

SYMBIOSIS NATIONAL APTITUDE TEST (SNAP)

SOLVED PAPER - 2007

[Based on Memory]

1. The leading brand of artificial sweetener in India, 'Sugar Free' is owned by
 - (a) Cipla
 - (b) Cadila
 - (c) Glaxo
 - (d) Monsanto
2. Monsoon is caused by
 - (a) Movements of cloud
 - (b) Impact of Summer temperature on the sea
 - (c) Rise in temperature
 - (d) Seasonal reversal of winds
3. An Indian company manufacturing automobiles for Mitsubishi is
 - (a) Tata Motors
 - (b) Bajaj Tempo
 - (c) Mahindra
 - (d) Hindustan Motors
4. The name "Koneru Humpy" is associated with which of the following sport?
 - (a) Badminton
 - (b) Cricket
 - (c) Chess
 - (d) Weight Lifting
5. The new coin 'Rupiya' was issued for the first time by
 - (a) Sher Shah Suri
 - (b) Akbar
 - (c) Ala ud din Khilji
 - (d) Mohammed Shah Tughlaq
6. One of the following allows an individual to start and continue to share regularly any of his/her own personal experience, knowledge, opinion or thought with the internet community?
 - (a) Portal
 - (b) Email
 - (c) Blog
 - (d) Chat
7. Phishing is
 - (a) A Govt. plan
 - (b) A stem cell
 - (c) A fraudulent way of getting the PIN and bank passwords using emails
 - (d) None of these
8. In the sports world, the sobriquet 'Indo-Pak Express' is applied to
 - (a) Shree Santh and Shoaib Akhtar
 - (b) Rohan Bopanna and Aisam-Ul- Haq Quareshi
 - (c) Sania Mirza and Shahar Peer
 - (d) Rohan Bopanna and Shahar Peer
9. A film that has not been directed by Mira Nair is
 - (a) Earth
 - (b) Monsoon Wedding
 - (c) Kamasutra
 - (d) Salaam Bombay
10. In banking terminology, CRR means
 - (a) Credit Reserve Ratio
 - (b) Cash Reserve Ratio
 - (c) Credit Rating Ratio
 - (d) Cash Rating Ratio
11. Some of the large deals entered into by IT majors in India (all are billion dollar deals) are listed here as options. Which one is **not**?
 - (a) TCS-Nielson
 - (b) Tech Mahindra-BT
 - (c) Infosys-ABN AMRO
 - (d) IBM-Bharti
12. A suicide car bomb caused havoc in England in July 2007 at the which airport?
 - (a) Glasgow
 - (b) Heathrow
 - (c) Birmingham
 - (d) Nottingham
13. Pakistan has signed Free Trade Agreement (FTA) and a five year investment package with
 - (a) USA
 - (b) European Union
 - (c) China
 - (d) Russia
14. Major oil finds in India have been reported in
 - (a) Krishna Godavari Basin
 - (b) Cauvery Basin
 - (c) Rajasthan Desert
 - (d) Lower Assam Valley.
15. The propagation of radio signals is greatly influenced by
 - (a) troposphere
 - (b) ionosphere
 - (c) exosphere
 - (d) thermosphere
16. According to Dun and Bradstreet which one of the following is the largest employer among Indian ITes and BPO companies?
 - (a) Genpact
 - (b) Accenture Services
 - (c) Wipro BPO
 - (d) IBM Daksh
17. "In God we trust, the rest have to bring data on the table." This statement was made by the famous industrialist
 - (a) J.R.D. Tata
 - (b) Aditya Birla
 - (c) Dhirubhai Ambani
 - (d) Narayan Murthy
18. The runner-up in the recent Vice-Presidential election was
 - (a) Mr. Bhairon Singh Shekhawat
 - (b) Dr. Najma Heptullah
 - (c) Mr. Praful Patel
 - (d) Mr. Hameed Ansari
19. Which of the following is *not* provided in the constitution?
 - (a) Election Commission
 - (b) Planning Commission
 - (c) Public Service Commission
 - (d) Finance Commission
20. When did Governor General's rule end in India?
 - (a) 15th August 1947
 - (b) 9th August 1948
 - (c) 26th January 1950
 - (d) 2nd October 1950

21. The newspaper which was recently voted as the largest selling newspaper in the world is
 - (a) The Los Angeles Times
 - (b) The Times of India
 - (c) The London Times
 - (d) The New York Times
 22. Which of the following countries is the top source of FDI inflows into India at present?
 - (a) Singapore (b) USA
 - (c) UK (d) Mauritius
 23. The human cell contains
 - (a) 44 chromosomes (b) 48 chromosomes
 - (c) 46 chromosomes (d) 23 chromosomes
 24. In year 2006, the three largest economies in the world were
 - (a) USA, Japan & Germany
 - (b) USA, China & Japan
 - (c) USA, UK & Germany
 - (d) USA, UK & France
 25. Identify an entry that is reversed in terms of the forex rates for US Dollar on a day recently.
 - (a) 1 US \$ = Rs. 39.35 (b) 1 US \$ = €1.42
 - (c) 1 US \$ = £ 0.48 (d) 1 US \$ = ¥ 114
 26. Starbucks, the coffee chain retailer's name is inspired from which book?
 - (a) The Scarlet Letter
 - (b) Mobydick
 - (c) Uncle Tom's Cabin
 - (d) None of the above
 27. A major US toy manufacturer which suffered a breakdown in supply chain from China on account of legally unacceptable toxic substances in its products is
 - (a) Leo Toys (b) Mattel Toys
 - (c) Universal Toys (d) Funskool Toys
 28. Bollywood name has been granted as a trademark to which US based Media and Entertainment company by Indian Trademark Registry?
 - (a) Viacom
 - (b) Universal Studios
 - (c) Disney Enterprises
 - (d) Miramax
 29. Lakshmi Mittal, the famous NRI industrialist, is partnering with Govt. of India for which of the following big projects?
 - (a) Oil Refinery
 - (b) Atomic Power Plant
 - (c) Biotechnology
 - (d) Mining
 30. Tyeb Mehta, Nand Lal Bose and Majit Bewa are
 - (a) Classical Singers (b) English Poets
 - (c) Photographers (d) Painters
 31. Zapak Digital Entertainment (a gaming venture) belongs to which business group?
 - (a) UTV
 - (b) Balaji Telefilm
 - (c) Zee TV
 - (d) Anil Dhirubhai Ambani Enterprises
 32. In August 2007, Chennai High Court passed a landmark judgment that may have far reaching consequences on pharmaceuticals industry, dismissing a writ petition filed by
 - (a) Ranbaxy (b) Sandoz
 - (c) Novartis (d) Glaxo
 33. The busiest port in the world today is
 - (a) Port of Rotterdam (b) Port of Shanghai
 - (c) Port of Singapore (d) Port of Dubai
 34. In recent months the monks of Myanmar marched the streets of Yangon in hundreds
 - (a) To spread the message of peace
 - (b) To celebrate Buddha purnima
 - (c) To protest against the government that was ruling
 - (d) To take the normal route for alms
 35. To recover the national loss suffered by small investors in the IPO allotment scam from the National Securities Depository Services Ltd, Central Depository Services Ltd and eight depository participants, a second interim order was passed by
 - (a) SEBI (b) RBI
 - (c) AFMI (d) Supreme Court
 36. Indian Broadcasting Service was renamed in 1936 as
 - (a) Akshwani (b) Nabhowani
 - (c) Doorwani (d) All India Radio
 37. Which of the following is *not* a principal organ of the UNO?
 - (a) General Assembly (b) Trusteeship Council
 - (c) Security Council (d) World Health Organization
 38. Who was the composer of the classical composition 'Moonlight Sonata'?
 - (a) Ludwig Van Beethoven
 - (b) Joseph Haydn
 - (c) Johann Bach
 - (d) Handel
 39. During the year 2006-07 Indian Railways earned a profit of approximately
 - (a) Rs. 20,000 crores (b) Rs. 14,000 crores
 - (c) Rs. 18,000 crores (d) Rs. 16,500 crores
 40. Egg is a rich source of nutrients except
 - (a) Vitamin C (b) Protein
 - (c) Vitamin D (d) None of the above
- Directions (Qs. 41 to 46): Read the following passage and answer within its context.**
- The world dismisses curiosity by calling it idle, or mere idle curiosity - even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you who are now

part of the university, he will say that he wants to know the answer simply because he does not know it. The way a mountain climber wants to climb a mountain simply because it is there. Similarly a historian when asked by outsiders why he studies history may come out with argument that he has learnt to repeat on such occasions. Something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

41. Common people consider some of the questions asked by scholars as unimportant
- since they are not worth asking of answering.
 - because the question is related to new machines and gadgets.
 - because the common man does't understand questions without years of explanations.
 - scholars ask very minute, specialized questions beyond the comprehension of the common man.
42. In the statement 'that is mainly what a university is for' 'that' refers to
- parents refusal to answer questions.
 - children's curiosity that survives parents structures.
 - questions not worth answering.
 - the aim and scope of the university to provide an opportunity to curious minds to find out the answers to their questions.
43. According to the passage the general public respects
- new inventions.
 - any useful invention.
 - any invention that makes life easier for them.
 - a scientist who invents gadgets and machines for them.
44. The writer compares the scientist to
- a historian and mountain climber.
 - a historian.
 - a mountain climber.
 - a scholar.
45. The primary function of a scholar is different from the search for a cure for cancer because
- the answers to the scholar's question have no consequence unlike the results of the research involving a cure for cancer.
 - the answer sought by the scholar is selfish unlike the consequences of cancer research which are for the common weal.
 - the primary function of a scholar is satisfaction of his mental curiosity, while research involving a cure for cancer demands a constant, systematic and planned pursuit by several scholars.
 - several scholars work for a cancer cure while a single scholar works with a selfish motive.

46. Idle curiosity means
- curiosity is lazy.
 - idle people are curious.
 - curiosity is apt.
 - casual curiosity.

47. Find the correct match of definition/meaning with usage for the word:

WOULD

Definition / meaning

Usage

- | | |
|---------------------------------|-----------------------------------------------------|
| 1) willingness | 5) He would go for a walk even when it was raining. |
| 2) obstinacy persistence | 6) He would do as you say. |
| 3) determination | 7) He beat the ox, but it wouldn't move. |
| 4) improbable or real condition | 8) If you came across a snake what would you do? |
| (a) 1-8, 2-5, 3-6, 4-6 | (b) 1-6, 2-7, 3-5, 4-8 |
| (c) 1-5, 2-7, 3-8, 4-6 | (d) 1-7, 2-5, 3-6, 4-8 |
48. Choose the most appropriate passive construction of the sentence:
'He is doing his job well.'
- His job is done well by him.
 - His job is being done well.
 - He has been doing his job well.
 - His job is being well done.
49. There are three underlined words below, followed by their usages. Determine the sentences, in which the use of words is correct or appropriate :
Pray. Prey. Prying
- If you pray with faith, they say, it will be answered.
 - He has fallen a prey to cheats
 - Prying into the affairs of others is bad.
- A and B
 - A and C
 - A, B and C
 - B and C

Directions (Qs. 50 to 54): The following is an excerpt from a recent article by David Ewing Duncan. Read the passage and answer the questions within its context.

Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L. V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

The Sangwan-Vemuganti team uses stem cells found in the tissues of living adults, not ones derived from embryos. Teams all over the world are working with adult stem cells, trying to coax them to regrow cells in hearts, brains, livers and other organs, but progress is slow. Besides corneas, scientists have had some success regrowing skin cells and bone tissues, but those procedures remain experimental. "A number of programs around the world have tried to perfect this treatment, but they have had bad outcomes," says University of Cincinnati eye surgeon and stem cell specialist Edward Holland. "It is impressive what they are doing at Prasad."

In addition to the Hyderabad project, only Holland's program and a half-dozen others in the world conduct operations using corneas grown from stem cells.

The treatment uses stem cells harvested from the limbus, located where the cornea touches the white of the eye. For those with damaged corneas, these cells – called “limbic” and “conjunctiva” – are harvested from a patient's good eye, if he has one, or from a close relative. They are placed in a petri dish and chemically tweaked to grow into the lower layer of a cornea, called epithelium. It is then transplanted into the eye of the patient where in most cases it takes hold and grows. In 56% of the cases at the Prasad Institute, patient could still see clearly after 40 months later.

Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions. But in this case, Sangwan and Vemuganti, a pathologist, developed the technique on their own from reading papers and running experiments in the lab. Sangwan says he had a number of patients with burned eyes who could not be helped with standard corneal transplants from cadavers, so he persuaded Vemuganti to try growing corneas in her lab. “You know how to grow cells, and I know how to do the transplant surgery.” Vemuganti recalls him saying, “Why don't we work together?” She smiles and shakes her head. “I had no clue if this was going to work.”

Vemuganti's major innovation was developing a platform on which to grow corneas. First she designed a circular glass tube about the size of a stack of coins. Then she overlaid the glass with tissue from a human placenta which is “a good surface to grow corneas on.” She says. After that she placed stem cells in four places around a circle, added a growth medium, and watched the corneas begin to grow.

Commercial interests among stem cell companies for the procedure has been scant because of the perceived small volume of patients, says venture capitalist Antoun Nabhan of Bay Capital, who sits on the board of Cellerant, a leading stem cell company in San Carlos, Calif. But corneal stem cell treatment may have wider applications, say ophthalmologist Ivan Schwab of University of California at Davis. “These stem cells are similar to others in the body that make mucous membrane,” he says. “These techniques of growing stem cells might one day be used to treat mucous-membrane tissue in the sinuses, bladder, and other organs.”

50. According to the article Sangwan-Vemuganti team's cutting-edge procedure of implanting cornea grown from stem cells is considered a major advancement by the experts because
- They derive stem cells from embryos.
 - Their labs are customised to grow stem cells.
 - They regrow cells in hearts, brains, livers with stem cells from tissues of living adults.
 - They derive stem cells from tissues of living adults and grow cells in labs.
51. Sangwan-Vemuganti procedure is carried out on
- Patients requiring any corneal transplant
 - Patients with damaged corneas
 - Patients with damaged eyes of any kind
 - None of the above
52. The world recognises this Indian innovation because Indian scientists are normally known
- To be good at analysing and finding out a method of how an existing drug is made.
 - As they are good researchers of drugs.
 - As they are good at carrying out experiments to create generic drugs.
 - As they are able to carry out drug trials on large samples.

53. The pathologist, Vemuganti, started growing cornea in a petri dish
- By following procedures published in research papers
 - By inventing a totally new procedure
 - By experimenting with procedures published in journals
 - By following the instruction of the transplant surgeon.
54. In the context of the passage choose the correct set of meanings for the words: PLATFORM and GENERIC
- Lab table; related to genes
 - Method; related to genes
 - Lab experiments; without a brand name
 - Methodology; without a brand name
55. Choose the option which is closest in meaning to the word SUBTLE
- Innocent
 - Elusive
 - Dangerous
 - Insidious
56. The following sentence has a missing punctuation mark, choose the right answer.
My mother who is from the village is very superstitious.
- Brackets
 - Comma
 - Semicolon
 - Apostrophe
57. For the pair of sentences below choose the right option.
- Those are them.
 - Those are they.
- The first sentence has an error.
 - The second sentence is erroneous.
 - Both sentences are incorrect.
 - Both sentences are correct.

Directions (Qs. 58-62): Read the following passage and answer within its context.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all the number-countries irrespective of their levels of development, natural and human endowments and history. Every member-country has been asked by the WTO to amend its national patent law to confirm to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc.

Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

This attempt at global standardisation and uniformity by way of TRIP's agreement is in conflict with the main thrust of the Rio Earth Summit of 1992 that set out the conditions for sustainable development. These two reveal two contrasting types of international approaches and norms.

While the 1992 Earth Summit and the 1993 convention on biodiversity (CBD) focused on ‘diversity’ as being fundamental to sustain life and development, TRIPs and WTO are pushing for ‘conformity’ to international standardized norms on patents, services, labour, investment and what not irrespective of their history, ecology, level of economic development, etc. But despite their diametrically opposed viewpoints, 170 countries signed CBD upholding the need for diversity, and 50 countries signed the

TRIPs agreement in 1994 claiming the urgency of uniformity, with a very large element of common names (130) in both.

The convention on bio-diversity (CBD) in its Article 16.5 specifically asserts that intellectual property right must not be in conflict with conservation and sustainable use of bio-diversity, a provision that has been totally ignored by those who composed the TRIPs agreement. While in case of agriculture the higher yield of patented products induces the farmers to switch from a more varied production pattern, the resulting narrowing of genetic base makes the economy and society more vulnerable to plant disease and epidemics. It is true that the move towards cultivation of a smaller number of higher yielding varieties and the uniform spread of the same variety over a large space predates the present debate on patent, particularly since the introduction of the green revolution technology in the mid-sixties, but there can be no doubt that the latter has brought about a qualitative change in the scenario and has created possibility of a vast quantitative change too in that direction. So far no attempt has been made to reconcile the two conflicting approaches of CBD and TRIPs. If diversity is so important for sustaining life, how can WTO demand conformity to standardised global formats?

58. The author points out that intellectual property rights and their administration mechanism
- is throttling the interest of global bio-diversity
 - is working to help sustain global bio-diversity
 - is being sustained by global bio-diversity
 - is what the global bio-diversity needs
59. Which of the following has been said by the author in the passage?
- A high number of countries have signed both CBD and TRIPs, two conflicting treaties.
 - A narrow genetic base, if stuck to for long, is fraught with danger.
 - Although a nondiscriminatory approach has been followed in the applicability of TRIPs, there has been a confessional attitude in prescribing a timeframe for Transition, as per needs of the respective countries.
 - The author is supportive of international conventions and treaties such as TRIPs, CBD etc.
60. Out of the countries that signed CBD, the percentage of those that signed the TRIPs also, is
- 76.5
 - 74.5
 - 78.5
 - 80.2
61. According to the author, a higher-yield seed variety is not always welcome as it also ultimately leads to
- diseases among the consumers.
 - diseases among the plants.
 - monopoly of developed countries.
 - monopoly of developing countries.
62. As per the TRIPs agreement not much differentiation is made between a developed country such as the USA and an undeveloped country such as Sudan. This is
- definitely true
 - probably true
 - probably false
 - definitely false
63. A single word equivalent for the statement 'Speak falsely with deliberate intent' is
- repudiate
 - prevaricate
 - disparage
 - equivocate
64. Identify the option with the correct spelling.
- paraphernalia
 - programme
 - pediatrics
 - beserk
65. Which two sentences in the following convey the same idea? Choose from the combinations listed below:
- Wasn't there any checking at the airport?
 - I want to know if there was any checking at the airport.
 - I wonder if there should have been any checking at the airport?
 - There should have been checking at the airport.
- 2,3
 - 1,4
 - 3,4
 - 2,4
66. Choose the grammatically correct sentence.
- You should at once report it to the concerned authority.
 - You should report it at once, to the authority concerned.
 - You should report it at once, to the concerned authority.
 - You should at once report it to the authority concerned.
67. Find the correct match of grammatical function with usage for the word:
- AFTER**
- | Grammatical function | Usage |
|------------------------|-----------------------------------------------------|
| 1) adjective | 5) You may go after having your lunch |
| 2) adverb | 6) It appears to be the after effect of the disease |
| 3) conjunction | 7) Many graduates are hankering after jobs |
| 4) preposition | 8) He came soon after |
| (a) 1-8, 2-5, 3-6, 4-7 | (b) 1-6, 2-5, 3-8, 4-7 |
| (c) 1-5, 2-8, 3-7, 4-6 | (d) 1-6, 2-8, 3-5, 4-7 |
68. NEOPHYTE is the opposite of
- student
 - clown
 - veteran
 - professional
69. Find the maximum number of times that any one of the given words fits the set of sentences.
- disabled flimsy crippled lame**
- Don't make excuses.
 - Liberalization may have smaller manufacturers.
 - Being a defaulter at the stock exchange makes him a duck.
 - A person may limp.
- in all the four sentences
 - in three sentences
 - in two sentences
 - in only one
70. Which of the following does not make a sensible word/phrase when added to the given word?
- FIRE**
- fly
 - engine
 - stick
 - escape

79. Find the ODD one out from the group of words which are related in some way or the other
 (a) din (b) cacophony
 (c) racket (d) cadence
80. Fill in the blanks with the correct alternative.
 Caw is to crows asis to cows.
 (a) bleat (b) snort
 (c) low (d) bellow
81. In 4 years, the SI on a certain sum of money is $\frac{7}{25}$ of the principal. What is the annual rate of interest?
 (a) 4% (b) 4.5%
 (c) 7% (d) 9%
82. Thirty days are in September, April, June and November. Some months are of thirty one days. A month is chosen at random.
 Then its probability of having exactly three days less than maximum of 31 is
 (a) $\frac{15}{16}$ (b) 1
 (c) $\frac{3}{48}$ (d) None of these
83. Two persons are climbing up on two moving escalators which have 120 steps. The ratio of 1st person's speed to that of 1st escalator is 2:3 (steps). The ratio of 2nd person's speed to that of 2nd escalator is 3:5 (steps). Find the total number of steps they both have taken together.
 (a) 85 (b) 93
 (c) 80 (d) 75
84. The table below shows the temperatures in degrees Fahrenheit in a city over one week.

Noontime Temperature!						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
66	78	75	69	78	77	70

If m represents the median temperature, f represents the temperature that occurs most often, and a represents the average (arithmetic mean) of the seven temperatures, which of the following is the correct order of m , f , and a ?

- (a) $a < m > f$ (b) $a < m < f$
 (c) $m < a < f$ (d) $m < f < a$
85. Inside a triangular park, there is a flower bed forming a similar triangle. Around the flower bed runs a uniform path of such a width that the sides of the park are exactly double the corresponding sides of the flower bed. The ratio of areas of the path to the flower bed is:
 (a) 1 : 1 (b) 1 : 2
 (c) 1 : 3 (d) 3 : 1
86. Consider the following piecewise definition of the function f .

$$f(x) = \begin{cases} 3 - x, & \text{if } x \leq 0 \\ x^2 + 2, & \text{if } x \geq 0 \end{cases}$$

Evaluate $f(-3)$.

- (a) 6 (b) 0
 (c) 11 (d) -7

87. A special lottery is to be held to select a student who will live in the only deluxe room in a hostel. There are 100 Year-III, 150 Year-II, and 200 Year-I students who applied. Each Year-III's name is placed in the lottery 3 times; each Year-II's name, 2 times; and each Year-I's name, 1 time. What is the probability that a Year-III's name will be chosen?
 (a) $\frac{1}{8}$ (b) $\frac{2}{9}$
 (c) $\frac{2}{7}$ (d) $\frac{3}{8}$
88. The average of nine numbers is M and the average of three of these is P . If the average of remaining numbers is N , then
 (a) $M = N + P$ (b) $2M = N + P$
 (c) $3M = 2N + P$ (d) $3M = 2P + N$
89. The intersection of two cubes cannot be
 (a) cube (b) triangle
 (c) a rectangle (d) none of these
90. In a factory, each day the expected number of accidents is related to the number of overtime hour by a linear equation. Suppose that on one day there were 1000 overtime hours logged and 8 accidents reported and on another day there were 400 overtime hours logged and 5 accidents. What is the expected number of accidents when no overtime hours are logged?
 (a) 2 (b) 3
 (c) 4 (d) 5
91. A rainy day occurs once in every 10 days. Half of the rainy days produce rainbows. What percent of all the days do not produce rainbow?
 (a) 95% (b) 10%
 (c) 50% (d) 5%
92. Bags I, II and III together have ten balls. If each bag contains at least one ball, how many balls does each bag have? Decide whether the data given in the statements are sufficient to answer the question.
Statement (1): Bag I contains five balls more than bag III.
Statement (2): Bag II contains half as many balls as bag I
 (a) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
 (b) Statement (2) Alone is sufficient, but statement (1) alone is not sufficient to answer the question asked.
 (c) BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked
 (d) EACH statement ALONE is sufficient to answer the question asked.
93. Area of a square natural lake is 50 sq. kms. A diver wishing to cross the lake diagonally, will have to swim a distance of
 (a) 10 miles (b) 12 miles
 (c) 15 miles (d) None of these
94. If $n = 1 + x$, where x is the product of 4 consecutive positive integers, then which of the following is/are true?
 1. n is odd;
 2. n is prime
 3. n is a perfect square
 (a) 1 and 3 only (b) 1 and 2 only
 (c) 1 only (d) None of these

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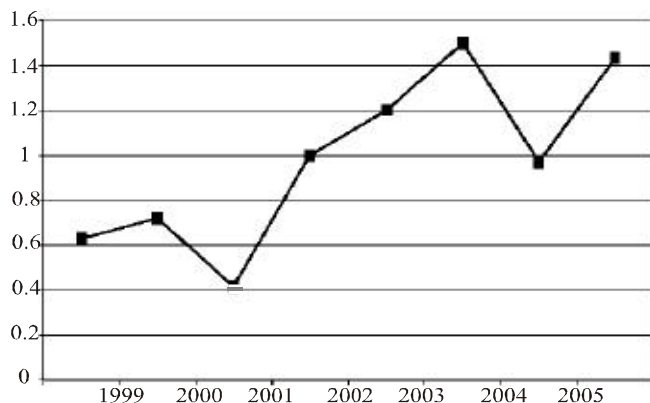
Target SNAP

95. How many arrangements can be formed out of the letters of the word EXAMINATION so that vowels always occupy odd places?
 (a) 72000 (b) 86400
 (c) 51600 (d) 64000
96. In a school drill, a number of children are asked to stand in a circle. They are evenly spaced and the 6th child is diametrically opposite the 16th child. How many children are made to stand in the circle?
 (a) 16 (b) 20
 (c) 22 (d) None of these
97. A man purchased 40 fruits; Apples and oranges for Rs.17. Had he purchased as many oranges as apples and as many apples as oranges, he would have paid Rs.15/-. Find the cost of one pair of an apple and an orange.
 (a) 70 paise (b) 60 paise
 (c) 80 paise (d) 1 rupee
98. The number 311311311311311311311 is
 (a) divisible by 3 but not by 11
 (b) divisible by 11 but not by 3
 (c) divisible by both 3 and 11
 (d) neither divisible by 3 nor by 11
99. A man earns 6% SI on his deposits in Bank A while he earns 8% simple interest on his deposits in Bank B. If the total interest he earns is Rs.1800 in three years on an investment of Rs.9000, what is the amount invested at 6%?
 (a) 3000 (b) 6000
 (c) 4000 (d) 4500
100. Two identical trains A and B running in opposite directions at same speed take 2 minutes to cross each other completely. The number of bogies of A are increased from 12 to 16. How much more time would they now require to cross each other?
 (a) 40s (b) 50s
 (c) 60s (d) 20s
101. A ladder is lying against a wall which is 5 metres high. If the ladder slips 2 metres away from the wall, the top of the ladder touches the foot of the wall. The length of the ladder is
 (a) 5m (b) 5.25m
 (c) 7.25m (d) 4m
102. If the rice production in 2003 was 4 lac tons what was its wheat production during 2003?
 (a) 1.2 lac tons (b) 3.6 lac tons
 (c) 4.8 lac tons (d) 5.0 lac tons
103. In how many years wheat production was more than the rice production?
 (a) 2 (b) 3
 (c) 4 (d) 5
104. If the total annual grain requirement (wheat and rice together) of the state is 5 lac tons and if the rice production during 2001 was 3 lac tons, how much grain had to be imported from the other state of India to fulfill the requirement?
 (a) 2.00 lac tons (b) 1.55 lac tons
 (c) 1.05 lac tons (d) 0.65 lac tons
105. The profits of Biscuits India Ltd soared by 32% in the year 2006 – 07 as compared to year 2005 – 06. By what % did Biscuits India's Sales increase in 2006 – 07 compared to the previous year? (Assume: Profit = Sales – Expenses)
 Decide whether the information given in the two statements is sufficient to solve the problem.
Statement (1): Expenses in 2006 – 07 were Rs 1,400 crores, as compared to Rs 1,220 crores in 2005 – 06
Statement (2): Sales in 2006 – 07 were Rs 4,300 crores
 (a) Any one of the two statements (1) or (2) taken alone, is sufficient to answer the question.
 (b) Each of the statement (1) or (2) taken alone, is sufficient to answer the question.
 (c) Both statements, taken together, are sufficient to answer the question, but neither of them alone is sufficient
 (d) Both the statements together are insufficient to answer the question.

Directions (Qs.106 – 108): Use the table about the speed of a train over a 3-hour period. The time count does not begin from starting of train.

Time (Minutes)	0	30	45	60	90	120	150	180
Speed at given time (in km/hour)	40	45	47.5	50	55	60	65	70

Directions (Qs.102 – 104): The following line graph shows the ratio of the wheat production to rice production of a state in India over a period 7 years from 1999 – 2006. Answer the questions based on this data.



106. During the three-hour period shown in the table, the speed of the train increased by
 (a) 25% (b) 100%
 (c) 75% (d) 125%
107. At time t, measured in minutes after the beginning of the time period, which of the following gives the speed of the train in accordance with the table?
 (a) $t/6$ (b) $6t$
 (c) $40 + t$ (d) $40 + t/6$
108. How fast was the train travelling $2^{1/2}$ hours after the beginning of the time period?
 (a) 50 km/hr (b) 55 km/hr
 (c) 60 km/hr (d) 65 km/hr

109. In March 2007, Computers Ltd. made a bundled offer of its Laptops together with Deskjet printers to boost Sales, though both the Laptop and the printer were also available individually. What is the price of the Printer, if purchased separately? Decide whether the information given in the two statements is sufficient to solve the problem.

Statement (1): The bundled offer price was Rs 42,600

Statement (2): The Laptop, without the bundle offer was priced at Rs 39,400

- (a) Any one of the two statements (1) or (2) is sufficient to answer the question
- (b) Each of the statement (1) or (2) taken alone, is sufficient to answer the question
- (c) Both statements, taken together, are sufficient to answer the question, but neither of them alone is sufficient.
- (d) Both the statements together are insufficient to answer the question.

Directions (Qs. 110 – 113): The following chart presents the data collected for an on-line job portal InfiniteJobs.com. For each Question, there are two Statements, each of which could be either True or False. Choose one of the following options as an answer:

- (a) Only [X] is True
- (b) Only [Y] is True
- (c) Both [X] and [Y] are True
- (d) Neither [X] nor [Y] is True

Year	Category	Number of Registrations	Number of Candidates who posted their CV's	Number of Candidates short-listed by Employers	Number of offered jobs
2004	Technical	61,205	59,981	684	181
	Managerial	19,236	15,389	138	48
2005	Technical	63,298	60,133	637	115
	Managerial	45,292	40,763	399	84

110. **Statement X:** The percentage increase in number of Registrations from 2004 to 2005 is higher for Managerial candidates than for Technical candidates

Statement Y: The overall Registrations have grown by more than 25%

111. **Statement X:** The percentage of drop-outs (from Registration stage to posting CV's) had decreased from 2004 to 2005 for Managerial category

Statement Y: The percentage of drop-outs was higher for Technical than for Managerial category in 2005

112. **Statement X:** The success rate of candidates getting short-listed based on CV's is higher for Managerial category than for Technical category in 2005.

Statement Y: The success rate of candidates getting short-listed based on CV's is better for Managerial category in 2005 than in 2004.

113. **Statement X:** In 2004, the number of candidates offered jobs as a proportion of the number of CV's posted was higher for Technical than for Managerial candidates

Statement Y: In 2004, among those short-listed by Employers, the Technical category had a higher success rate in securing jobs than the Managerial category.

Directions (Qs. 114 – 116): The following table gives cost data of select stock prices on 3rd Dec 2003 in two markets, BSE of India and NQE of Kya Kya island. Closing stock refers to the price at the close of trading hours and opening stock to the price at the beginning of the day. The currency of Kya Kya is # and the exchange rate is # = Rs 11.

3rd Dec 2003				
	Closing		Opening	
	BSE (Rs)	NQE (in #)	BSE (Rs)	NQE (in #)
SIFY	247	22	232	21
INFY	115	10.5	105	9.5
WIPRO	65	6.5	60	5.5
TCS	444	40	450	40.5

114. Which share and which market showed the highest % increase on 3rd Dec 2003?

- (a) SIFY on BSE
- (b) INFY on NQE
- (c) Wipro on NQE
- (d) TCS on NQE

115. Arbitrage means buying in one market and selling simultaneously in another market. If Mr. Ghosh Babu were to buy a share at the opening price on one exchange and be able to sell it at the opening price on the other exchange, on which share does he make maximum % profit?

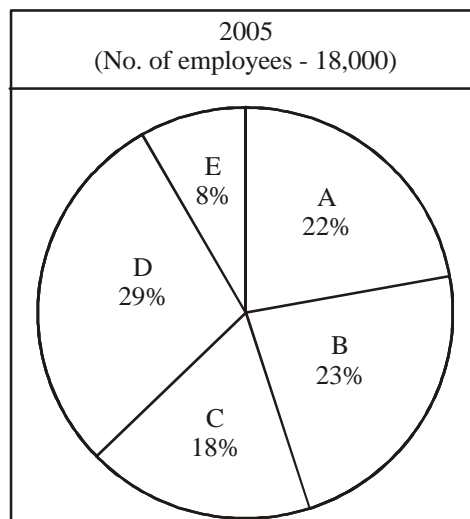
- (a) SIFY
- (b) INFY
- (c) Wipro
- (d) TCS

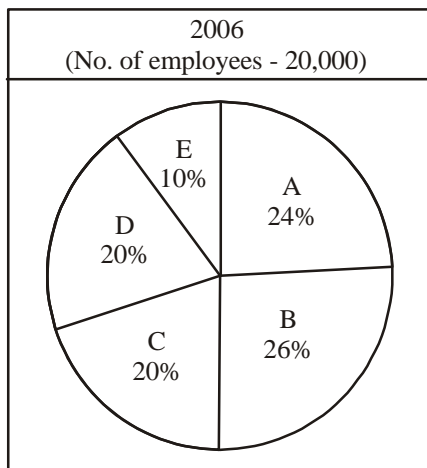
116. In an M&A deal SIFY is purchased by its parent company SATYAM which purchases 15% of SIFY's equity shares. Total SIFY's equity shares is 1 million. How much does Satyam pay in Rs. for the stake if 50% of its purchases were on BSE's operating price and balance on BSE's closing price?

- (a) 36 million
- (b) 3.5 million
- (c) 363 million
- (d) 217 million

Directions (Qs. 117 – 120): The following pie-charts give the percentage distribution of employees in different Departments in XYZ Company Ltd. during the years 2005 and 2006. Answer the questions using this data.

A-Administration; B-Operations; C-Sales & Marketing; D-Finance & Accounts; E-Corporate HQ





117. If the average monthly salary of employees in Administration was Rs 12,000 in 2005, what was the approximate total Salary expense of Administration in 2005?
 (a) Rs. 57 lakhs (b) Rs. 4.7 crores
 (c) Rs. 66 crores (d) Rs. 66 lakhs
118. What is the percentage increase in No. of employees in Sales & Marketing?
 (a) 2% (b) 2.34%
 (c) 23.45% (d) None of these
119. In which Dept is the variation in strength the maximum in 2006?
 (a) A (b) B
 (c) D (d) E
120. If 300 employees left Operations at the end of 2005, how many joined in 2006?
 (a) 480 (b) 960
 (c) 1360 (d) None of these
121. You have three chests in front of you. The first chest is labeled "GOLD", the second is labeled "SILVER" and the third is labeled "GOLD OR SILVER". You have been told that all the labels are on the wrong chests and that one chest contain gold coins, one contains silver coins and one contains bronze coins. How many chests do you need to open to deduce which label goes on which chest?
 (a) 0 (b) 1
 (c) 2 (d) Cannot deduce
122. How many minutes before 12 noon is it when it is 27 minutes past 10 am?
 (a) 30 (b) 93
 (c) 49 (d) 94

Directions (123 - 125): Read the following passage and answer the questions.

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 - 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

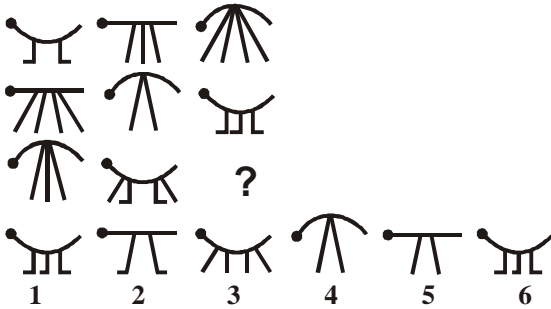
Miss Ruby needs to use the telephone quite often throughout the day. Mr. Minhas and Mr. Brar need adjacent offices as they need to consult each other often while working. Miss Harsha is a senior employee and has to be allotted the office number 5, having the biggest window.

Mr. Dongre requires silence in the offices next to his. Mr. Tanjore, Mr. Minhas and Mr. Dongre are all smokers. Miss Harsha finds tobacco smoke allergic and consequently the offices next to hers are to be occupied by non-smokers.

Unless specifically stated all the employees maintain an atmosphere of silence during office hours.

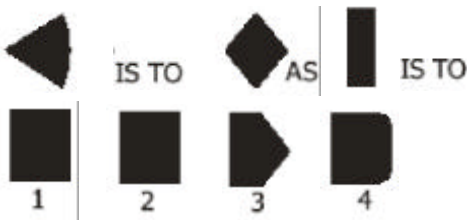
123. The ideal candidate to occupy the office furthest from Mr. Brar would be
 (a) Miss Harsha (b) Mr. Minhas
 (c) Mr. Tanjore (d) Mr. Dongre
124. The three employees who are smokers should be seated in the offices.
 (a) 1,2 and 4 (b) 2, 3 and 6
 (c) 1, 2 and 6 (d) 1, 2 and 3
125. In the event of what occurrence, within a period of one month since the assignment of the offices, would a request for a change in office be put forth by one or more employees?
 (a) Mr. Dongre quitting smoking
 (b) The installation of a noisy teletype machine by Miss Harsha in her office.
 (c) Miss Ruby needs silence in the office (s) next to her own.
 (d) Mr. Tanjore taking over the duties formerly taken care of by Miss Ruby.
126. Shankar and Jwala are both members of a Youth club, though they are not speaking to each other and refuse to work with each other. Chaya, the club president, is appointing members to the fundraising committee, but she has resolved that she will not appoint anyone without his or her explicit consent. Shankar tells Chaya, "I will not consent to appointment on that committee unless I know whether Jwala is to be a member of it." And Jwala says, "I will not consent to be a member of that committee unless I know whether Shankar will be appointed to it."
 If all three of these people stick by these resolutions, then:
 (a) Neither of them can be appointed to the committee.
 (b) They must either both be appointed or both be left out.
 (c) The committee may finally have one of them, both of them, or neither of them as members.
 (d) Either one of them can be appointed, but not both.
127. A bank customer had Rs. 100 in his account. He then made 6 withdrawals, totaling Rs. 100. He kept a record of these withdrawals, and the balance remaining in the account, as follows:
- | Withdrawals | Balance left |
|--------------|--------------|
| Rs.50 | Rs.50 |
| Rs.25 | Rs.25 |
| Rs.10 | Rs.15 |
| Rs.8 | Rs.7 |
| Rs.5 | Rs.2 |
| Rs.2 | Rs.0 |
| <hr/> Rs.100 | <hr/> Rs.99 |
- So, why are the totals not exactly right?
 (a) There is a mistake in the total of withdrawals.
 (b) There is a mistake in the total of the balance.
 (c) The two totals need not be equal.
 (d) The bank has cheated the customer.

128. Which image from the bottom row should replace the question mark?



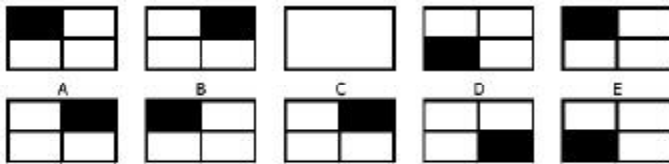
- (a) 3 (b) 6
(c) 2 (d) 5

129.



- (a) 1 (b) 2
(c) 3 (d) 4

130. Which pattern from the bottom line (A, B, C, D or E) is missing from the top line?



- (a) A (b) B
(c) D (d) E

Directions (Qs. 131-133): These questions are based on the following information.

During their school Silver Jubilee Reunion, four alumni were discussing their starting annual salaries back in 1981. The salaries in question were Rupees 40, 50, 60 and 70 thousand per year. Of course the present MD of a private company earned the most. Arvind earned more than Biswajeet, and the doctor earned more than Dhruv the engineer. Chinmay could not remember what he started on. Biswajeet the lawyer did not start on Rs.50,000, nor did Dhruv.

131. What is Chinmay's current profession?

- (a) MD (b) Lawyer
(c) Doctor (d) Engineer

132. What was the Lawyer's starting salary?

- (a) 40,000 (b) 50,000
(c) 60,000 (d) 70,000

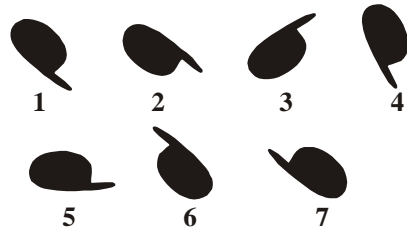
133. Who received the highest starting salary?

- (a) Arvind (b) Biswajeet
(c) Chinmay (d) Dhruv

134. A man has a job which requires him to work 8 straight days and rest on the ninth day. If he started work on a Monday, the 12th time he rests will be on what day of the week?

- (a) Sunday (b) Wednesday
(c) Tuesday (d) Friday

135. From the images below (1-7) find 3 odd ones out.



- (a) 1, 2, 3 (b) 2, 3, 7
(c) 3, 7, 4 (d) 4, 1, 6

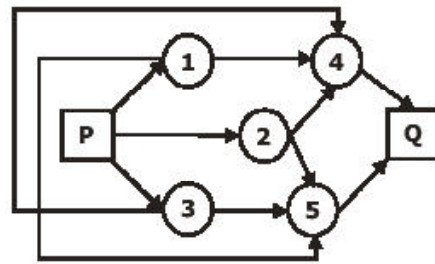
136. Babloo and Bunty were excitedly describing the result of the First Annual Running Race at Damapur High School. Snehal, Tanmay and Waman had been the three contestants. "Tanmay won the race; Waman was in second place," reported Babloo. Bunty disagreed. "It was Snehal who won. Tanmay came second."

In fact, neither Babloo nor Bunty had given a correct version of the result as each had made one true and one false statement.

What was the actual placing of the three contestants?

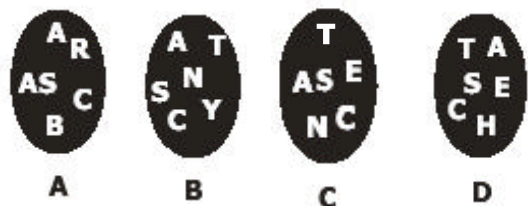
- (a) Snehal, Waman, Tanmay.
(b) Snehal, Tanmay, Waman.
(c) Waman, Snehal, Tanmay.
(d) Tanmay, Waman, Snehal.

137. What is the number of routes from P to Q?



- (a) 5 (b) 6
(c) 9 (d) 12

138. Find the circle, which does not include a word using all letters.



- (a) A (b) B
(c) C (d) D

139. It is possible to arrange eight of nine numbers 2,3,4,5,7,10,11,12,13 in the vacant squares of the 3 by 4 array shown below so that the arithmetic average of the numbers in each row and column is the same integer.

1			15
	9		
		14	

Which of the nine numbers must be left out when completing the array?

- (a) 4 (b) 10
(c) 15 (d) 7
140. What number will replace the question mark?



- (a) 40 (b) 18
(c) 19 (d) 24
141. Where should the letter 'W' be placed?

B	C	D	E	J	K	L	M
A	F	G	H	I	N		

- (a) Above (b) Below
(c) Both (d) None
142. At a family reunion were the following people: one grandfather, one grandmother, two fathers, two mothers, four children, three grandchildren, one brother, two sisters, two sons, two daughters, one father-in-law, one mother-in-law, and one daughter-in-law. But not as many people attended as it sounds. How many person were there?
- (a) 5 (b) 10
(c) 15 (d) 7

143. On the counter are six squares marked 1, 2, 3, 4, 5, 6. Players are invited to place as much money as they wish on any one square. Three dice are then thrown.

- 1 If your number appears on one die only, you get your money back plus the same amount.
- 1 If two dice show your number, you get your money back plus twice the amount you placed on the square.
- 1 If your number appears on all three dice, you get your money back plus three times the amount.
- 1 If the number is not on any of the dice, the operator gets your money.

For example, suppose that you bet one Rupee on square No. 6. If one die shows a 6, you get your Rupee back plus another Rupee. If two dice show 6, you get back your Rupee plus two Rupees. If three dice show 6, you get your Rupee back plus three Rupees.

From a player's point of view, the chance of his number showing on one die is $1/6$, but since there are three dice, the chances must be $3/6$ or $1/2$, therefore the game is a fair one. Of course this is the way the operator of the game wants everyone to reason, for it is quite fallacious.

What is the probable story?

- (a) Operator gets a profit of 6% on each Rupee bet.
(b) Operator suffers a loss of 7.8% on each Rupee bet.
(c) Operator gets a profit of 7.8% on each Rupee bet.
(d) The player suffers a loss of 6% on each Rupee bet.
144. Jaideep was given some money by his mother on his birthday. Jaideep spent all of it in five stores. In each store he spent one rupee more than half of what he had when he came in. How much did he get from his mother?
- (a) Rs. 25 (b) Rs. 30
(c) Rs. 46 (d) Rs. 52
145. Consider the following two statements to be true if they seem to be at variance from commonly known facts. Then decide which of the given conclusions logically follows from two given statements. Select the correct alternative.

Statements: All Lawyers are extrovert.
Some wise men are extrovert.

Conclusions:

- (ja) All lawyers are wisemen.
(jb) All wisemen are lawyers.
(jc) Some extrovert are wisemen.
(jd) All extrovert are lawyers
- (a) Only (ja) follows.
(b) Only (jb) and (jc) follows.
(c) Only (ja) and (Jc) follows.
(d) Only (jc) follows.

Directions (Qs. 146-148): Use the data given below to answer the questions.

The following are the results of a survey conducted on a small cross-section of students from Symbiosis Group of institutes, to determine the readership of three magazines. This survey was conducted in Dec. 2006.

- Number of students who read only Business India was 40
- 60 students read only Outlook
- 110 students read only India Today
- 30 students read all three magazines
- 20 read Business India and India Today, but not Outlook
- 50 read Business India and Outlook, but not India Today
- 40 read Outlook and India Today, but not Business India

146. What was the total no. of students surveyed?
- (a) 210 (b) 350
(c) 390 (d) None of these
147. How many students did not read Business India?
- (a) 40 (b) 170
(c) 240 (d) None of these
148. When another survey was conducted in May 2007 with the same set of students, their tastes had changed and the findings were different. All of them read India Today. 120 read Outlook, and no one read Business India. Hence, in May 2007, how many students read only India Today?
- (a) 60 (b) 110
(c) 230 (d) None of these

149. An ingredient in coffee, known as RTC, has been found to inactivate common cold viruses in experiments. In previous experiments, researchers found that inactivated common cold viruses can convert healthy cells into cancer cells. It can be concluded that the use of coffee can cause cancer. Which one of the following, if true, most seriously weakens the argument?
- (a) Several teams of scientists performed the various experiments, and all of the teams had similar results.
 - (b) The carcinogenic effect of RTC could be neutralized by the other ingredients found in coffee.
 - (c) When RTC kills common cold viruses it weakens the immune system, and it might thus diminish the body's ability to fight other viruses, including viruses linked to cancers.
 - (d) If chemists modify the structure of RTC, RTC can be safely incorporated into medications to prevent the common cold.
150. A census taker approaches a house and asks the woman who answers the door, "How many children do you have, and what are their ages?"
- Woman: "I have three children, the product of their ages is 36, the sum of their ages is equal to the address of the house next door."
- The census taker walks next door, comes back and says, "I need more information."
- The woman replies, "**I have to go, my oldest child is sleeping upstairs.**"
- Census taker: "Thank you, I now have everything I need." What are the ages of each of the three children?
- (a) 9, 2, 2
 - (b) 6, 6, 1
 - (c) 12, 3, 1
 - (d) 6, 3, 2

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

EXPLANATORY NOTES

41. (d) They ask questions too minute and specialized for you and me to understand without years of explanation.
42. (d) Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for.
43. (b) He talks that way because he knows that the world understands and respects utility.
44. (a) Sentence “The way a mountain climber ………” indicates that the writer compares the scientist to a historian and mountain climber.
45. (c) It is true that scholars can be put to work answering questions for the sake of the consequences as thousands are working now, for example, in search of a cure for cancer. But this is not the primary functions of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.
46. (d) Idle curiosity means “a desire to know about something without particular reason”.
50. (d) The Sangwan-Vunuganti team uses cells found in the tissues of living adults, not one derived from embryos.
51. (c) In an operating theatre, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes.
52. (a) Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions.
53. (c) Sangwan and Vemuganti developed the technique on their own from reading papers and running experiments in the lab.
55. (d) Subtle means “not very noticeable or obvious” Lusidious means “spreading gradually or without being noticed”.
56. (b) My mother, who is from the village, is very superstitious.
58. (a) From the first sentence of the passage
60. (a) 170 countries signed CBD upholding the need for diversity, and 50 countries signed the TRIPs agreement in 1994 claiming the urgency of uniformity, with a very large element of common names (130) is both.
61. (b) In case of agriculture the higher yield of patented products induces the farmers to switch from a more varied production pattern, the resulting narrowing of genetic base makes the economy and society more vulnerable of plant diseases and epidemics.
62. (d) From the last sentence of the passage.
63. (d) Equivacate means “to talk about something in a way is deliberately not clear in order to avoid or hide the truth.
72. (d) Vaatsalya is one among rapidly spreading ‘for profit’ social enterprises that serves the poor and brings in profit.
73. (b) Acumen Fund, a US-based social fund that invests in companies that target low income communities.
74. (c) Done fleetingly in India and elsewhere till now, entrepreneurial minds with a social conscience are methodically creating much models at a greater pace.
75. (a) Maligner means “to pretend to the ill/sick especially in order to avoid work. Argue means “to speak angrily to somebody because you disagree with them. Hence argue is most inappropriate.
78. (b) It should be “so that we would be no time”
79. (d) All other mean loud unpleasant sound. But cadence means the rise and fall of the voice in speaking or the end of a musical phrase.

80. (d) Cow is the harsh sound that is made by birds such as crow. Similarly bellow in the harsh sound that is made by cow and bull.

81. (c) Simple Interest = $\frac{P \times 4 \times r}{100}$
(where P is principal and r is rate of interest in percentage.)

$$\Rightarrow \frac{7P}{25} = \frac{P \times 4 \times r}{100} \Rightarrow \frac{7}{25} = \frac{4r}{100}$$

$$\Rightarrow r = 7\%$$

82. (d) February is the only month having 28 days which is three days less than the maximum of 31.

Prob. of choosing February is 1 month from 12 months

$$= \frac{1}{12}$$

83. (b) 2 steps of 1st person = 3 steps of escalators
Hence steps for 1st person

$$= \left(\frac{2}{3} \times \frac{120}{1 + \frac{2}{3}} \right) = 120 \times \frac{3}{5} \times \frac{2}{3} = 72 \times \frac{2}{3} = 48$$

Similarly, steps for 2nd person

$$= \frac{3}{5} \times \frac{120}{1 + \frac{3}{5}} = \frac{3}{5} \times 120 \times \frac{5}{8} = 45$$

Total steps taken together = 48 + 45 = 93

84. (b) Arranging data in ascending order, we get 66, 69, 70, 75, 77, 78, 78

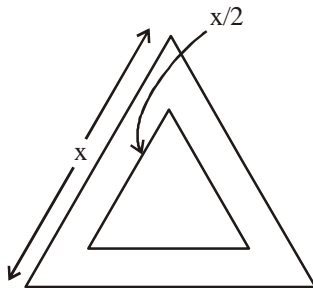
So, median, m = 75

$$\text{Arithmetic mean} = \frac{66 + 69 + 70 + 75 + 77 + 78 + 78}{7} = 73.29$$

Mode = 78.

Median, lies between mean and mode i.e., $a < m < f$.

85. (d) Let side of the park be x then Park area = $\frac{\sqrt{3}}{4}x^2$



$$\text{Flower bed area} = \frac{\sqrt{3}}{4} \left(\frac{x}{2} \right)^2 = \frac{\sqrt{3}}{4} \cdot \frac{x^2}{4}$$

$$\text{Path area} = \frac{\sqrt{3}}{4}x^2 \left(1 - \frac{1}{4} \right), \text{ Ratio} = \frac{\frac{\sqrt{3}}{4} \left(\frac{3}{4} \right)}{\frac{\sqrt{3}}{4} \left(\frac{1}{4} \right)} = 3 : 1$$

86. (a) $f(-3) = 3 - (-3) = 6$ [Since $-3 < 0$, $f(x) = 3 - x$ holds.]

87. (d) Total names in the lottery = $3 \times 100 + 2 \times 150 + 200 = 800$

No. of year-III names = 3×100

$$\text{Prob} = \frac{300}{800} = \frac{3}{8}$$

88. (c) Let A_1, A_2, \dots, A_9 be the numbers and their average = M. (given)

$$\text{So, } A_1 + A_2 + \dots + A_9 = 9M$$

$$A_1 + A_2 + A_3 = 3P \text{ (since average of } A_1, A_2 \text{ and } A_3 = P)$$

$$A_4 + A_5 + \dots + A_9 = 6N \text{ (since average of } A_4 \text{ to } A_9 = N)$$

$$\Rightarrow 9M = 3P + 6N$$

$$3M = 2N + P$$

89. (a) Cubes are 3-dimensional. So, their intersection will be always two-dimensional. Hence, it cannot be a cube.

90. (b) Suppose no. of accidents $y = a + bx$

Where x is no. of overtime hour

From the given data $y = 8$ for $x = 1000$ and $y = 5$ for $x = 400$

$$\Rightarrow 8 = a + 1000b \text{ and } 5 = a + 400b, \Rightarrow b = \frac{1}{200}, a = 3$$

$$\text{So, the relation } y = 3 + \frac{x}{200}$$

For $x = 0$, $y = 3$

91. (a) Two rainy days occur in 20 days. So, rainbow will occur once in 20 days.

Rest 19 days will have not rainbow.

$$\% \text{ of not producing rainbows} = \frac{19}{20} \times 100 = 95\%$$

92. (c) Suppose, the bag contains x, y and z balls.

$$x + y + z = 10$$

From statement 1, $x = z + 5 \Rightarrow z = x - 5$

$$\text{From statement 2, } y = \frac{1}{2}x$$

$$\text{Solving, we get } x + \frac{x}{2} + x - 5 = 10$$

$$x = 6, y = 3, z = 1$$

So, both statements together are sufficient but neither statement alone is sufficient.

93. (d) $A = 50$ sq km.

$$\text{Length of each side} = \sqrt{50} = 5\sqrt{2}$$

$$\text{Diagonal Length} = \sqrt{2} \times 5\sqrt{2} = 10 \text{ km}$$

Which does not match with option (a) to (c).

94. (c) 4 consecutive positive integers will have two even numbers and two odd numbers.

So, x will always be even.

$\Rightarrow n = 1 + x$ will always be odd.

Let 4 consecutive integers be $(p-1)(p)(p+1)(p+2)$

$$n = 1 + p(p+2)(p^2-1) = 1 + p^4 + 2p^3 - p^2 - 2p$$

Which is not necessarily a perfect square.

$n = 1 + x$ may not be a prime number in all the cases.

But $1 + x$ is definitely an odd number.

95. (c) No. of vowels = E, A, A, I, I, O
 No. of non-vowels = X, M, N, N, T
 Six vowels are to be placed at six odd places in 11-letter word while 5 non-vowels will occupy the rest places.
 There are two pairs of same vowels No. of arrangements

$$= \frac{6!}{2! \times 2!} \times \frac{5!}{2!} = 180 \times 60 = 10800$$

96. (b) Since 6 and 16th are standing diametrically opposite number of children on one side between 6th & 16th child = 9

$$\text{So, total children} = 9 + 9 + 2 = 20$$

97. (c) Let the man buys x apples at p price and y oranges at q price, then $x + y = 40$

$$px + qy = 17 \quad \dots (1)$$

$$\text{Also } qx + py = 15 \quad \dots (2)$$

Adding (1) & (2)

$$(p + q)(x + y) = 17 + 15$$

$$p + q = \frac{32}{40} = \text{Rs } 0.80$$

98. (d) 311 is repeated seven times in the number, 311 is not divisible by 3 but 311 repeated twice is not divisible by 3, but divisible by 11.

Similarly 311 repeated thrice is divisible by 3, but not by 11.

As 311 is repeated seven times, which is neither multiple of 2 nor 3.

So, number is not divisible by 3 or 11.

99. (b) Suppose, the man invests x in 6% and y in 8%
 $x + y = 9000 \quad \dots (1)$

$$3 \times \left(\frac{x \times 6}{100} + \frac{y \times 8}{100} \right) = 1800$$

$$3x + 4y = 3000 \quad \dots (2)$$

From (1) & (2), $x = 6000$

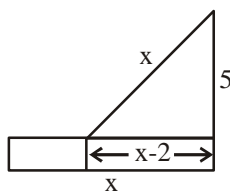
100. (d) Total bogies initially is $12 + 12 = 24$, since train move in opposite direction.

Additional bogies = $16 - 12 = 4$, so total bogies = 28
 24 bogies take 2 minutes, so, 28 bogies will take

$$\frac{2 \times 60}{24} \times 28 = 140 \text{ seconds, so, 20 seconds will take}$$

more times.

101. (c) Let the length be x
 then $x^2 = (x - 2)^2 + (5)^2$
 $x^2 = x^2 - 4x + 4 + 25$



$$4x = 29 \Rightarrow x = \frac{29}{4} = 7.25 \text{ m}$$

102. (c) Wheat production = $4 \times 1.2 = 4.8$ lac tons.

103. (a) Only for year 2003 & 2004, it is higher.

104. (d) Wheat production during 2001 = $0.45(3) = 1.35$
 Total grain production = $3 + 1.35 = 4.35$
 Import needed = $5 - 4.35 = 0.65$ lac tons

105. (c) $E_1 = 1220$, Expenses, 2005-06
 $E_2 = 1400$, Expenses for 2006-07
 $S_2 = 4300$, Sales for 2006-07
 $P_2 = 4300 - 1400 = 2900$, profit for 2006-07
 Since there is 32% increase
 $P_2 = 1.32 P_1 = 2900$

$$P_1 = \frac{2900}{1.32} = 2196.37$$

$$S_1 = E_1 + P_1 \text{ (sales in 2005-06)} = 1220 + 2196.37 = 3416.91$$

So using both statements, % increase in sales can be determined.

106. (c) Per cent increase in speed = $\frac{70 - 40}{40} \times 100 = 75\%$

107. (d) Let the equation be of the form $v = u + at$
 For $t = 30$ min

$$v = 45 \text{ and initial speed} = 40$$

$$\text{So, } 45 = 40 + a \times 30$$

$$\Rightarrow a = t/6$$

$$\text{So } 40 + \frac{t}{6}$$

108. (d) $2\frac{1}{2}$ hours = 150 min

Speed of the train is 65 km/hr.

109. (d) Both the statements together are insufficient to answer the question as no relation has been indicated between individual prices and bundled prices. We cannot draw the inference that

Printer price = bundled offer - individual laptop price.

110. (c) For statement X,

$$\frac{45292 - 19236}{45292} > \frac{63298 - 61205}{63298}$$

$$\frac{26066}{45292} > \frac{2093}{63298} \text{ which is correct.}$$

For statement Y,

$$\left(\frac{26066}{45292} + \frac{2093}{63298} \right) \times 100 (= 61\%)$$

$\Rightarrow 61725$ which is correct.

111. (a) For statement X,

$$\frac{19236 - 15389}{15389} > \frac{45292 - 40763}{45292}$$

$$\text{or, } \frac{3847}{15389} > \frac{4529}{45292} \text{ which is correct}$$

For statement Y,

$$\frac{63298 - 60133}{63298} > \frac{45292 - 40763}{45292}$$

$$\text{or, } \frac{3165}{63298} > \frac{4529}{45292} \text{ which is incorrect.}$$

112. (b) As per statement X,

$$\frac{399}{40763} > \frac{637}{60133} \text{ which is not correct}$$

As per statement Y,

$$\frac{399}{40763} > \frac{138}{15333}$$

Which is true, only y is true.

113. (d) As per statement X,

$$\frac{181}{59981} > \frac{48}{15389}$$

Which is not true.

As per statement Y,

$$\frac{181}{684} > \frac{48}{138} \text{ which is not true.}$$

114. (c) By observation, % increase of Wipro in NQE market is

the highest as $\frac{6.5 - 5.5}{5.5}$ is the highest among all.

115. (d) For SIFY, % difference = $\frac{21 \times 11 - 232}{21 \times 11} = \frac{-1}{21 \times 11}$

$$\text{For INFY} = \frac{9.5 \times 11 - 105}{9.5 \times 11} = \frac{-0.5}{9.5 \times 11}$$

$$\text{For Wipro} = \frac{5.5 \times 11 - 60}{5.5 \times 11} = \frac{-0.5}{5.5 \times 11}$$

$$\text{For TCS} = \frac{40.5 \times 11 - 450}{40.5 \times 11} = \frac{-4.5}{40.5 \times 11}$$

Among all figures

$$\frac{4.5}{40.5 \times 11} \text{ is the highest for TCS.}$$

116. (a) Total price of 15% share

$$\begin{aligned} &= \frac{7.5 \times 10^6}{100} \times 232 + \frac{7.5 \times 10^6}{100} \times 247 \\ &= 7.5 \times 10^4 (232 + 247) = 7.5 \times 479 \times 10^4 \approx 36 \text{ million.} \end{aligned}$$

117. (b) For 22% employees

$$\text{Salary} = 12,000 \times 22 \times 180 = 216 \times 2.2 \text{ lakhs} \approx 4.75 \text{ crores}$$

118. (c) Per cent increase = $\frac{C_2 - C_1}{C_1} \times 100$, $C_2 = 20\%$ of 20000

and $C_1 = 18\%$ of 18000.

$$= \frac{20 \times 200 - 18 \times 180}{18 \times 180} \times 100$$

$$= \frac{760 \times 100}{18 \times 180} = \frac{1900}{81} = 23.45\%$$

119. (c) **For year 2005,**

$$A_1 = 22 \times 180, \quad B_1 = 23 \times 180$$

$$C_1 = 18 \times 180, \quad D_1 = 29 \times 180$$

$$E_1 = 8 \times 180$$

For year 2006,

$$A_2 = 24 \times 200, \quad B_2 = 26 \times 200$$

$$C_2 = 20 \times 200, \quad D_2 = 20 \times 200$$

$$E_2 = 10 \times 200$$

Variation of strength is maximum for D as strength dips from 29 to 20.

$$\begin{aligned} 120. (c) \quad B_2 - (B_1 - 300) &= 26 \times 200 - (23 \times 180 - 300) \\ &= 5200 - (4140 - 300) = 1360 \end{aligned}$$

GOLD	SILVER	GOLD or SILVER
1st chest	2nd chest	3rd chest

If all the labels are on wrong chests then 3rd chest has neither gold nor silver. Hence it has bronze.

Now, first chest has either gold or silver. But label is wrong hence it has silver. Therefore 2nd chest has gold. Thus, no any chest we need to open to deduce which label goes on which chest.

122. (b) 12 noon - 10:27 a.m. = 1 hour 33 minutes = 93 minutes.

For (Qs. 123-125)

The arrangement of offices is as follows:




1	2	3	4	5	6
Mr Dongre	Mr Tanjore	Mr Minhas	Mr Barar	Miss Harsha	Miss Ruby
Required silence		Need adjacent office		Office no. 5 Smoke allergic	Use telephone (Noise)
Smokers					

123. (d) Miss Harsha has been allotted the office number 5. So office number 4 and 6 have to be allotted to non-smokers. Mr. Barar and Miss Ruby are non-smokers. Mr. Barar has to be allotted office number 4 and Mr. Minhas number 3 because they need to consult each other often while working. Mr. Dongre requires silence. So he has to be allotted office number 1. Hence the ideal candidate to occupy the office furthest Mr. Barar is Mr. Dongre.

124. (d) Mr. Tanjore, Mr. Minhas and Mr. Dongre are smokers. They have to be allotted office numbers 2, 3 and 1 respectively.

125. (d) If Mr. Tanjore needs to use the telephone quite often throughout the day. Mr. Dongre would put forth a request for a change in office because he requires silence in the office next to his.

126. (d) Shankar and Jwala do not speak to each other and refuse to work with each other. So either one of them can be appointed, but not both.

128. (d) The number of feet in each row's and column's designs are same. Top portions take any one of design among , , and  in each column and row without repetitions.

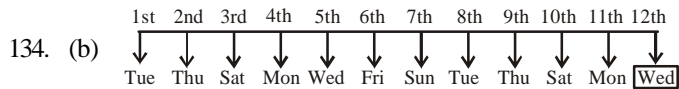
129. (c) From figure first to second the number of sides is increasing by one. Triangle is followed by a quadrilateral. So rectangle will be followed by a pentagon.

130. (c) The dark square moves one place in clockwise direction in each step.

For (Qs. 131 - 133)

Alumni	Profession	Starting Salary
Arvind	MD	Rs 70,000
Biswajeet	Lawyer	Rs 60,000
Dhruv	Engineer	Rs 40,000
Chinmay	Doctor	Rs 50,000

131. (c) 132. (c) 133. (a)



Every next rest will occur on two days later from previous rest.

135. (b) All others are in anticlockwise direction.

136. (a)

Place	Bablu's Statements	Bunty's Statements
1st	Tanmay (False*)	Snehal (True*)
2nd	Waman (True*)	Tanmay (False*)

* Each has made one true and one false statement. Hence, actual placing of the three contestants was Snehal, Waman and Tanmay.

137. (c) Probable routes are
 P-1-4-Q, P-3-5-Q, P-2-4-Q, P-2-5-Q, P-3-5-2-4-Q
 P-1-4-2-5-Q, P-1-4-3-5-Q, P-3-5-1-4-Q, P-2-5-1-4-Q

138. (a) From option (b) we get SCANTY (too little in amount for what is needed)
 From option (c) we get ASCENT (the out of climbing or moving up)
 From option (d) we get CHASTE (not having sex with any one)

139. (b)

1	13	3	15
11	9	7	5
12	2	14	4

The arithmetic average of numbers in each row ($32 \div 4=8$) and column ($24 \div 3=8$) is 8

140. (b) The product of two numbers is double than the product of rest two numbers.

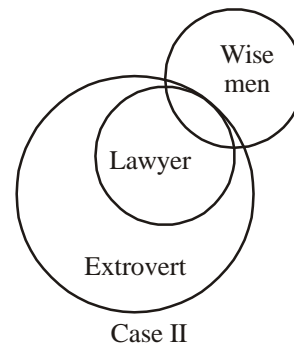
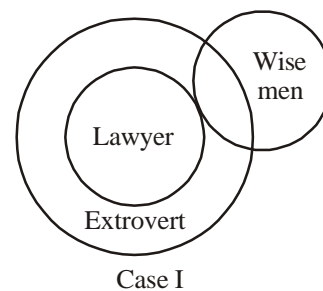
Example: $12 \times 8 = 2(8 \times 6)$
 $6 \times 10 = 2(6 \times 5)$
 $\boxed{18} \times 4 = 2(12 \times 3)$

141. (b)

B	C	D	E	J	K	L	M	R	S	T	U
A	F	G	H	I	N	O	P	Q	V	W	

142. (d) Let A be the grandfather and B be the grandmother. C is the son of A and B. D is the wife of C. E is the son and F and G are daughters of C and D. Here A and C are two fathers. B and D are two mothers. C, E, F and G are four children. E, F and G are three grand-children. E is one brother. F and G are two sisters, C and E are two sons. F and G are two daughters. A, B and D are father-in-law, mother-in-law and daughter-in-law respectively. So there were 7 persons.

145. (d)



(ja) ✗ (jb) ✗ (jc) ✓ (jd) ✗
 Hence only (jc) follows.

146. (b) Total no. of students surveys
 $= 40 + 60 + 110 + 30 + 20 + 50 + 40 = 350$

147. (d) No. of students who did not read Business India
 $= 60 + 110 + 40 = 210$

148. (c) No. of students who read only India Today.
 $= 350 - 120 = 230$

149. (c) Option (c) is the most weakens argument.