32.** Amino acids are found in
(a) Carbohydrates (b) Fats
(c) Proteins (d) Vitamins
- 33.** Which among the following is the world's largest milk producing country?
(a) India (b) China
(c) The US (d) Germany
- 34.** A group of words that share the same spelling and the same pronunciation but have different meaning, e.g. left (opposite of right) and left (past tense of leave)
(a) Synonyms (b) Homonyms
(c) Heteronyms (d) Acronyms
- 35.** The National Flag of India was designed by
(a) Mahatma Gandhi (b) Jawaharlal Nehru
(c) Rabindra Nath Tagore (d) Pingali Venkayya
- 36.** In 1679, Denis Papin, a French physicist, who assisted Robert Boyle, used the latter's scientific discoveries and invented what is today one of the most commonly found kitchen equipment. His invention earned him a membership of the Royal Society of England. What was the invention?
(a) Knife (b) Fork
(c) Pressure Cooker (d) Stove
- 37.** Mr. Ratan Tata refused to job with one of the following companies to join Tata Steel in 1962.
(a) IBM (b) HUL
(c) Siemens (d) SKF International
- 38.** Which of the following have owned Land Rover branch before Tata Motors?
(a) BMW (b) British Leyland
(c) British Aerospace (d) All of the above
- 39.** Who is known as 'The Man Who Broke the Bank of England' after he made a reported \$1 billion during the 1992 Black Wednesday UK currency crisis?
(a) George Soros (b) George W Bush



- (c) Paul Volcker (d) Ben Bernake

40. Who is the current dean of Harvard Business School?

- (a) Nitin Nohria (b) Deepak Jain
(c) Kim Clark (d) None of the above

SECTION II GENERAL ENGLISH

For all questions in this section, correct answers carry 1 mark each.

Directions for Question Nos. 41-44

Read the passage and then determine the best choice for an answer from the questions given below. Base your choice on what this passage states directly or implies, not on any information you may have got from elsewhere.

“The emancipation of women”, James Joyce told one of his friends, “has caused the greatest revolution in our time.”

Other modernists agree: Virginia Woolf, claiming that in about 1910 “human character changed” and illustrating the new balance between the sexes, urged, “Read the ‘Agamemnon’ and see whether your sympathies are not almost entirely with Clytemnestra”. D.H. Lawrence wrote “perhaps the deepest fight for 200 years and more has been the fight for women’s independence”.

But if modernist writers considered women’s revolt against men’s domination as one of their “greatest” and “deepest” themes, only recently, perhaps in the past 15 years has literary criticism begun to catch up with it. Not that the images of sexual antagonism that abound in modern literature have gone unremarked far from it. We are able to see in literary works the perspective we bring to them and now that women are enough to make a difference in reforming canons and interpreting literature, the landscapes of literary history and the features of individual books have begun to change.

41. According to the passage, modernists are changing literary criticism by:-

- (a) Noting instances of hostility between men and women
(b) Seeing literature from fresh points of view
(c) Studying the works of early twentieth-century writers
(d) Reviewing books written by feminists



42. The author quotes James Joyce, Virginia Woolf and D.H. Lawrence primarily in order to show that:-
- (a) These were feminist writers
 - (b) Although well-meaning, they were ineffectual
 - (c) Before the twentieth century, there was little interest in women's literature
 - (d) None of the above
43. The author's attitude towards women's reformation of literary canons can best be described as one of:-
- (a) Ambivalence
 - (b) Antagonism
 - (c) Indifference
 - (d) Endorsement
44. Which of the following titles best describes the contents of the passage?
- (a) Modernist Writers and the Search for Equality
 - (b) The meaning of Literature, from 1910 onwards
 - (c) Transforming Literature
 - (d) None of the options
45. Choose the correct sentence
- (a) A anthropologist by profession, he is also a trained classical singer.
 - (b) The anthropologist by profession, he is also a trained classical singer.
 - (c) As anthropologist by profession, he is also a trained classical singer.
 - (d) An anthropologist by profession, he is also a trained classical singer.

Directions for Question Nos. 46-49

Fill in the blanks and choose the correct definition for the punctuation.

46. _____ is used to indicate possession.
- (a) Hyphen
 - (b) Apostrophe
 - (c) Semi Colon
 - (d) Period
47. _____ is used to mark the end of declarative and imperative sentences.
- (a) Semicolon
 - (b) Comma
 - (c) Dash
 - (d) Period



48. When a subordinate clause is followed by the main clause, _____ is required.
- (a) Dash (b) semi-colon
(c) comma (d) Colon
49. When no connecting word is used to connect two independent clauses, one should use_____.
- (a) Comma (b) semi-colon
(c) period (d) Colon

Directions for Question Nos. 50-51

Which is the correct proverb?

50. (a) Sleeping dogs tell lies.
(b) Dogs sleeping lie till late.
(c) Lie sleeping dogs till the dawn comes.
(d) Let the sleeping dogs lie.
51. (a) A fool is always parted from his money.
(b) A fool and his money are parted easily.
(c) Money and the fool must part ways.
(d) You can always part a fool from his money.

Directions for Question Nos. 52-57

Choose the correct meaning of the following idioms

52. If someone said, "You are the bomb!" she or he probably would be telling you:
- (a) You have a bad temper.
(b) You are a war weapon
(c) You are exceptional and/or wonderful.
(d) You are dangerous.
53. When someone is described as being "flighty", the person described is probably:
- (a) Light.
(b) Indecisive and irresponsible.



- (c) Someone who loves flying.
(d) Someone who flies kites.
- 54.** What does “to take down the enemy” mean?
(a) To take the enemy’s pictures off the wall.
(b) To kill the enemy.
(c) To make friends with the enemy.
(d) To ignore the enemy.
- 55.** What does, “Dime a dozen” mean?
(a) For one dime you get a dozen
(b) All dozens cost a dime
(c) Anything that is common and easy to get.
(d) It is difficult to get people
- 56.** “Throw the baby out with the bath water” means,
(a) Clean out everything
(b) Throw out the good things with the unwanted
(c) Being Thorough
(d) Create the impression of an accident
- 57.** “Bark up the wrong tree” means,
(a) Skin of another animal
(b) Behave like a dog
(c) Purposely make an error
(d) Make the wrong choice
- 58.** I _____ my bike yesterday, so my legs are sore.
(a) road (b) rode
(c) rhode (d) ride
- 59.** Insulation was fitted to _____ further heat loss from the building.
(a) guard (b) protect
(c) save (d) prevent
- 60.** A _____ rate of inflation makes exports difficult.
(a) great (b) high



- (c) large (d) tall
61. My boat has two _____.
- (a) sales (b) sails
(c) sailes (d) sells
62. Can you give me _____ details, please?
- (a) faster (b) further
(c) farther (d) furthur
63. A baby deer is called a _____.
- (a) Foal (b) Fawn
(c) Calf (d) Joe

Directions for Question Nos. 64-65

Complete the sentence by choosing the correct words from the given alternatives

64. The greatest _____ of my generation is that a human being can alter his life by _____ his attitude.
- (a) gift ... gifting (b) discovery ... altering
(c) misgiving ... elevating (d) thing ... flaunting
65. When it comes to staying _____, a mind-lift beats a _____ any day.
- (a) young ... face-lift (b) at home ... egg
(c) light ... elevator (d) away ... sleep
66. None are so _____ as those who are full of themselves
- (a) empty (b) important
(c) vital (d) indispensable
67. Your most unhappy customers are your greatest source of _____
- (a) earning (b) irritation
(c) worry (d) learning
68. Choose the correct **antonym** for the word below from the options provided 'Eulogize'
- (a) Extol (b) Criticize
(c) Emulate (d) Amulet
69. Correct synonym for **Pedantic** is,
- (a) Referring to small children (b) Teaching Methodology



- (c) Finicky (d) Angry

70. Pyrophobia means

- (a) Fear of Pythons (b) Fear of funeral pyres
(c) Fear of fever (d) Fear of fire

Directions for Question Nos. 71-72

Choose the kangaroo word that carries a smaller version of the word with a very similar meaning :

- 71.** (a) Masculine (b) Woman
(c) Man (d) Child
- 72** (a) Sleep (b) Respite
(c) Walk (d) Talk

Directions for Question No. 73

Choose the word that completes the first and begins the second word.

- 73.** Paper _____ and _____ lifter
(a) cone (b) weight
(c) light (d) fly

Directions for Question Nos. 74-75

Choose the word that cannot be coupled with the given word to form a new word.

- 74.** Out
(a) Shine (b) Number
(c) Bug (d) Run
- 75.** News
(a) Letter (b) Week
(c) Stand (d) Paper
- 76.** I did not see you _____ the office party.
(a) in (b) for
(c) at (d) on

Directions for Question Nos. 77- 78

Fill in the blanks with the correct simile



- 77.** As cool as
- (a) a Cucumber (b) the winter night
(c) an ice cream (d) a rock star
- 78.** As fresh as
- (a) a daisy (b) a rose
(c) milk (d) dew
- 79.** Choose the option that does not belong with the rest:
- (a) Consort (b) Spouse
(c) Partner (d) Clear
- 80.** Nerd means
- (a) Genius (b) Uninteresting person
(c) Worm (d) Arthropod

SECTION III QUANTITATIVE & DATA INTERPRETATION & DATA SUFFICIENCY

For all questions in this section, correct answers carry 1 mark each.

- 81.** In a Retail outlet the average revenue was Rs.10,000 per day over a 30 day period. During this period the average daily revenue on weekends (total 8 days) was Rs.20,000 per day. What was the average daily revenue on weekdays?
- (a) 6364 (b) 5250
(c) 6570 (d) 8060
- 82.** Two different prime numbers X and Y, both are greater than 2, then which of the following must be true?
- (a) $X - Y = 23$ (b) $X + Y \neq 87$
(c) Both A and B (d) None of the above
- 83.** It takes 6 hours for pump A, used alone, to fill a tank of water. Pump B used alone takes 8 hours to fill the same tank. A, B and another pump C all together fill the tank in 2 hours. How long would pump C take, used alone, to fill the tank?
- (a) 4.8 (b) 6
(c) 5.6 (d) 3



- 84.** A swimming pool can be filled by pipe A in 3 hours and by pipe B in 6 hours, each pump working on its own. At 9 am pump A is started. At what time will the swimming pool be filled if pump B is started at 10 am?
- (a) 11.20 a.m. (b) 11.05 a.m.
(c) 11.10 a.m. (d) 10.50 a.m.
- 85.** The sum of prime numbers that are greater than 60, but less than 70 is:
- (a) 128 (b) 191
(c) 197 (d) 260
- 86.** Find out the appropriate next number in the series from the options below:
0, 2, 6, 12, 20, 30, 42, ?
- (a) 56 (b) 62
(c) 49 (d) 5
- 87.** A bakery opened with its daily supply of 40 dozen rolls. Half of the rolls were sold by noon, and 60% of the remaining rolls were sold between noon and closing time. How many dozen rolls were left unsold?
- (a) 6 (b) 8
(c) 10 (d) 12
- 88.** Stuart, Jack and Leo are colleagues working in a plant. Stuart and Jack can do a work in 10 days, Jack and Leo can do the same work in 15 days while Stuart and Leo can do it in 12 days. All of them started the work together. After two days, Leo was shifted to some other work. How many days will Stuart and Jack take to finish the rest of the work?
- (a) 9 (b) 12
(c) 8 (d) 7.5
- 89.** The missing numbers in the below series would be
1 : 1, 8 : 4, 9 : 27, 64 : 16, 25 : 125, ? : ?, 49 : 343,
- (a) 36 : 316 (b) 216 : 36
(c) 316 : 16 (d) 32 : 316
- 90.** The difference between the value of a number increased by 25% and the value of the original number decreased by 30% is 22. What is the original number?
- (a) 70 (b) 65



- (c) 40 (d) 90

- 91.** Running at the same constant rate, 6 identical machines can produce a total of 180 bottles per hour. How many bottles could 15 such machines produce in 30 minutes?
- (a) 225 (b) 300
(c) 250 (d) 350
- 92.** A number whose fifth part increased by 4 is equal to its fourth part diminished by 10, is :
- (a) 240 (b) 260
(c) 270 (d) 280
- 93.** Which one of the following numbers will completely divide $(461 + 462 + 463 + 464)$?
- (a) 3 (b) 10
(c) 11 (d) 13

Directions for Question Nos. 94 -100:

Each of the following questions is followed by two statements.

Mark (a) - if statement I alone is sufficient to answer the question.

(b) - if statement II alone is sufficient to answer the question.

(c) - if both statements I and II together are necessary to answer the question.

(d) - if both statements I and II together are not sufficient to answer the question.

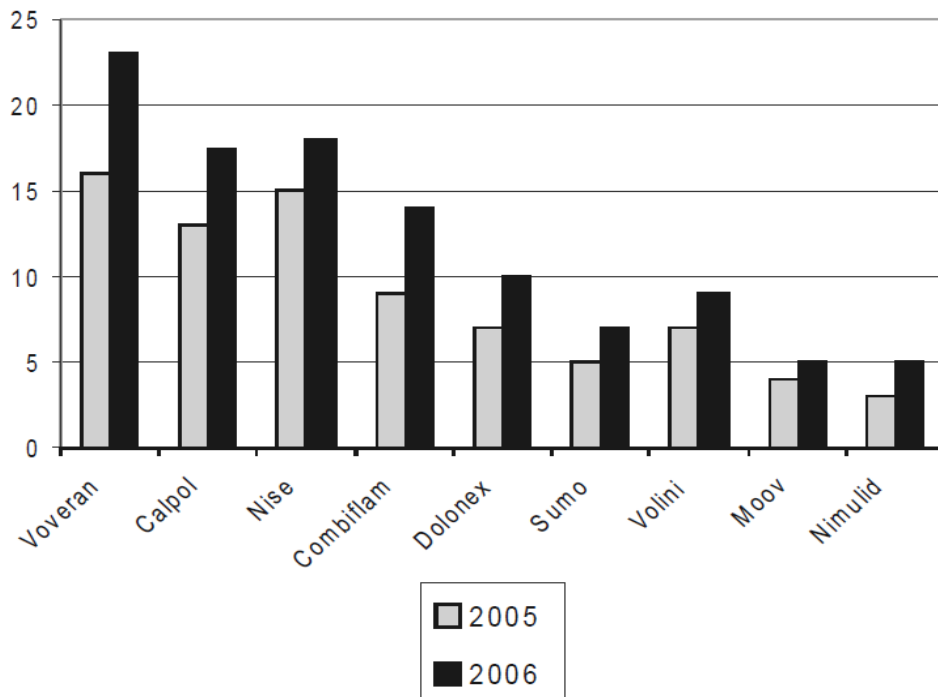
- 94.** Is 'b' positive?
- (I) $a + b$ is positive
(II) $a - b$ is positive
- 95.** In a general body election, 3 candidates p, q and r were contesting for a membership of the board. How many votes did each receive?
- (I) p received 17 votes more than q and 103 votes more than r.
(II) Total votes cast were 1703
- 96.** If C_1 and C_2 are the circumferences of the outer and inner circles respectively, What is $C_1 : C_2$?



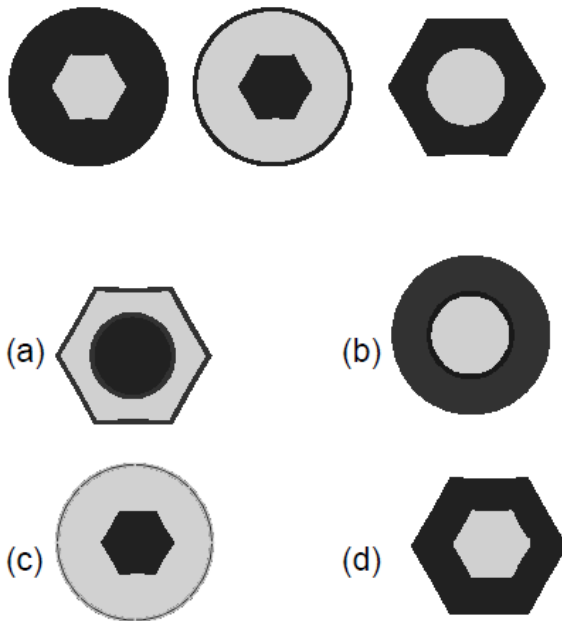
- (I) The two circles are concentric
- (II) The area of the ring is $\frac{2}{3}$ the area of greater circle
- 97.** What is the middle number of 7 consecutive whole numbers?
- (I) Product of number is 702800
- (II) Sum of the numbers is 105
- 98.** Total marks obtained by P, Q, R and S in Mathematics is 360. How many marks did P secure in Mathematics?
- (I) P secured one-third marks of the total of Q, R and S
- (II) Average marks obtained by Q and R are 20 more than that secured by S.
- 99.** How many ice cubes can be accommodated in a container?
- (I) The length and breadth of the container is 20 cm and 15 cm respectively
- (II) The edge of the ice cube is 2 cm
- 100.** Ram got Rs 1500 as dividend from a company. What is the rate of interest given by the company?
- (I) The dividend paid last year was 10%
- (II) Ram has 350 shares of Rs 10 denomination

Direction for Question Nos. 101-104:

Refer to the following bar diagram showing the sales (in Rs Crores) of top market brands among pain killers in India and answer the questions



- 101.** What is the difference between the sales of Voveran in 2006 and those of Calpol in 2005 (in Rs lacs)?
- (a) 1000 (b) 50
(c) 100 (d) 500
- 102.** Percentage of increase in sales from 2005 to 2006 is the highest for which brand of a pain killer?
- (a) Voveran (b) Volini
(c) Dolonex (d) Sumo
- 103.** Percentage increase in sales from 2005 to 2006 is the lowest for which brand of a pain killer?
- (a) Voveran (b) Volini
(c) Moov (d) Nise
- 104.** What is the approximate percentage of increase in the sales of Voveran from 2005 to 2006?
- (a) 35% (b) 40%
(c) 45% (d) 50%
- 105.** Which of the designs best completes the following sequence?



- 106.** What is the number that is one half of one quarter of one tenth of 400?
- (a) 2 (b) 5
(c) 8 (d) 10
- 107.** Consider a square ABCD with midpoints E, F, G and H of sides AB, BC, CD and DA. Let L denote the line passing through F and H. Consider points P and Q on the line L inside the square such that the angles APD and BQC are both equal 120° . What is the ratio ABCQPD to the remaining area of ABCD?
- (a) $4 + \sqrt{2}/3$ (b) $2\sqrt{3} - 1$
(c) $2 + \sqrt{3}$ (d) $(10 - 3\sqrt{3})/9$
- 108.** The Price of Darjeeling Tea (in rupees Kilogram) is $100 + 0.1n$, on the n th day of a non-leap year ($n = 1, 2, 3 \dots, 100$) and then remains constant. On the other hand the price of Ooty tea (in rupees per kilogram) is $85 + 0.15n$, on the n th day ($n = 1, 2, \dots, 365$). On which date of that year will the prices of these two varieties of the tea be equal?
- (a) 27th October (b) 16th June
(c) 15th June (d) 28th October

Each of questions 109-112 consist of question followed by two statements numbered I and II

Answer (a) if data in Statement I alone is sufficient to answer the question but the data in Statement II alone is not sufficient to answer the question.



Answer (b) if data in Statement II alone is sufficient to answer the question but the data in Statement I alone is not sufficient to answer the question.

Answer (c) if data in Statement I and II together are necessary to answer the question.

Answer (d) if data in Statement I and II together are not sufficient to answer the question.

109. $\triangle ABC$ and $\triangle PQR$ are congruent

(I) Area of $\triangle ABC$ and $\triangle PQR$ are same

(II) $\triangle ABC$ and $\triangle PQR$ are right angle triangles

110. Salary of A and B is in ratio 3:4 and expenditure is in ratio 4:5. What is the ratio of their saving?

(I) B's saving is 25% of his salary

(II) B's salary is Rs 2500

111. What is the average height of the class?

(I) Average height of the class decreases by 1 cm if we exclude the tallest person of the class whose height is 56 cm

(II) Average height of the class increases by 1 cm if we exclude the shortest person of the class whose height is 42 cm

112. Ram is taller than Shyam and Jay is shorter than Vikram. Who is the shortest among them?

(I) Ram is the tallest.

(II) Shyam is taller than Vikram.

113. In September 2009, the sales of a product were $\frac{2}{3}$ rd of that in July 2009. In November 2009, the sales of the product were higher by 5% as compared to September 2009. How much is the percentage of increase in sales in November 2009 with respect to the base figure in July 2009?

(a) +40%

(b) -20%

(c) -30%

(d) +25%

114. For what range of values of 'x', will be the inequality $15x - \frac{2}{x} > 1$?

(a) $x > 0.4$

(b) $x < \frac{1}{3}$

(c) $-\frac{1}{3} < x < 0.4, x > \frac{15}{2}$

(d) $-\frac{1}{3} < x < 0, x > \frac{2}{5}$

115. How many litres of a 30% alcohol solution should be added to 40 litres of a 60% alcohol solution to prepare a 50% solution?



- (a) 30 (b) 20
(c) 24 (d) 32
- 116.** 66 cubic centimeters of silver is drawn into a wire of 1 mm diameter. The length of the wire in metres will be:
(a) 84 (b) 90
(c) 168 (d) 336
- 117.** A train 108 m long moving at a speed of 50 km/hr crosses a train 112 m long coming from opposite direction in 6 seconds. The speed of the second train is,
(a) 48 km/hr (b) 54 km/hr
(c) 66 km/hr (d) 82 km/hr
- 118.** R is a positive number. It is multiplied by 8 and then squared. The square is now divided by 4 and the square root is taken. The result of the square root is Q. What is the value of Q?
(a) 3R (b) 4R
(c) 7R (d) 9R
- 119.** If the length, breadth and height of the room are in ratio 3:2:1. The breadth and height of the room are halved and length of the room is doubled. Then area of the four walls of the room will,
(a) decrease by 13.64% (b) decrease by 15%
(c) decrease by 18.75% (d) decrease by 30%
- 120.** A survey was conducted of 100 people whether they have read recent issues of 'Golmal', a monthly magazine. Summarized Information is presented below:
Only September: 18
September but not August: 23
September and July: 8
September: 28
July: 48
July and August: 10
None of the three months: 24
What is the number of surveyed people who have read exactly for two consecutive months?
(a) 7 (b) 9
(c) 12 (d) 14



SECTION IV ANALYTICAL & LOGICAL REASONING

For all questions in this section, correct answers carry 2 mark each.

121. Four children A, B, C & D are having some chocolates each.

A gives B as many as he already has, he gives C twice of what C already has and he gives D thrice of what D already has.

Now, D gives $\frac{1}{8}$ th of his own chocolates to B.

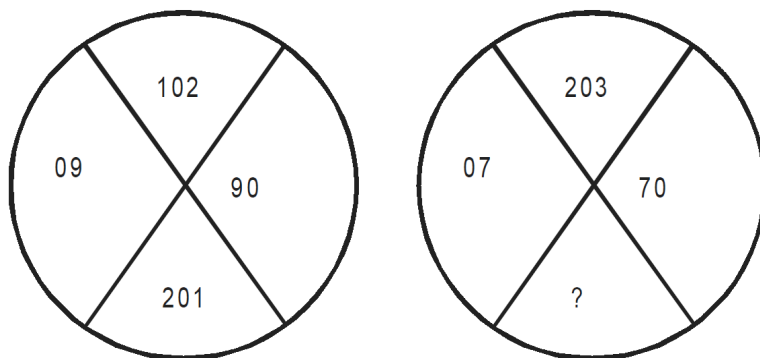
Then A gives 10% chocolates he now owns to C and 20% to B.

Finally, all of them have 35 chocolates each.

What is the original number of chocolates each had in the beginning?

- (a) A-110, B-10, C-10, D-10
- (b) A-90, B-20, C-20, D-10
- (c) A-70, B-25, C-25, D-20
- (d) A-125, B-5, C-5, D-5

122. There are two similar figures below with some numbers. The left one is complete whereas one number is missing in the right one. Find a suitable number to fill in place of the question mark.



- (a) 280
- (b) 303
- (c) 362
- (d) 382

123. Complete the following series by replacing the?:

(TBLD, VEPI, XHTN, ?)

- (a) ZJVP
- (b) ZVJP
- (c) ZKXS
- (d) ZKXP



- 124.** In a cricket team, three batsmen Ricky, Sachin and Brian are the top three run-scorers in any order. Each of them gives two replies to any question, one of which is true and the other is false, again, in any order. When asked about who the top scorer was, following were the replies they gave:

Sachin: I got the top score. Ricky was second.

Brian: I got the top score. Sachin was second.

Ricky: I got the top score. Sachin was third.

Which of the following is the correct order of batsmen who got the top score, second best and third best score respectively?

- (a) Brian, Ricky, Sachin (b) Brian, Sachin, Ricky
(c) Ricky, Sachin, Brian (d) Sachin, Brian, Ricky
- 125.** 60 employees in an office were asked about their preference for tea and coffee. It was observed that for every 3 people who prefer tea, there are 2 who prefer coffee. For every 6 people who prefer tea, there are 2 who drink both of tea and coffee. The number of people who drink both is the same as those who drink neither. How many people drink both tea and coffee?
- (a) 10 (b) 12
(c) 14 (d) 16
- 126.** A clock strikes once at 1 o'clock, twice at 2 o'clock and so on. If it takes 6 seconds to strike at 3 o'clock, how much time will it take to strike at 9 o'clock?
- (a) 24 seconds (b) 18 seconds
(c) 20 seconds (d) None of these

Direction for Questions 127 – 128

E-1, E-2 and E-3 are three engineering students writing their assignments at night. Each of them starts at a different time and completes at a different time. The digit in their names and the order of their starting and completing the assignment is certainly not the same. The last student to start is the first to complete the assignment.

- 127.** Who is the first student to start writing the assignment?
- (a) E-1 (b) E-2
(c) E-3 (d) Cannot be decided
- 128.** Who is the last student to complete the assignment?
- (a) E-1 (b) E-2



(c) E-3

(d) Cannot be decided

Directions for Questions 129-130

A, B and C are three students from Don School and P, Q and R are three students from Elite School. Q is brighter than R but duller than the Don School student who is brighter than A. The same Don School student is duller than P but is brighter than C.

129. Who is brightest amongst all?

(a) B

(b) P

(c) R

(d) Cannot be decided

130. Who is the dumbest amongst the three students from Elite School?

(a) P

(b) Q

(c) R

(d) Cannot be decided

131. When Rafael entered the class, there were already 10 students in the class. 5 students entered the class between Roger and Rafael. Total 10 students entered after Roger. Exactly how many students are in the class finally?

(a) 15

(b) 25

(c) 27

(d) Cannot be decided

Directions for question Nos. 132-134

Arijit, Biplab, Chintan, Debashish, Elangovan, Frederick, Gautam and Himadri are sitting around a circular table. Some information about the order in which they are sitting is available as follows:

(1) Debashish is sitting opposite to Himadri and to the immediate right of Gautam.

(2) Elangovan is sitting to the immediate right of Biplab.

(3) Arijit is sitting opposite Chintan who is not immediately next to Frederick on either side.

132. Who is sitting to the immediate right of Himadri?

(a) Arijit

(b) Debashish

(c) Elangovan

(d) Frederick

133. Who is sitting opposite Biplab?

(a) Arijit

(b) Debashish



- (c) Frederick (d) Himadri

134. Who is to the immediate right of Chintan?

- (a) Arijit (b) Biplab
(c) Elangovan (d) Himadri

135. Select the alternative that logically follows the two given statements:

Some rocks are not tables Some rocks are balloons

- (a) Some tables are not balloons (b) Some tables are balloons
(c) Some balloons are not tables (d) None of the above

Directions for Question Nos. 136-137

A, B, C, D and E sit on a long bench. C does not sit next to A or E. A and E have three persons sitting between them.

136. Who is sitting in the middle of the bench?

- (a) B (b) C
(c) D (d) None of these

137. Who are sitting at the extreme ends of the bench?

- (a) A & E (b) B & D
(c) C & E (d) None of these

Directions for Question Nos. 138-139

Observe the chart below and answer the following questions.

1 Yearly Commission Earned by Five Salesmen.						
						Figure in Rs.
Year	1990	1991	1992	1993	1994	1995
A	23750	28500	25200	29800	24600	27000
B	26850	27900	27400	28000	28500	29000
C	26200	27900	28200	29100	29400	30000
D	2785	30040	29800	30060	29800	32000
E	28640	29000	28750	3000	29750	29700



138. In the year 1994, the commission earned by salesman D was approximately what per cent more of the commission earned by A?

- (a) 18 (b) 82.5
(c) 21 (d) 17

139. In the year 1993, the commission of B was approximately what per cent of the total commission earned by five salesmen that year?

- (a) 30 (b) 20
(c) 40 (d) 80

140. Find the Missing Number in the following set

2	4	6	8	10
2	14	34	??	98

- (a) 30 (b) 62
(c) 42 (d) 78

141. There are 6 volumes of books on a rack kept in order (such as, vol.1, vol.2 and so on). After some readers used them, their order got disturbed. The changes showed as follows:

Vol.5 was directly to the right of vol.2

Vol.4 has vol.6 to its left and both were not at Vol.3's place

Vol.1 has Vol.3 on right and Vol.5 on left

An even numbered volume is at Vol.5's place

Find the order in which the books are kept now, from the 4 given alternatives.

- (a) 6, 3, 5, 1, 4, 2 (b) 4, 6, 3, 5, 1, 2
(c) 3, 4, 1, 6, 5, 3 (d) 2, 5, 1, 3, 6, 4

142. All German philosophers, except for Marx, are idealists. From which of the following can the statement above be most properly inferred?

- (a) Except for Marx, if someone is an idealist philosopher, then he or she is German.
(b) Marx is the only non-German philosopher who is an idealist.
(c) If a German is an idealist, then he or she is a philosopher, as long as he or she is not Marx.
(d) Marx is not an idealist German philosopher.



- 143.** Ramaswami was studying for his examinations and the lights went off. It was around 1:00 a.m. He lighted two uniform candles of equal length but one thicker than the other. The thick candle is supposed to last six hours and the thin one two hours less. When he finally went to sleep, the thick candle was twice as long as the thin one.

For how long did Ramaswami study in candle light?

- (a) 2 hours (b) 3 hours
(c) 2 hours 45 minutes (d) 4 hours
- 144.** The numerator and denominator of a fraction is in the ratio 2:3. If 6 are subtracted from the numerator the value of the fraction becomes $\frac{2}{3}$ of the original fraction. The numerator of the original fraction is,

- (a) 16 (b) 21
(c) 18 (d) 30

- 145.** A person wanted to withdraw X rupees and Y paise from the bank. But cashier made a mistake and gave him Y rupees and X paise. Neither the person nor the cashier noticed that. After spending 20 paise, the person counts the money. To his surprise, he has double the amount he wanted to withdraw.

Find X and Y. (1 Rupee = 100 Paise)

- (a) $X = 3, Y = 6$ (b) $X = 26, Y = 53$
(c) $X = 15, Y = 30$ (d) $X = 9, Y = 36$
- 146.** A drawer contains 10 black and 10 brown socks which are all mixed up. What is the fewest number of socks you can take from the drawer without looking and be sure to get a pair of the same color?

- (a) 7 pairs (b) 7 pieces only
(c) 10 pieces only (d) 3 pieces only

- 147.** A placement company has to assign 1000 SW personnel who are skilled in Java and Dot Net to a prospective outsourcing company. He finds that 750 have Dot Net skills and 450 have Java skills. Some have skills in both Java and Dot Net. Find the numbers who have skills in both Java and Dot Net.

- (a) 250 (b) 200
(c) 350 (d) 100

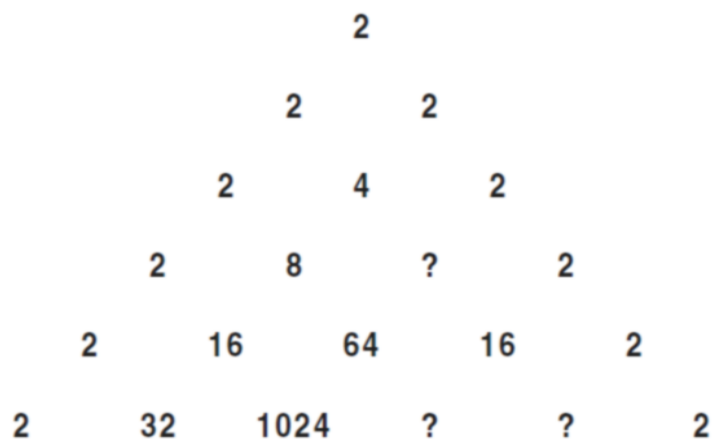
- 148.** All good athletes who want to win are disciplined and have a well balanced diet. Therefore athletes who do not have well balanced diets are bad athletes.



Based on the sentence above which of the statement below strongly supports the view:

- (a) No bad athlete wants to win
- (b) No athlete who does not eat a well balanced diet is good athlete
- (c) Every athlete who eats a well balanced diet is good athlete
- (d) All athletes who want to win are good athletes.

149. The numbers in these series are arranged in a triangle which has a logic as shown below. Find the missing numbers shown as (?) from the choices given below:



- (a) {16, 32, 64}
- (b) {8, 1024, 32}
- (c) {24, 1024, 64}
- (d) {16, 32, 64}

150. If for a particular value of the variable x , the following holds good,

$$17 = \frac{17x}{(1-x)},$$

then compute the value of $(2x) \times x$.

- (a) 17
- (b) 1
- (c) 2
- (d) 1/2



ANSWER KEY - SNAP 2010

1	d	2	a	3	c	4	b	5	d	6	b	7	a	8	a	9	b	10	a
11	b	12	c	13	b	14	a	15	b	16	a	17	c	18	a	19	b	20	d
21	b	22	d	23	c	24	c	25	d	26	c	27	c	28	c	29	b	30	b
31	a	32	c	33	a	34	b	35	d	36	c	37	a	38	d	39	a	40	a
41	b	42	d	43	d	44	d	45	d	46	b	47	d	48	c	49	b	50	d
51	b	52	c	53	b	54	b	55	c	56	b	57	d	58	b	59	d	60	b
61	b	62	b	63	b	64	b	65	a	66	a	67	d	68	b	69	b	70	d
71	a	72	b	73	b	74	c	75	b	76	c	77	a	78	a	79	d	80	b
81	a	82	b	83	a	84	a	85	a	86	a	87	b	88	d	89	b	90	c
91	a	92	d	93	b	94	d	95	c*	96	b	97	b	98	a	99	d	100	b
101	a	102	d	103	d	104	b	105	a	106	b	107	b*	108	b	109	d	110	a
111	c	112	b	113	c	114	d	115	b	116	a	117	d	118	b	119	d	120	b
121	a	122	a	123	c	124	a	125	b	126	a	127	c	128	a	129	b	130	c
131	d	132	a	133	c	134	b	135	d	136	b	137	a	138	c	139	b	140	b
141	d	142	c*	143	b	144	c	145	b	146	d	147	b	148	b	149	b	150	d



SOLUTIONS - SNAP 2010

1. d 2. a 3. c 4. b 5. d
6. b 7. a 8. a 9. b 10. a
11. b 12. c 13. b 14. a 15. b
16. a 17. c 18. a 19. b 20. d
21. b 22. d 23. c 24. c 25. d
26. c 27. c 28. c 29. b 30. b
31. a 32. c 33. a 34. b 35. d
36. c 37. a 38. d 39. a 40. a
41. b Refer to the last paragraph -" Not that the images we are able to see in literary works change." Author says that modernist writers have left an impact on literature by works that have a newer perspective on the theme.
42. d By quoting James Joyce and Virginia Woolf Author wants to emphasize on the fact that the fight for women's independence is not a new theme and that it has been going on for several decades now.
43. d Author appreciates the change that is visible in the literature with reference to the discussed theme.
44. d Author has discussed how modernist writers have impacted the issue of Women's Emancipation. None of the given options are correct.
45. d "Anthropologist" starts with a Vowel sound and hence should use " An " before it. Hence the only correct answer choice is option d.
46. b Apostrophe is used as the marking of possessive case (as in the cat's whiskers).
47. d Period is used to mark the end of declarative and imperative sentences. (Hand in the poster essays no later than noon on Friday.)
48. c Comma (I am, as you have probably noticed, very nervous about this.)



49. b Semi colon is used between closely related independent clauses not conjoined with a coordinating conjunction (I went to the basketball court; I was told it was closed for cleaning.)
50. d "Let the sleeping dogs lie" means 'Do not instigate trouble.'
51. b "A fool and his money are parted easily" means that foolish people lose wealth easily.
52. c "You are a bomb " means exceptionally wonderful.
53. b "flighty" means Indecisive and irresponsible.
54. b "Take down the enemy" means to kill/defeat the enemy.
55. c "Dime a dozen" means very common.
56. b "Throw the baby out with the bath water" means to discard the useful along with the useless.
57. d "Bark up the wrong tree" means to make a wrong choice.
58. b Rode
59. d Prevent
60. b High
61. b Sails
62. b Further
63. b Fawn
64. b Correct answer are discovery and altering.
65. a Correct answers are Young and face lift.
66. a Correct answer is empty.
67. d Correct answer is learning.
68. b Eulogize means to praise highly. Opposite will be to Criticize.
69. b Pedantic means ostentatious in one's learning.
70. d Pyrophobia is the fear of fire.
71. a Masculine has "man".
72. b Respite has "rest".



- 73.** b Weight can be clubbed with both paper (Paper-weight) and lifter (weight -lifter).
- 74.** c "out" can be clubbed with all the words except "bug". 'Out- shine', "out Number" and 'out'.
- 75.** b News can be clubbed with all the words except Week. 'News letter', 'newsstand', 'newspaper'.
- 76.** c Correct answer should be at the party.
- 77.** a Correct expression is Cool as a Cucumber which means very calm.
- 78.** a Correct expression is as fresh as a daisy which means very fresh.
- 79.** d All the rest denote a couple.
- 80.** b Nerd means an uninteresting person.
- 81.** a Total revenue for 30 days = $10,000 \times 30 = \text{Rs.}3,00,000$
Total revenue for weekends = $20,000 \times 8 = \text{Rs.}1,60,000$
Total revenue for weekdays = $3,00,000 - 1,60,000 = \text{Rs.}1,40,000$
Hence, average daily revenue for weekdays
$$= \frac{1,40,00}{22} \approx \text{Rs.}6,364.$$
- 82.** b As both the prime numbers are greater than 2, so both must be odd. Sum of any two odd numbers must be even.
Hence, $X + Y \neq 87$.
Hence, statement (b) must be true.
- 83.** a Let total units to be filled be 24.
Units filled by A in one hour = 4
Units filled by B in one hour = 3
Units filled by A, B and C in one hour = 12
So, units filled by C in one hour = 5
Hence, C can fill the complete tank in $\frac{24}{5} = 4.8$ hours.
- 84.** a Let total units to be filled be 6.
Units filled by A in one hour = 2



Units filled by B in one hour = 1

Units filled in the swimming pool upto 10:00 a.m. = 2

Units filled in the swimming pool upto 11:00 a.m. = 2 + 3 = 5

Now as 3 units are being filled in one hour,

So 1 unit will be filled in $\frac{1}{3}$ hr i.e. 20 minutes

Hence, swimming pool will be completely filled at 11 : 20 a.m.

- 85.** a Prime numbers between 60 and 70 are 61 and 67.

So, sum = 61 + 67 = 128.

- 86.** a It is an A.P. in second form.

The difference between the terms is in A.P.

So the missing term is 42 + 14 = 56

- 87.** b Rolls at the time of opening = 40 dozens

Rolls sold by noon = 20 dozens

So rolls remaining = 20 dozens

Rolls sold between noon and closing time = 12 dozens

So rolls left unsold = 8 dozens.

- 88.** d Let total units of work to be done be 60.

Now, units done by Stuart and Jack in one day = 6

units done by Jack and Leo in one day = 4

units done by Leo and Stuart in one day = 5

So units done by all three in 1 day = $\frac{6 + 4 + 5}{2} = \frac{15}{2}$

Remaining units to be done = $60 - 2 \times \frac{15}{2} = 45$

So time taken by Stuart and Jack = $\frac{45}{6} = 7.5$ days

- 89.** b 216 : 36

- 90.** c Let original number be y.



Now, increased number = $\frac{5}{4}y$

and decreased number = $\frac{7}{10}y$

According to question,

$$\frac{5}{4}y \Rightarrow \frac{7}{10}y = 22 \Rightarrow \frac{25 - 14}{20}y = 22 \Rightarrow \frac{11}{20}y = 22 \Rightarrow y = 40.$$

- 91.** a Bottles produced by 6 machines in one hour = 180
Bottles produced by 6 machines in 30 minutes = 90
Bottles produced by 1 machine in 30 minutes = 15
Bottles produced by 15 machines in 30 minutes = $15 \times 15 = 225$.
- 92.** d Let the number be x.
Now, according to the question
- $$\frac{x}{5} + 4 = \frac{x}{10} \Rightarrow \frac{x}{4} - \frac{x}{5} = 14 \Rightarrow \frac{x}{20} = 14 \Rightarrow x = 280.$$
- 93.** b $461 + 462 + 463 + 464 \equiv 1 + 2 + 3 + 4 \equiv 10 \equiv \frac{10}{10}$
 \therefore The sum will end in 0.
 \therefore The sum will be divisible by 10.
- 94.** d From statement I, 'b' can be either negative or positive.
Also from statement II, 'b' can be either negative or positive so statements I and II cannot be combined.
Hence, we cannot find out the answer.
- 95.** *c From statement I,
 $p = q + 17$ and $p = r + 103$
From statement II,
 $p + q + r = 1703$
Combining statement I and statement II,
 $p + p - 17 + p - 103 = 1703$
 $\Rightarrow 3p = 1583 \Rightarrow p = 527.66$



So value of p, q and r can be found out by combining both the statements.

*** Note: Figures are faulty as number of votes cannot be fraction but statements yield results.**

96. b From statement I, nothing can be said.

From statement II,
$$\pi(R_1^2 - R_2^2) = \frac{2}{3}\pi R_1^2$$

So the ratio of $R_1 : R_2$ can be found out.

Hence, ratio of $C_1 : C_2$ can be found out.

Therefore, statement II alone is sufficient.

97. b From statement I, we can not find out the answer.

From statement II,

$$a - 3 + a - 2 + a - 1 + a + a + 1 + a + 2 + a + 3 = 105$$

$$\Rightarrow 7a = 105$$

$$\Rightarrow a = 15$$

Hence, the middle number can be determined.

Therefore, statement II alone is sufficient.

98. a From statement I,

$$P = \frac{1}{3} P Q R S$$

and we know that $P + Q + R + S = 360$.

Hence, the marks of P can be determined.

Therefore, statement I alone is sufficient.

From statement II we can not say anything.

99. d Even after combining both statements the volume of container cannot be determined as width of the container is not given.

Hence, number of ice cubes that can be accommodated cannot be determined.

100. b Statement I tells only about the previous year's rate.

Statement II: Dividend from 350 shares = Rs.1500



$$\text{Dividend from 1 share} = \frac{150}{35} = \frac{30}{7} = 4.28$$

So the rate of interest can be found out as

$$4.28 = \frac{10 \times R \times 1}{100}$$

$$\Rightarrow R = 42.8\%$$

Therefore, statement II alone is sufficient.

- 101.** a Sales of Voveran in 2006 = Rs.23,00,00,000
Sales of Calpol in 2005 = Rs.13,00,00,000
So difference = Rs.10,00,00,000
= Rs.1,000 lakhs.

- 102.** d Percentage increase in sales of Voveran

$$= \frac{6.5}{16.5} \times 100 = 39.39\%$$

$$\text{Percentage increase in sales of Volini} = \frac{2}{7} \times 100 = 28.57\%$$

$$\text{Percentage increase in sales of Dolonex} = \frac{3}{7} \times 100 = 42.85\%$$

$$\text{Percentage increase in sales of Sumo} = \frac{2.5}{5} \times 100 = 50\%$$

Hence, only Sumo has a 50% increase in sales in 2005-06.

- 103.** d Percentage increase in sales of Voveran = $\frac{6.5}{16.5} \times 100 = 39.39\%$

$$\text{Percentage increase in sales of Volini} = \frac{2.5}{7} \times 100 = 35.71\%$$

$$\text{Percentage increase in sales of Moov} = \frac{1}{4} \times 100 = 25\%$$

$$\text{Percentage increase in sales of Nise} = \frac{3}{15} \times 100 = 20\%$$



104. b Percentage increase in the sales of Voveran

$$\begin{aligned} &= \frac{6.5}{16.5} \times 100 \\ &= 39.39 = 40\% \text{ (approx.)} \end{aligned}$$

105. a In the first pair, the colours of the shadings gets interchanged only. Hence, 'a' is the correct option.

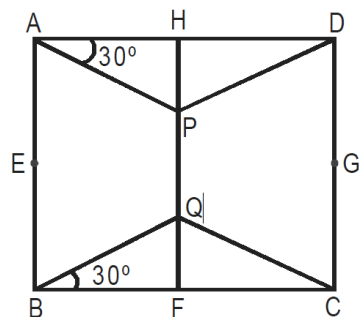
106. b $\frac{1}{10} \times 400 = 40$

$$\frac{1}{4} \times 40 = 10$$

$$\frac{1}{2} \times 10 = 5$$

Hence, the required answer is 5.

107. b



Let the edge of the square measures $2a$ units.

In right triangle BFQ,

$$QF = BF \tan 30^\circ = a \tan 30^\circ = \frac{a}{\sqrt{3}}$$

Area of triangle BQC = $2(\text{Area of triangle BFQ})$

$$= 2 \left(\frac{1}{2} \right) (a) \left(\frac{a}{\sqrt{3}} \right) = \frac{a^2}{\sqrt{3}} \text{ units square}$$

Area (ABCQPD) = Area(ABFH) + 2Area (QFC)

$$= \left(\frac{1}{2} \right) \text{Area(ABCD)} + \text{Area (BQC)}$$



$$= 2a^2 + \frac{a^2}{\sqrt{3}} = a^2 \left(2 + \frac{1}{\sqrt{3}} \right)$$

$$\text{Remaining area of ABCD} = 4a^2 - \left(2a^2 + \frac{a^2}{\sqrt{3}} \right) = a^2 \left(2 - \frac{1}{\sqrt{3}} \right)$$

$$\text{Answer} = a^2 \left(2 + \frac{1}{\sqrt{3}} \right) : a^2 \left(2 - \frac{1}{\sqrt{3}} \right)$$

$$= \frac{(2\sqrt{3} + 1)}{(2\sqrt{3} - 1)} = \frac{(13 + 4\sqrt{3})}{11}$$

which is none of the given options.

Hence, **the question is wrong.**

Assumption:

Had it been polygon ABQCDP in the question instead of ABCQPD,

$$\frac{4a^2 - 2(\text{area of } \triangle BQC)}{2(\text{area of } \triangle BQC)} = \frac{\left(4a^2 - \frac{2a^2}{\sqrt{3}} \right)}{\left(\frac{2a^2}{\sqrt{3}} \right)} = 2\sqrt{3} - 1$$

answer =

which is option (b).

108. b Price of Darjeeling tea on every day after 100th day = 100 + 10 = Rs.110

Price of only Tea on 100th day = 85 + 0.15 × 100 = Rs.100

∴ Their prices will not be same in first 100 days.

So according to the question,

$$110 = 85 + 0.15x$$

$$\Rightarrow x = \frac{25}{15} \times 100 = \frac{500}{3} = 166.67$$

i.e. on 167th day, prices will be equal.

Hence, on 16th June, prices will be equal.

109. d From statement I, we can not say that triangles must be congruent. Also from statement II, we can not say that every right angle triangles are congruent to each other.



Even on combining both the statements we can not arrive at the conclusion whether the triangles are congruent or not.

- 110.** a Let salary of A be $3x$ and that of B be $4x$ and expenditure of A be $4y$ and that of B be $5y$.

From statement I,

B's saving = x

$$\therefore 4x - 5y = x \Rightarrow 3x = 5y$$

$$\text{A's saving } 3x - 4y = 3x - \frac{3}{5}x = \frac{15}{5}x - \frac{3}{5}x = \frac{12}{5}x$$

Hence, ratio of saving can be determined.

Therefore, statement I alone is sufficient.

From statement II, we can not say anything about expenditures of A and B.

Therefore, statement II alone is not sufficient.

- 111.** c Let the average height of the class be A and the number of persons in the class be N .

From statement I,

$$\frac{AN - 56}{N - 1} = A - 1 \Rightarrow AN - 56$$

$$= AN - A - N + 1 \Rightarrow A + N = 55$$

Therefore, statement I alone is not sufficient.

From statement II,

$$\frac{AN - 42}{N - 1} = A + 1 \Rightarrow AN - 42$$

$$= AN - A + N - 1 \Rightarrow A - N = 43$$

Therefore, statement II alone is not sufficient.

Combining statement I and II, we have

$$A + N = 55$$

$$A - N = 43$$

$$2A = 98 \Rightarrow A = 49$$

Hence, both statements I and II are necessary to answer.



112. b $R > S$

$$J < V$$

From statement I,

Ram is tallest but we can not know who is taller between Shyam and Vikram.

From statement II,

$$S > V$$

Hence, Jay is the shortest among them.

Therefore, statement II alone is sufficient.

113. c Let the sales in July be 150 units.

So the sales in September = 100 units

and the sales in November = 105 units

Hence, the required percentage change $= \frac{-45}{150} \times 100\% = -30\%$.

114. d

$$15x - \frac{2}{x} > 1$$

$$\Rightarrow 15x - \frac{2}{x} - 1 > 0$$

$$\Rightarrow \frac{15x^2 - x - 2}{x} > 0$$

$$\Rightarrow \frac{15x^2 - 6x + 5x - 2}{x} > 0$$

$$\Rightarrow \frac{3x(5x - 2) + 1(5x - 2)}{x} > 0$$

$$\Rightarrow \frac{(3x + 1)(5x - 2)}{x} > 0$$

$$\Rightarrow \frac{\left(x + \frac{1}{3}\right)\left(x - \frac{2}{5}\right)}{(x - 0)} > 0$$



$$\therefore x \in \left(-\frac{1}{3}, 0\right) \cup \left(\frac{2}{5}, \infty\right)$$

115. b

$$\begin{array}{ccc} 30 & & 60 \\ & \searrow & / \\ & 50 & \\ & / & \searrow \\ 10 & & 20 \end{array}$$

i.e., 1 ; 2

So with 40 litres of a 60% alcohol solution 20 litres of a 30% alcohol solution should be added to prepare a 50% solution.

- 116.** a Let the length of the wire be x mm.
So according to the condition,

$$x \left(\frac{1}{2}\right)^2 \times x = 66000 \Rightarrow \frac{22}{7} \times \frac{1}{4} \times x = 66000 \Rightarrow x = 84,000 \text{ mm}$$

So length of the wire is 84 meters.

- 117.** d Let the speed of second train be x km/hr.
Length of both the trains = 220 m

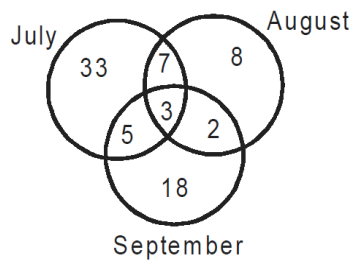
$$\text{Now, } \frac{220}{6} = (5 + x) \times \frac{5}{18}$$

$$\Rightarrow 50 + x = 132 \Rightarrow x = 82 \text{ km/hr.}$$

- 118.** b $(8R)^2 = 64R^2$
After dividing by 4 = $16R^2$
Its square root = $4R$
So $Q = 4R$.

- 119.** d Let length, breadth and height of room $6x$, $4x$ and $2x$.
So area of four walls = $24x^2 + 16x^2 = 40x^2$.
Dimensions after changes are $12x$, $2x$ and x .
So area of four walls = $24x^2 + 4x^2 = 28x^2$.

$$\text{Hence, the percentage reduction in area} = \frac{12}{40} \times 100 = 30\%$$



120. b

Hence, $7 + 2 = 9$ people read magazine for exactly two consecutive months.

121. a The final table is:

A	B	C	D
35	35	35	35

Prior to this stage, A gives 10% of his chocolates to C and 20% to B, i.e. A is left with 70% of last stage.

$$70\% \text{ of } x = 35 \Rightarrow x = 50$$

A	B	C	D
50	25	30	35

Before this stage, D gives $\frac{1}{8}$ th of his chocolates to B, i.e. D is left with $\frac{7}{8}$ th of his chocolates at this stage.

$$\frac{7}{8}y = 35 \Rightarrow y = 40$$

Prior to this, A gave away chocolates such that B had double, C triple and D four times of its initial amount.

Hence, initial values will be

A	B	C	D
110	$\frac{20}{2} = 10$	$\frac{30}{3} = 10$	$\frac{40}{4} = 10$

$$\therefore A = 110, B = 10, C = 10, D = 10.$$

122. a 201 is the sum of all three numbers.



So question mark should be $07 + 203 + 70 = 280$.

- 123.** c The first letter is being incremented by two letters in each element of series, the second is being incremented by three letters and so on.

So the answer must be ZKXS.

- 124.** a One statement of each has to be wrong and one has to be right.

So the first statement of any one of the three must be right while that of other two must be wrong.

If we assume the first statement of Sachin and Ricky to be right, we get some contradicting results.

So Brian must be top scorer and Sachin cannot be the second.

Hence, correct order is Brian, Ricky, Sachin.

- 125.** b Let the number of employees who prefer tea be T and who prefer coffee be C, while those who drink both and those who drink neither be B and N respectively.

Now, $T = 3B$ and $2T = 3C \Rightarrow C = 2B$.

Also, $B = N$

So $T + C - B + N = 60$

$\Rightarrow 3B + 2B - B + B = 60$

$\Rightarrow 5B = 60 \Rightarrow B = 12$.

- 126.** a As the clock strikes three times in 6 seconds i.e. at 0 seconds, 3 seconds and 6 seconds, means taking 3 seconds in between two strikes.

Now, clock has to strike 9 times at 9 o'clock.

So it will take $8 \times 3 = 24$ seconds.

For questions 127 and 128:

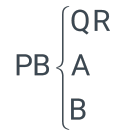
Name	E - 1	E - 2	E - 3
Order of starting time	2	3	1
Order of completion time	3	1	2

- 127.** c E - 3

- 128.** a E - 1



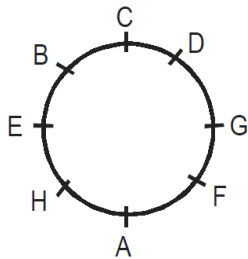
For questions 129 and 130:



The order of students from brightest to dullest is

- 129.** b P is clearly the brightest among all the students.
- 130.** c R is the dullest among the three students from Elite School.
- 131.** d If Rafael enters before Roger, then
10 Rafael 5 Roger 10
 \therefore Total number students in the class = $10 + 1 + 5 + 1 + 10 = 27$
If Roger enters before Rafael, then
4 Roger 5 Rafael 4
 \therefore Total numbers of students = $4 + 1 + 5 + 1 + 4 = 15$.
Hence, the exact number of students cannot be determined.

For questions 132 to 134:



- 132.** a
- 133.** c
- 134.** b
- 135.** d There is no evidence given to support or deny a relationship between balloons and tables. Hence, none of the first three given options can be conclusively deduced.

For questions 136 and 137:

The arrangements can be

$$A - C - E$$



or E – C – A

136. b So C must be sitting in the middle.

137. a A and E are always at the extreme ends.

138. c Commission earned by D in 1994 = Rs.29,800
Commission earned by A in 1994 = Rs.24,600

$$\text{So the required percentage} = \frac{5200}{24600} \times 100$$

= 21.14% = 21% approximately.

139. b Commission earned by B in 1993 = Rs.28,000

Total commission earned by all salesmen in 1993 = Rs.1,46,960

$$\text{So the required percentage} = \frac{28,000}{1,46,900} \times 100 = 19.05\%$$

= 20% approximately.

140. b The numbers in the second row are squares of the numbers in the first row decreased by 2 i.e. $n^2 - 2$

So missing number must be $(8)^2 - 2 = 64 - 2 = 62$.

141. d The order is 2, 5, 1, 3, 6, 4

142. c* Options (b) and (d) can be eliminated as they are specific in nature. Option (c) is the best answer amongst the given although this can act only as one premise while concluding the given statement. We need more information to conclusively deduce the given statement.

143. b Let the length of each candle be L.

And n is the number of hours.

$$\text{Now, } 2\left(L - \frac{nL}{4}\right) = L - \frac{nL}{6}$$

$$\Rightarrow 2L - \frac{nL}{2} = L - \frac{nL}{6} \Rightarrow L = \frac{nL}{3} \Rightarrow n = 3$$

Hence, Ramaswami went to sleep after studying 3 hours in candlelight.

144. c Let the numerator and denominator of the fraction be 2x and 3x.



$$\text{So } \frac{2x-6}{3x} = \frac{2}{3} \times \frac{2x}{3x}$$

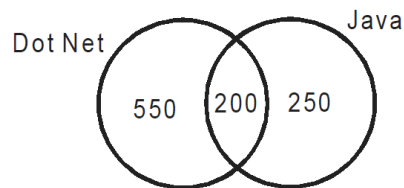
$$\Rightarrow 18x - 54 = 12x \Rightarrow 6x = 54 \Rightarrow x = 9$$

So the numerator = $2 \times 9 = 18$.

- 145.** b According to the question,
 $100Y + X - 20 = 2(100X + Y)$
 $\Rightarrow 100Y + X - 20 = 200X + 2Y$
 $\Rightarrow 98Y - 199X = 20$

Solving, we get $X = 26$ and $Y = 53$.

- 146.** d If we take two pieces then they can either be both of same colour, or of different colours. But the third one must be of one of the two colours. So by taking out 3 pieces we can get atleast one pair.



- 147.** b
Number of SW personnels having both skills are 200.

- 148.** b If we assume that the set athlete has only good and bad athletes and that good and bad athletes are complimentary sets, then Statement (b) is a paraphrase of the conclusion statement and hence the answer.

- 149.** b The missing numbers are 8, 1024 and 32.

150. d $17 = \frac{17x}{1-x}$

$$\Rightarrow \frac{x}{1-x} = 1 \Rightarrow x = 1 - x \Rightarrow x = \frac{1}{2}$$

So $(2x) \times x = 2 \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$.