THE PRINCETON REVIEW SNAP SAMPLE PAPER 1

INSTRUCTIONS – Please read these carefully before attempting the test

1. This test is based on pattern of this years' SNAP paper.

2. There are five sections.
   - Section 1- General English (24 questions)
   - Section 2- Quantitative Ability (30 questions)
   - Section 3- Data Interpretation & Data Sufficiency (40 questions)
   - Section 4-Analytical reasoning and Logical ability(40 Questions)
   - Section 5-Business Awareness and GK(25 Questions)

3. *The total time allotted is 2 hours exactly.* Please note your start time and end time on the answer sheet. Do not take more than 2 hours, or you will get a wrong assessment.

4. Please fill all the details, as asked on top of the answer sheet.

5. Please try to maximize your attempt overall, *but you need to do well in all sections.*

6. *There is 1 mark for every right answer and 0.25 negative mark for every wrong one.*

7. There is no sectional time limit.

8. Since it is a time constrained test and you have 2 hours, and all questions carry equal marks, please do not get stuck on any question, move fast to try and do easier ones.

9. *Please do all scratch work on paper only, no extra sheets to be used.* Put all your answers on the answer sheet.

Relax. You are competing against yourself.

SECTION 1

Directions for questions 1 to 8: In each of the following questions, statements 1 to 6 are respectively the first and last sentences of a paragraph. Statements A ,B ,C and D come in between them. Rearrange A, B, C and D in such a manner that they make a coherent paragraph together with statements 1 and 6. Select the correct order from the given choices and mark its number as your answer.

1. 1. Women's health status is basic to their advancement in all the fields of endeavour.
    A   The fundamental issues concerning women and their health are nutrition, sanitation, overwork, etc.
    B. They face high risk of malnutrition, retardation in growth and development, etc. at almost every stage of their lives.
    C. The main reason of this decline in the sex ratio is high mortality rates among females in all age groups.
    D. This has resulted in the fact that in India, there are fewer women than men.
    6. In girls, malnutrition, under nutrition and limited access to health care are seen as the main causes of mortality.
        (1) DCAB   (2) BADC   (3) ACDB   (4) ABDC

2. 1. One obvious explanation of the striking continuity and independence of the Chinese civilization is the following.
    A   It was also endowed with an even greater capacity to assimilate alien influence, probably because the tradition of civilization rested on different foundations in different countries.
    B. Islamic rule made more difference to India than to any dynasty's rise or fall in China.
    C. China was remote, inaccessible to alien influence, far from sources of disturbance in other great civilizations.
    D. In India, the great stabilizers were rested on the foundation of religion and a caste system inseparable from it.
    6. In China they rested on the culture of an administrative elite which survived dynasties and empires and kept China on the same course.
        (1) CABD   (2) CDBA   (3) CBAD   (4) ABCD

3. 1. The ethnographic composition and history of the Himalayan regions of Kumaon, Garwal and Himachal Pradesh form a fascinating field of study.
    A. Besides, the indepth study of place names offers interesting insights.
    B. 'Himachal' has been explained as 'the land of snow'.
    C. The author has endeavoured to trace the roots of the Himalayan culture and discuss the cultural components of the ancient inhabitants of that society.
    D. More than a dozen communities which have played an important part in the formation of history and culture of this region are studied in the book called "The Ancient Communities of India".
    6. Similarly, 'Kumaon' has been derived from the name of Kurmavana.
        (1) CADB   (2) ACBD   (3) DCBA   (4) DCAB

4. 1. The study of social change, in the view of the nebulous nature of its History is a difficult task.
    A. This job becomes more difficult in the case of a society like India's.
    B. In this form, change ceases to be viewed as a normal social process.
    C. This is because India has a fathomless historical depth and a plurality of traditions, but it is also engulfed in a movement of nationalistic aspirations

under which concepts of change and modernization have ideological meanings.

D. Instead, change becomes desirable in itself, and must be sought for.

6. This phenomenon of change is treated by some social scientists as equivalent to 'development' and 'progress'.

(1) ACBD   (2) CABD   (3) CBDA   (4) BADC

5. 1. The system of the composition of the Legislative Council of a State as laid down in the Constitution is not final.

A. But until the Parliament legislates on the matter, the composition be as given in the Constitution, which is as follows.

B. The final power of providing the composition of this chamber of the state Legislature is given to the Union Parliament.

C. The Council will be a partly elected and partly nominated body.

D. The election of the members will be an indirect one and in accordance with the principle of proportional representation by a single transferable vote.

6. The members being drawn from various sources, the Council shall have a variegated composition.

(1) DABC   (2) CBDA   (3) BACD   (4) DCAB

6. 1. Green Revolution refers to a significant improvement in agricultural production in a short period and the sustenance of higher level of agricultural production over a fairly long period of time.

A. This new strategy envisaged raising farm output through the use of High-Yielding Varieties (HYV) pr seeds, chemical fertilizers, implements and machinery, etc.

B. It was sponsored by the Ford Foundation which was invited by the Government of India to suggest means to increase agricultural production.

C. The necessity for such increase arose due to the continued stagnation of production and the rapidly increasing demands.

D. This type of green revolution has occurred in India as a result of adopting the 'new agricultural strategy' in 1964-65.

6. As one of the results, the increase in the demand for some cereals has been met with to some extent.

(1) BADC   (2) DABC   (3) CDBA   (4) BCAD

7. 1. Economists differ over the causes that lead to inflationary rise in prices.

A. Cost-Push inflation is caused by wage-push and profit-push to prices.

B. There are the quantity theorists or monetarists who attribute inflation to demand pull or excess demand.

C. Other economists ascribe inflation to cost-push factors.

D. According to them, inflation is the result of excessive increase in money supply in the face of an elastic supply of goods and services.

6. The basic cause of wage-push inflation is the rise in money wages more rapidly than the productivity of labour.

(1) ABCD   (2) BDAC   (3) CBAD   (4) BDCA

8. 1. The first of the recent spate of conventions aiming to govern global industrial activity is the one to protect the ozone layer.

A. India signed the Montreal Protocol on 17 September 1992.

B. But China has, till recently, not signed the treaty, calling its provisions unfair and discriminatory.

C. The convention, known as the Vienna Convention for the Protection of the Ozone Layer, 1985, was followed by the Montreal Protocol on Substances that Deplete the Ozone Layer.

D. It was signed in 1987 by the United States, the European Community and 22 other countries, including India.

6. Such an act came unexpectedly from China which is one of the most rapidly developing countries.
    (1) CDBA   (2) CDAB   (3) ABCD   (4) CADB

DIRECTIONS for questions 9 TO 14: A number of sentences are given below which, when properly sequenced, form a coherent paragraph. Choose the most logical order of sentences from among the four choices given to construct a coherent paragraph.

9. A. By releasing an ultraviolet photon, the atom falls back to the original energy level.
    B. From this high energy level, the atom will almost always release an electron, whereby the energy of the ultraviolet photon is dissipated.
    C. In the absence of green light, when a strontium atom absorbs a photon of ultraviolet radiations, its energy increases by a discrete amount.
    D. But, ever so often, the high-energy atom will emit a photon of other ultraviolet or green light.
    (1) CBDA   (2) CBAD   (3) CADB   (4) CABD

10. A. Frictions accruing from bilateral trade have been on the increase since the 1980s.
    B. Apart from the electronic problem, the automobile issue began to assume the character of a significant irritant.
    C. The protective policy followed by Japan has its adverse impact on trading partners, particularly the US.
    D. Japan in the 1970s continued to maintain an exceptionally high tariff even after lifting of quantitative restrictions on imports of automobiles.
    (1) DBCA   (2) DBAC   (3) BDCA   (4) BDAC

11. A. Instead, one could always help in averting these situations.
    B. Often in a religion, people fight with each other on issues that are thoroughly irrational and illogical.
    C. If one used scientific reasoning and logic, examined facts and the basis.
    D. Much of the rising and blood shed in communal violence can be avoided if the people involved don't blindly believe the rumours or get swayed by those who preached hatred.
    (1) CBAD   (2) BDCA   (3) DBCA   (4) CADB

12. A. With the pressure on resources of development becoming increasingly severe, the issue of tapping the agricultural surplus cannot be put off.
    B. But the methods of utilizing these resources more efficiently have not been debated sufficiently
    C. The existence of a substantial surplus in this sector is not in doubt.
    D. There has been a tendency to concentrate on the possibilities of using an agricultural income tax to tap these resources.
    (1) ABCD   (2) ACBD   (3) CBDA   (4) DCBA

13. A. And, at its best such programming represents a creative collaboration between the educational faculty and production teams.
    B. Tele-education or telecourses have been beamed in the United States since the early 1950s.
    C. Today, televised learning for the distant learner has come to use all the capabilities of the medium to bring a subject alive.
    D. The early programmes merely telecast the teacher at a black board, or used the simplest of visual aids.
    (1) BCDA   (2) BDCA   (3) DCBA   (4) BDAC

14.   A.   Yet, paradoxically, there is greater mass discontent in nearly the whole of Latin America, the Caribbean, the Middle East and parts of Asia.
        B.   Commodity prices have been at levels yielding much better terms of trade than they were before the war.
        C.   Real income has risen faster than ever before, social services have improved.
        D.   The decade and a half since the end of the war, has over-all been a good period for the underdeveloped countries.

          (1) CADB   (2) DCBA   (3) DBCA   (4) CDBA

DIRECTIONS for questions I5 to 19: Select the correct word/words from the choices that complete the given sentence as your answer. Please note that more than once choice may fit in to make synta ctically correct sentence but select the choice that is logical in the context of the sentence

15.   An experienced politician, who knew better than to launch a campaign in troubled political waters, she intended to wait for a more____ occasion before she announced her plans.
        (1) propitious   (2) provocative
        (3) questionable   (4) perfect

16.   The judge ruled that the evidence was inadmissible on the grounds that it was not___ to the issue at hand
        (1) useful   (2) germane   (3) manifest   (4) inchoate

17.   To seek ____ from the ____ summer of the plains many people prefer going to cooler climes during the summer months.
        (1) refuge ……. scalding   (2) shelter………. boiling
        (3) respite…….. scorching   (4) solace ………..blazing

18.   The columnist was almost_____ when he mentioned his friends but he was unpleasant and even ____ when he discussed people who irritated him.
        (1) recalcitrant. . . sarcastic   (2) reverential ……..acrimonious
        (3) sensitive ……. remorseful   (4) insipid ………… militant

19.   Quick-breeding and immune to most pesticides, cockroaches are so _____ that even a professional exterminator may fail to_____ them.
        (1) Vulnerable ……. Eradicate   (2) widespread …….. discern
        (3) Fragile ……. destroy   (4) hardy ……..eliminate

Directions: for question 20-24: Each pair of CAPITALIZED words given below is followed by four pairs of words Choose the pair which exhibit the relationship similar to that expressed in the capitalized pair

20.   ROTATE: GYRATE
        (1) Putrefy: Reject   (2) Anachronism: Cubism
        (3) Accolade: Criticism   (4) Absolve: Exonerate

21.   TEPEE: RED INDIAN
        (1) Tree: Bark   (2) Tent: Camping
        (3) Igloo: Eskimo   (4) House: Man

22.   WOOL: ACRYLIC
        (I) Minutes: Day   (2) Cotton: Polyester
        (3) India: Assam   (4) Nylon Rayon

23. COMMITMENT: GROW TH
    (1) Ingenuity: Invention   (2) Gullibility: Experiment
    (3) Loquaciousness : Sobriety   (4) Taciturnity: Silence

24. FISH: MERMAID
    (I) Unicom: Tapestry   (2) Horse: Centaur
    (3) Pegasus: Fly   (4) Cat: Lion

SECTION 2

1. A person who has a certain amount with him goes to the market. He can buy 50 oranges or 40 mangoes. He retains 10% of the amount for taxi fare and buys 20 mangoes, and of the balance he purchases oranges. The number of oranges he can purchase is:
   (1) 36   (2) 40   (3) 15   (4) 20

2. Two-fifths of the voters promise to vote for P and the rest promise to vote for Q. Of these, on the last day, 15% of the voters went back on their promise to vote for P and 25% of voters went back of their promise to vote for Q, and P lost by 2 votes. Then the total number of voters is:
   (1) 100   (2) 110   (3) 90   (4) 95

3. Two positive integers differ by 4 and the sum of their reciprocals is $10/21$. One of the numbers is:
   (1) 3   (2) 1   (3) 5   (4) 21

4. ABCD is a square of area 4, which is divided into four non-overlapping triangles as shown in the figure. The sum of the perimeters of the triangles is:
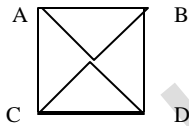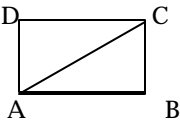

   (1) $8(2 + ?2)$ (2) $8(1 + ?2)$ (3) $4(1 + ?2)$ (4) $4(2 + ?2)$

5. What is the value of m which satisfies $3m^2 - 21m + 30 < 0$?
   (1) $m < 2$, or $m > 5$ (2) $m > 2$
   (3) $2 < m < 5$ (4) $m < 5$

6. The value of $\dfrac{55^3 \, ? \, 45^3}{55^2 \, ? \, 55 \, ? \, 45 \, ? \, 45^2}$ is:
   (1) 100   (2) 105   (3) 125   (4) 75

7. PQRS is a square. SR is a tangent (at point S) to the circle with centre O and TR = OS. The ratio of the area of the circle to the area of the square is:
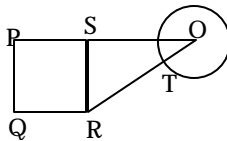
   (1) $?/3$ (2) $11/7$ (3) $3/?$ (4) $7/11$

8. $5^6 - 1$ is divisible by
    (1) 13   (2) 31   (3) 5   (4) None of these

9. The sides of a triangle are 5, 12 and 13 units respectively. A rectangle is constructed which is equal in area to the triangle and has a width of 10 units. Then the perimeter of the rectangle is
    (1) 30   (2) 26   (3) 13   (4) None of these

10. Which one of the following cannot be the ratio of angles in a right-angled triangle?
    (1) 1 : 2 : 3   (2) 1 : 1 : 3   (3) 1 : 3 : 6   (4) None of these

11. Three bells chime at an interval of 18, 24 and 32 minutes respectively. At a certain time they begin to chime together. What length of time will elapse before they chime together again?
    (1) 2 hours 24 minutes   (2) 4 hours 48 minutes
    (3) 1 hour 36 minutes   (4) 5 hours

12. A, B, C and D are four towns, any three of which are non-collinear. The number of ways to construct three roads each joining a pair of towns so that the roads do not form a triangle is:
    (1) 7   (2) 8   (3) 9   (4) more than 9

13. For the product $n(n + 1)(2n + 1)$, $n \in N$, which one of the following is necessarily false?
    (1)   It is always even
    (2)   Divisible by 3.
    (3)   Always divisible by the sum of the square of first n natural numbers
    (4)   Never divisible by 237.

14. Ram purchased a flat at Rs. 1 lakh and Prem purchased a plot of land worth Rs. 1.1 lakh. The respective annual rates at which the prices of the flat and the plot increased were 10% and 5%. After two years they exchanged their belongings and one paid the other the difference. Then:
    (1) Ram paid Rs. 275 to Prem   (2) Ram paid Rs. 475 to Prem
    (3) Ram paid Rs. 2750 to Prem   (4) Prem paid Rs. 475 to Ram

15. The remainder obtained when a prime number greater than 6 is divided by 6 is:
    (1) 1 or 3   (2) 1 or 5   (3) 3 or 5   (4) 4 or 5

16. In a race of 200 meters, A beats S by 20 meters and N by 40 metres. If S and N are running a race of 100 metres with exactly the same speed as before, then by how many metres will S beat N?
    (1) 11.11 metres   (2) 10 metres   (3) 12 metres   (4) 25 metres

17. In the adjoining figure, AC + AB = 5 AD and AC - AD = 8. The area of the rectangle ABCD is:

    (1) 36   (2) 50   (3) 60   (4) cannot be answered.

18. The rate of inflation was 1000%. What will be the cost of an article, which costs 6 units of currency now, two years from now?

(1) 666　　　(2) 660　　　(3) 720　　　(4) 726

19. Boxes numbered 1, 2, 3, 4, and 5 are kept in a row, and they are to be filled with either a red or a blue ball, such that no two adjacent boxes can be filled with blue balls. How many different arrangements are possible, given that all balls of a given colour are exactly identical in all respects?
(1) 8　　　(2) 10　　　(3) 15　　　(4) 22

Directions Q. 20 to 21: are based on the following information:
There are three different cable channels namely Ahead, Luck and Bang. In a survey it was found that 85% of viewers respond to Bang, 20% to Luck, and 30% to Ahead. 20% of viewers respond to exactly two channels and 5% to none.

20. What percentage of the viewers responded to all three?
(1) 10　　　(2) 12　　　(3) 14　　　(4) None of these

21. Assuming 20% respond to Ahead and Bang, and 16% respond to Bang and Luck, what is the percentage of viewers who watch only Luck?
(1) 20　　　(2) 10　　　(3) 16　　　(4) None of these

22. One root of $x^2 + kx - 8 = 0$ is square of the other. Then, the value of k is:
(1) 2　　　(2) 8　　　(3) - 8　　　(4) - 2

23. AB is diameter of the circle and the points C and D are on the circumference such that $\angle CAD = 30^0$. What is the measure of $\angle ACD$?
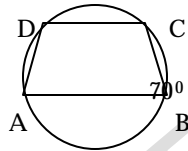
(1) 40^0　　　(2) 50^0　　　(3) 30^0　　　(4) 90^0

24. The length of a ladder is exactly equal to the height of the wall it is resting against. If lower end of the ladder is kept on a stool of height 3 m and the stool is kept 9 m away from the wall, the upper end of the ladder coincides with the top of the wall. Then, the height of the wall is:
(1) 12 m　　　(2) 15 m　　　(3) 18 m　　　(4) 11 m

25. The largest value of min $(2 + x^2, 6 - 3x)$ when $x > 0$ is
(1) 1　　　(2) 2　　　(3) 3　　　(4) 4

26. A man invests Rs. 3000 at a rate of 5% per annum. How much more should he invest at a rate of 8%, so that he can earn a total of 6% per annum?
(1) Rs. 1200　　　(2) Rs. 1300　　　(3) Rs. 1500　　　(4) Rs. 2000

27. Three consecutive positive even numbers are such that thrice the first number exceeds double the third by 2; then the third number is:
(1) 10　　　(2) 14　　　(3) 16　　　(4) 12

Directions Q. 28 to 31: use the following data:

A and B are running along a circular course of radius 7 km in opposite directions such that when they meet they reverse their directions and when they meet, A will run at the speed of B and vice-versa. Initially, the speed of A is thrice the speed of B. Assume that they start from M_0 and they first meet at M_1, then at M_2, next at M_3, and finally at M_4.

28. What is the shortest distance between M_1 and M_2?
    (1) 11 km   (2) 7?2 km   (3) 7 km   (4) 14 km

29. What is the shortest distance between M_1, and M_3 among the course?
    (1) 22 km   (2) 14?2 km   (3) 22?2 km   (4) 14 km

30. Which is the point that coincides with M_0?
    (1) M_1 (2) M_2 (3) M_3 (4) M_4

SECTION 3

Directions for questions 1 to 6: The following table gives the enrolment in Higher Secondary Schools in 1978. Study the table carefully and answer these questions.

| Enrolment	No. of Schools
20-39	526
40-59	620
60-79	674
80-99	717
100-119	681
120-139	612
140-159	540
160-179	517
180-199	522
Total	5439

1. What is the approximate percentage of schools, where the enrolment was below 120?
   (1) 59.16   (2) 59.27   (3) 60   (4) 61

2. What is the approximate percentage of schools, where the enrolment was above 79 but below 180?
   (1) 56   (2) 56.39   (3) 57   (4) 55

3. Under which class does the maximum number of schools fall?
   (1) 100-119   (2) 80-99   (3) 60-79   (4) None of these

4. What is the approximate percentage of the least number of schools for the classes of enrolment?
   (1) 8   (2) 9.5   (3) 9   (4) 10

5. What is the number of schools where the enrolment is above 99 but below 160?
   (1) 2550   (2) 2033   (3) 1833   (4) 1316

6. What is the average enrolment per H.S. School?
   (1) 107.87   (2) 217.60   (3) 109.5   (4) 106.33

Directions for questions 7 to 16: The following table gives Population and Activities of Indian Children (1993-94). Study the table carefully and answer these questions.

Age/Gender Group	Total Population (Million)	In School	Not in school and working	Not in school and not working	Child Population not in School (million)
		------------Percentage of Age Group------------------ (Total)			
Rural males 5-9	39.7	67.2	1.3	31.5	13.02
Rural females 5-9	35.7	56.2	3.0	40.8	15.63
Urban males 5-9	11.3	84.1	0.3	15.2	1.79
Urban females 5-9	10.2	80.1	1.3	18.6	2.02
Rural males 10-14	36.1	76.6	12.8	10.6	8.44
Rural females 10-14	30.3	55.7	30.3	14.0	13.42
Urban males 10-14	11.7	87.2	7.0	5.8	1.50
Urban females 10-14	10.5	81.6	13.1	5.3	1.93
Total	**185.5**				**57.75**

7.   What is the average of Rural Male Population in millions?
      (1) 36.1   (2) 39.7   (3) 37.9   (4) 30.3

8.   In which category of population, is there the lowest percentage of children in the school?
      (1) Urban males 5 - 9   (2) Rural males 5 - 9
      (3) Urban females 5 - 9   (4) Rural females 10 - 14

9.   What is the approximate percentage of children of all categories not in school?
      (1) 40.8   (2) 31.5   (3) 30.5   (4) 31.13

10.   What percent is the ratio between urban males and rural males not in school?
      (1) 16   (2) 18   (3) 15.33   (4) None of these

11.   What is the approximate number of children in millions who are working?
      (1) 17   (2) 18   (3) 19   (4) 16

12.   What is the approximate percentage of all categories of children not in school and not working?
      (1) 20.06   (2) 21.56   (3) 22.36   (4) None of these

13.   In which category of children, is there a maximum number of not in school and not working?
      (1) Rural females 10 - 14   (2) Rural males 5 - 9
      (3) Rural females 5 - 9   (4) Urban males 10 - 14

14.   In which category of children, there is maximum number not in school but working?
      (1) Rural males 10 - 14   (2) Rural females 10 - 14
      (3) Urban females 10 - 14   (4) Urban males 10 14

15.   What percentage of the total population of the children of all categories is in school?
      (1) 68.87   (2) 69.86   (3) 67.9   (4) 68.80

16.   What approximately is the percentage ratio between the total number of children not in school and in school?
      (1) 50.20   (2) 44.20   (3) 45.20 4   (4) 46.20

Directions for questions 17 to 26: Study the following graph and answer questions

TEA IN INDIA (IN MILLION KG)

Per capita availability in gm)

Exports | Production
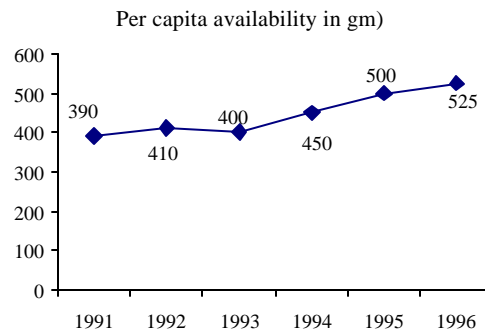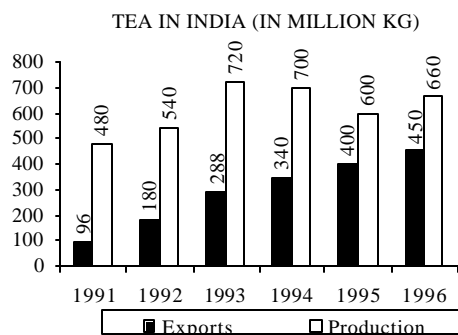
17. Which year shows the maximum percentage of export with respect to production?
(1) 1992   (2) 1993   (3) 1996   (4) 1995

18. The population of India in 1993 was
(1) 800 million   (2) 1080 million   (3) 985 million   (4) 900 million

19. If the area under tea production was less by 10% in 1994 than in 1993, then the approxima te rate of increase in productivity of tea in 1994 was
(1) 97.22   (2) 3   (3) 35   (4) None of the above

20. The average proportion of tea exported to the tea produced over the period is
(1) 0.87   (2) 0.47   (3) 0.48   (4) 0.66

21. What is the first half-decade's average per capita availability of tea?
(1) 457 gm   (2) 535 gm   (3) 446 gm   (4) 430 gm

22. In which year was the per capita availability of tea minimum?
(1) 1996   (2) 1994   (3) 1991   (4) None of these

23. In which year was there minimum percentage of export with respect to production?
(1) 1991   (2) 1992   (3) 1993   (4) 1994

24. In which year we had maximum quantity of tea for domestic consumption?
(1) 1994   (2) 1991   (3) 1993   (4) 1996

25. What approximately was the average quantity of tea available for domestic consumption during the period?
(1) 324.3 million kg   (2) 400 million kg
(3) 410.3 million kg   (4) 320.3 million kg

26. What was approximately the average population during the period?
(1) 625 million   (2) 624 million   (3) 600 million   (4) 757 million

Directions for questions 27 to 34: Study the table given below and answer these questions

Year	Exports	Imports	Trade Balance	Exports GDP ratio %	Imports GDP ratio %
1989-90	16613	21219	-4606	6.1	7.7
1990-91	18145	24073	-5928	6.1	8.1
1991-92	17865	19411	-1546	7.1	7.8
1992-93	18537	21882	-3345	7.6	9
1993-94	22238	23306	-1068	8	8.3
1994-95	26331	28654	-2323	8	8.7
1995-96	31795	36675	-4880	8.7	10.1
1996-97	33470	39132	-5662	8.4	9.9
1997-98	35006	41485	-6479	8.3	9.9
1998-99	33659	41858	-8199	8.1	10

27. In which period, did we have the most adverse trade balance for India?
    (1) 1996-97   (2) 1989-90   (3) 1998-99   (4) 1990-91

28. What was the average % growth rate of exports during the entire period?
    (1) 6.5   (2) 9.56   (3) 5.06   (4) 10.26

29. In which period was the trade balances the best?
    (1) 1998-99   (2) 1991-92   (3) 1994-95   (4) 1993-94

30. In which period the growth rate of exports was the highest?
    (1) 1995-96   (2) 1993-94   (3) 1989-90   (4) None of these

Directions Q. 31 to 40: Each item has a question followed by two statements,
    Mark 1, if the question can be answered with the help of I alone,
    Mark 2, if the question can be answered with the help of II alone,
    Mark 3, if the question can be answered only with the help of both I and II,
    Mark 4, if the question cannot be answered even with the help of both statements.

31. Is the distance from the office to home less than the distance from the cinema hall to home?
    I.   The time taken to travel from home to office is as much as the time taken from home to the cinema hall, both distances being covered without stopping.
    II.   The road from the cinema hall to home is bad and speed reduces, as compared to that one the road from home to the office.

32. A and B work at digging a ditch alternately for a day each. If A can dig a ditch in 'a' days and B can dig it in 'b' days, will work get done faster if A begins the work?
    I. n is a positive integer such that $n(1/a + 1/b) = 1$ II. $b > a$

33. If twenty sweets are distributed among some boys and girls such that each girl gets two sweets and each boys gets three sweets, what is the number of boys and girls?
    I.   The number of girls is not more than five.
    II.   If each girl gets 3 sweets and each boy gets 2 sweets, the number of sweets required for the children will still be the same.

34. If the selling price were to be increased by 10%, the sales would reduce by 10%. In what ratio would profits change?
   I.   The cost price remains constant.   II. The cost price increased by 10%.

35. What is the average weight of the 3 new team members who are recently included into the team?
   I.   The average weight of the team increases by 20 kg.
   II.   The 3 new men substitute 3 earlier members whose weighs are 64 kg, 75 kg, and 66 kg.

36. Is segment PQ greater than segment RS?
   I.   PB > RE, BQ = ES
   II.   B is a point on PQ, E is a point on RS.

37. Three boys had a few Coffee Bite toffees with them. The number of toffees with the second were four more than those with the first and the number of toffees with the third were four more than those with the second. How many toffees were there in all?
   I.   The number of toffees with each of them is a multiple of 2.
   II.   The first boy ate up four toffees from what he had and the second boy ate up six toffees from what had and the third boy gave them two toffees each from what he had, and the number of toffees remaining with each of them formed a geometric progression.

38. Little Beau Peep she lost her sheep, she couldn't remember how many were there. She knew she would have 400 more next year, than the number of sheep she had last year. How many sheep were there?
    I.   The number of sheep last year was 20% more than the year before that and this simple rate of increase continues to be the same for the next 10 years.
    II.   The increase is compounded annually.

39. What will be the total cost of creating a 1-foot border of tiles along the inside edges of a room?
    I. The room is 48 feet in length and 50 feet in breadth.
    II. Every tile costs Rs. 10.

40. Ten boys to a neighbouring orchard. Each boy steals a few mangoes. What is the total number of mangoes they steal?
    I.   The first boy steals 4 mangoes, the fourth boy steals 16 mangoes, the eight boy 32 mangoes and the tenth boy steals 40 mangoes.
    II.   The first boy stole the minimum number of mangoes and the tenth boy stole the maximum number of mangoes.

SECTION 4

Direction (Q.1 to 5): The diagram shows rates of change in agricultural and industrial production (compared to previous years) from 1992 to 1999.
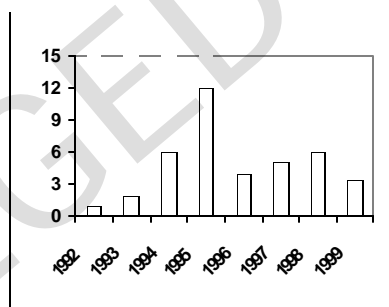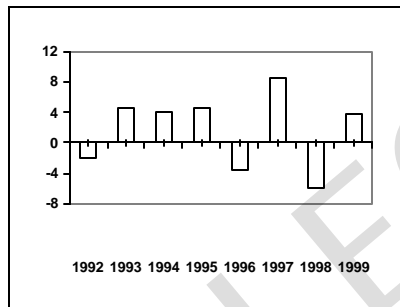

Answer the questions below:

1. If agriculture accounts for 30% of GDP, what was agricultural sector's contribution to GDP growth in1993?
   1) 12%   2) 1.2%   3) 4%   4) Can't say

2. In 1995, total industrial production (taking 1981-82 base as 100) touched the index at 230. What was the value of index in 1996?
   1) 270   2) 240   3) 250   4) 260

3. Which of the following is/are correct?
   Industrial production never dropped from its previous year.
   11. In 1998, agricultural production was a loss-making enterprise.
   1) 1 only   2) 11 only   3) 1 and 11   4) Neither 1 nor 11

4. Which of the following is/are correct?
   I.   In 1999, the industrial production was less than that in 1998.
   II.   In 1997 the industrial production was more than that in 1996.
   1) 1 only   2) 11 only   3) 1 and 11   4) Neither 1 nor 11

5.   In 1994, agricultural production was 180 million tones of food grains. What was the production in 1996?
        1) 183.3mt   2) 196mt   3) 201mt   4) 190.2mt

Directions for questions 6 to 10: In these questions, choose one of the figures labelled a, b, c, and d, which best represents the relationship among the items given.

1

2

3

4
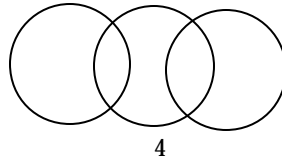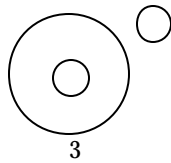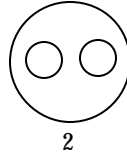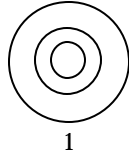
6.   Mangoes, Apples, Fruits
7.   Coffee, Tea, Beverages
8.   Musicians, Men, Women
9.   Parrots, Birds, Mice
10.   Fish, Herring, Animals living in water

Directions for questions 11 to 15: For these questions, what is the missing element in the sequence represented by the question mark?

11.   1, 1, 2, 6, 24,?, 720
        (1) 100   (2) 104   (3) 108   (4) 120

12.   2, 12, 30, 56, ?, 132, 182
        (1) 116   (2) 76   (3) 90   (4) 86

13.   625, 5, 125, 25, 25, ?, 5
        (1) 125   (2) 5   (3) 25   (4) 625

14.   P3C, R5F, T8I, V12L, ?
        (1) Y17O   (2) X17M   (3) X17O   (4) X16O

15.   A, G, L, P, S, ?
        (1) X   (2) Y   (3) W   (4) U

16.   In a certain code, EASE is written as GUCG. How is CUT written in that code?
        (1) UWE   (2) VWE   (3) EWU   (4) CWF

17.   If BRIDGE is written as EULGJH in a certain code, how will FRUIT be written in that code?
        (1) IUXLW   (2) IVLXW   (3) IUWXL   (4) IUXVT

18.   In a certain code language, '134' means 'Good and Tasty', '478' means 'see good pictures' and '729' means 'pictures are faint'. Which of the following numerical symbols stands for 'see'?
        (1) 1   (2) 2   (3) 7   (4) 8

19.   In a certain code, CAT is written as SATC and DEAR is written as SEARD. How would SING be written in that code?

(1) GNISS   (2) SINGS   (3) SGNIS   (4) BGINS

20. If the code of ABCDEF is ZYXWVU, then what is the code for PASS?
(1) KZHH   (2) KHZZ   (3) KMHH   (4) WZHH

21. At an enquiry office at a railway station, a passenger was told 'A train for Delhi has left 15 minutes ago, but after every 45 minutes a train leaves for Delhi. The next train will leave at 8.30 pm'. At what time was this information given to the passenger?
(1) 7.45 pm   (2) 8.00 pm   (3) 8.15 pm   (4) 8.05 pm

22. Five newly - born babies were weighed by the doctor. In her report, she stated that child A is lighter than child B. Child C is lighter than child D. Child B is lighter than child D, but heavier than child E. Which child is the heaviest?
(1) E   (2) D   (3) C   (4) A

23. How many triangles are there in the following diagram of a 5-cornered star?
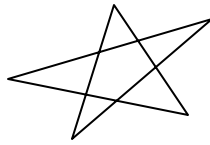
(1) 6   (2) 10   (3) 12   (4) 14

24. Three views of a cube are given below:
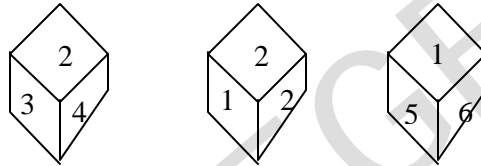
Which number is opposite to the face 4?
(1) 5   (2) 3   (3) 6   (4) 2

25. If 21st July, 1999 was Wednesday, what would have been the day of the week on 21st July, 1947?
(1) Monday   (2) Sunday   (3) Thursday   (4) Saturday

26. Three numbers are in G.P. Their sum is 28 and product is 512. The numbers are
(1) 6, 9 and 13   (2) 4, 8 and 16   (3) 2, 8 and 18   (4) 2, 6 and 18

27. The sum of the series: $1^2 + 2^2 + 3^2 + 4^2 + \ldots + 15^2$ is
(1) 1080   (2) 1240   (3) 1460   (4) 1620

28. If the nth term of an A.P. is $4n + 1$, then the common difference is
(1) 3   (2) 4   (3) 5   (4) 6

29. If $1/(b – a) + 1/(b – c) = 1/a + 1/c$, then a, b, c form a/an

(1)   Arithmetic progression
(2)   geometric progression
(3)   Harmonic progression
(4)   None of these

30. If the second term of a geometric progression is 2 and the sum of the series to infinity is 8, then the first term is

(1) 5   (2) 2   (3) 4   (4) 1

Directions for questions 31 to 40: In these questions, two statements are given, followed by two inferences A and B. Assume the statements to be true, mark your answer as:

1.   If only inference A follows,
2.   If only inference B follows,
3.   If both A and B follow,
4.   If neither A nor B follows

31. All mothers are aunts. All aunts are ladies. So,
   A: All mothers are ladies.   B: All aunts are mothers.

32. Some doctors are fools. Some fools are rich. So,
   A: Some doctors are rich.   B: Some rich are doctors.

33. All goats are cows. Some goats are lambs. So,
   A: All goats are lambs.   B: Some lambs are cows.

34. All pedestrians are poor. All poor are honest. So,
   A: All honest are pedestrians.   B: All pedestrians are honest.

35. All rings are wings. All wings are kings. So,
    A: All rings are kings.   B: All kings are rings.

36. Some books are hooks. All books are fish. So,
    A: Some hooks a re fish.   B: Some fish are hooks.

37. All pens are guns. All guns are inkpots. So,
    A: All pens are inkpots.   B: All inkpots are pens.

38. All P's are Q's. All Q's are R's. So,
    A: All P's are R's   B: All R's are P's

39. Some swords are sharp. All swords are rusty. So,
    A: Some rusty things are sharp. B: Some rusty things are not sharp.

40. All liquor is water. No water is bitter. So,
    A: No liquor is bitter.   B: No bitter thing is liquor.

SECTION 5

1. Ali Rodriguez is the secretary general of the
   (1)   Organisation of Petroleum Exporting Countries (OPEC)
   (2)   Organisation for Islamic Countries (OIC)
   (3)   Organisation for Economic Cooperation and Development (OECD)
   (4)   North Atlantic Free Trade Area

2. Which among the following nations is the second largest exporter of oil (petroleum) in the world?
   (1) United Arab Emirates (UAE)   (2) Kuwait
   (3) Russia   (4) Venezuela

3. Which among the following states has planned environment-friendly rubber dams to produce electricity?
   (1) Rajasthan   (2) Gujarat
   (3) Kerala   (4) Tamil Nadu

4. Which among the following is the largest mutual fund scheme of India?
   (1) SBI Magnum   (2) LIC Mutual fund
   (3) Birla Sun Life   (4) US-64

5. Cegat stands for
   (1)   Customs, Excise and Gold (Control) Appellate Tribunal
   (2)   Customs, Excise and Governance Appellate Tribunal
   (3)   Central Excise Governance Appellate Tribunal
   (4)   Central Excise and Gold Appellate Tribunal

6. The Organisation of the Petroleum Exporting Countries (OPEC) controls ___ of world oil exports.
   (1) one - third   (2) two-third
   (3) three - fourth   (4) four-fifth

7. Which among the following nations is the largest producer and exporter of coffee in the world?
   (1) India   (2) Brazil
   (3) Kenya   (4) Argentina

8. Arrange the following rounds/ministerial meetings of the WTO in the chronology of their occurrence (first to last)?
   (A) Uruguay   (B) Singapore
   (C) Geneva   (D) Seattle
   (E) Seattle   (F) Doha
   Choose the answer from the following choices:
   (1) A, B, D, C, E   (2) A, B, C, E, D
   (3) A, B, C, D, E   (4) A, B, D, E, C

9. What is the approximate population of the world?
   (1) 5 billion   (2) 5.6 billion
   (3) 6 billion   (4) 7 billion

10. Match the following. Column-I represents companies and Column-11 their tea/coffee brands.

Column-I	Column-II
(A) Tata Tea	i. Agni
(B) HLL	ii. Red Label
(C) Nestle	iii. Nescafe

Choose the answer from the following choices:
(1) A-i, B-ii, C-iii   (2) A-ii, B-i, C-iii
(3) A-iii, B-ii, C-I   (4) None of these

11. 'Uncrushables' and "Ice Touch" are the product ranges offered by which among the following textiles companies?
(1) Vimal Suitings   (2) Grasim Suitings
(3) Bombay Dyeing   (4) Mayur

12. Which among the following is/are the business area/s of L&T (Larsen & Toubro)?
(1) Engineering   (2) Cement
(3) Textiles

Choose the answer from the following choices:
(1) Only A   (2) Only B
(3) A and B   (4) None of these

13. Last year, Reliance industries had sold its 10 per cent stake in L&T to which among the following companies?
(1) ACC   (2) Gujarat Ambuja Cement
(3) Zuari Cement   (4) None of these

14. The following pairs show groups and companies, promoted by' them. Which among the following is wrongly matched?
(1) A V Birla group-Grasim   (2) Tata group -Hotel Taj
(3) Thapar group-Built   (4) Reliance-Hindalco

15. Match the following. Column-I represents persons and Column-II industries, they are associated with.

Column-I	Column-II
(A) Nusli Wadia	i. Bombay Dyeing
(B) Rajiv Chandreshekhar	ii. BPL
(C) Deepak Parekh	iii. HDFC Bank

Choose the answer from the following choices:
(1) A-i, B-ii, C-iii   (2) A-i, B-iii, C-ii
(3) A-ii, B-i, C-iii   (4) None of these

16. Which among the following pairs is wrongly matched?
(1)   Mitsubishi Lancer-Own the road
(2)   Fiat Palio–Technology to the max
(3)   Opel Astra —The science of comfort
(4)   Maruti Zen -The hottest little car in your town

17. V2 is the upgraded version of which among the following cars?
(1) Fiat Palio   (2) Hyundai Santro
(3) Tata Indica   (4) Maruti Versa

I8. "Magic" is a pre-paid cards of which among the following cellular service providers?
(1) Bharti   (2) Essar
(3) Hutchison   (4) None of these

19. Bujhaye only pyaas, baaki sub bukwaas, Dikhwa hai waste, trust only taste, All taste, no gyan are a famous ad campaign associated with

(1) 7 Up   (2) Thums Up

(3) Mirinda   (4) Sprite

20. Recently, the Delhi High Court had restrained which among the following TV channels from telecasting the programme, "Shubh Vivah" which is alleged to have hijacked the concept of another programme "Swaymvar"?

(1) Zee TV   (2) Star Plus

(3) SABe TV   (4) Sony Entertainment TV (SET)

21. Recently, Zee TV has started broadcasting a 52-episode mega celebrity-led show, 'Jeena Isi Ka Naam Hai (JIKNH)". The programme is produced by which among the following TV software companies?

(1) Nimbus   (2) Balaji Telifilm

(3) Creative Eye   (4) NDTV

22. Sachin Tendulkar is not a brand ambassador of which among the following companies?

(1) Britannia   (2) Pepsi

(3) Timex Watch   (4) Visa Card

23. Following pairs show companies and their brands. Which among the following is wrongly matched?

(1)   SmithKline Beecham-Maltova

(2)   HLL-Vesline

(3)   Cavin Kare-Nyle

(4)   P&G-Sunsilk

24. Which among the following brands is not owned by the Bajaj Auto?

(1) Boxer   (2) Victor

(3) Aspire   (4) Eliminator

25. Match the following. Column-I represents companies and Column-II their punch line. Column-I Column-II A. AT&T i. Get the edge B. HDFC Bank ii. We understand your world C. LIC iii. We know India better

Choose the answer from the following choices;

(1) A-ii. B-iii. C-I   (2) A-iii, B-ii, C-i

(3) A-i, B-ii, C-iii   (4) None of these

SOLUTION

SECTION 1

1. (4)	2.(1)	3. (4)	4. (1)	5. (3)	6. (2)	7. (4)	8. (2)	9. (2)	10. (3)
11. (2)	12. (2)	13. (2)	14. (3)	15. (1)	16. (2)	17. (3)	18. (2)	19. (4)	20. (4)
21. (3)	22. (4)	23. (1)	24. (2)						

SECTION 2

1 (4)	2 (1)	3 (1)	4 (1)	5 (3)	6 (1)	7 (1)	8 (2)	9 (2)	10 (3)
11 (2)	12 (4)	13 (4)	14 (3)	15 (1)	16 (4)	17 (2)	18 (4)	19 (4)	20 (1)
21 (4)	22 (4)	23 (1)	24 (2)	25 (3)	26 (3)	27 (2)	28 (4)	29 (1)	30 (4)

SECTION 3

1 (1)	2 (2)	3 (2)	4 (2)	5 (3)	6 (4)	7 (3)	8 (4)	9 (4)	10 (3)
11 (2)	12 (2)	13 (3)	14 (2)	15 (1)	16 (3)	17 (3)	18 (2)	19 (4)	20 (2)
21 (4)	22 (3)	23 (1)	24 (3)	25 (1)	26 (4)	27 (3)	28 (4)	29 (3)	30 (1)
31 (4)	32 (1)	33 (2)	34 (2)	35 (4)	36 (3)	37 (2)	38 (1)	39 (4)	40 (4)

SECTION 4

1 (2)	2 (4)	3 (1)	4 (2)	5 (1)	6 (2)	7 (2)	8 (4)	9 (3)	10 (1)
11 (4)	12 (4)	13 (1)	14 (3)	15 (4)	16 (2)	17 (1)	18 (4)	19 (2)	20 (1)
21 (2)	22 (2)	23 (2)	24 (1)	25 (1)	26 (2)	27 (2)	28 (2)	29 (3)	30 (3)
31 (1)	32 (4)	33 (2)	34 (2)	35 (1)	36 (1)	37 (1)	38 (1)	39 (1)	40 (3)

SECTION 5

1 (l)	2 (3)	3 (3)	4 (4)	5 (1)	6 (2)	7 (2)	8 (3)	9 (3)	10 (1)
11 (2)	12 (3)	13 (4)	14 (4)	15 (1)	16 (4)	17.3	18 .1	19.4	20 (4)
2I (4)	22 (3)	23 (4)	24 (2)	25 (3)					

SOLUTIONS

SECTION - 1

Questions 1 to 8:

1. Statement A is the appropriate statement to fallow'1'. Statement'1' says woman's health status is the basic to their development in all fields and A tells about the fundamental issue concerning women and their health. Further B follows A, it extends the idea expressed in A. Subsequently B is followed by D which says that high risk of malnutrition has resulted in the decline in the number of woman. Finally C is the appropriate statement to precede '6' Hence choice (4) is the appropriate answer. Choice (4)

2. Statement'1' tells about the continuity and independence of the Chinese civilization C is the appropriate statement to follow '1' it says that China was remote, and inaccessible to alien influence. The idea expressed in C finds a continuation in A. The words "It was also…." refer to China
    Further BD are logically related, thus choice (1) is the most appropriate answer Choice (1)

3. D is the appropriate statement to follow 1 The words "More than a dozen of Communities in "D" continue the idea expressed in 1 and farther C is a better statement to follow D. It tells about the author of fie book. 'The Ancient Communities of India" (mentioned m D) Between CA and CB, CA is a better combination because the preposition "Besides" in A' says that in addition to the discussions on the Cultural components of the ancient inhabitants of the Himalayan Region, the study of names of places has offered an interesting insight. Further B, precedes '6' because in both B and 6 we find a mention of how the names of places are derived Hence Choice (1) is the answer Choice (1)

4. Statement 'A' is the appropriate statement to Follow1. 1 says the study of social change is a difficult task and 'A' says this job (the study) is difficult in countries like India. Further 'C' mentions the reason for it to be difficult The words "Concepts of Change" find a continuation in B. D precedes '6' D says change becomes desirable and must be sought for and '6' tells about the phenomenon at change Hence ACBD is the appropriate combination. Hence choice (1) is the answer Choice (1)

5. Statement '1' says the system of composition of the legislate Council of a state, as laid down in the constitution is not final. This finds a continuation in B' B says the final power of composition is given to the Union Parliament. Further 'A' Tells the composition shall be as given in the constitution C and D give the detailed idea of the composition of in legislative council as stated in the Constitution. D tells about the of numbers which finds a continuation is '6' Hence BACD is the best option Choice (3)

6. Statement '1' defines Green Revolution D follows '1', it says that the green revolution occurred as a result of adopting the new agricultural strategy'. Further the idea expressed in D is continued in A. Subsequently BC follow. B says the new strategy was sponsored by Ford Foundations to increase agricultural production and C focuses on the necessity for such increase. Thus choice (2) is the most appropriate answer Choice (2)

7. Statement 1 tells about the difference in the idea of Economists on the causes that lead to inflationary rise in price. The reference to Quantity theorists or monetarists in 'B' continues the idea expressed in 1. The words "According to them" them refer to the quantity theorists or monetarists mentioned in B. Now we have to decide between A and C to follow D. DC is a better combination because 'C' tells about other economists. Subsequently in '6' A follows. The word wage-push" in A finds continuation in '6'. Thus Choice (4) is correct. Choice (4)

8. The words "the recent spate of conventions" in '1' find a continuations in 'C' which tells about Vienna conventions for the protection of ozone layer. 'D' follows C. The words it was signed ….. " refer to the Vienna convention.

Subsequently 'A' follows, which says India has signed the Monterial Protocol. Further B says that China has not signed the treaty. Thus 'B' precedes '6' choice (2)

Solutions for questions 9 to 14:

9. From the choices only 'C' can start the paragraph. Now we have to decide between B and A to follow C. the idea expressed in C is expanded in B. (The words from this high energy level……..." indicate it. Hence CB is a better- combination. Choices (3) and (4) are ruled out. From Choices (1) and (2), either D or A has to follow B "A" is the most appropriate statement to follow B. The idea expressed by words 'Ultraviolet Photon is dissipated" in B is continued by the words releasing an ultraviolet photon" in A. Hence BA is a better. Further 'D' concludes the paragraph. Choice (2)

10. From the choices either 'B' or 'D' may open the paragraph. 'B' is the most appropriate statement to begin the paragraph. It introduce the topic of automobile problem. Further the idea is Continued in D. Hence BD go together. Either C or A. has to follow D. 'C' is more appropriate statement to follow D. 'E' tells about the adverse impact on trading partners particularly in the US Further 'A' concludes the paragraph. Hence Choice (3) is the Best answer Choice (3)

11. Statement B is the most appropriate opening sentence. It says often in religions, people fight on illogical issues. The idea expressed in B finds a continuation in D. D says how can blood shed in communal violence be avoided. Further D is followed by C which says that if one applies scientific reasoning and logic one does not become a party to such crimes. Finally A concludes the paragraph. Choice (2)

12. Statement 'A' opens the paragraph, it says the issue of tapping the agricultural surplus cannot be put off. True idea is continued in 'C' It says substantial surplus exists in the sector Subsequently B fallows it says, the method of utilizing these sources have not been debated sufficiently ACB is the logical order of arrangement of statements Choice (2)

13. B opens the paragraph and D follows it. The words "the early programmes" in D extend a continuation, of the idea expressed in B. 'C' follows BD which tells about the effect of televised learning in todays world and 'A' most appropriately is the concluding statement. Choice (2)

14. Statement 'D' opens the paragraph. It focuses on the condition of underdeveloped Countries. Since the end of the war. B follows D. It tells us about the commodity prices after war Further 'C' follows B which tells us about the rise in real income after the war. Hence, DBCA is the appropriate Choice. Choice (3)

Solutions for question 15 to 19:

15. Propitious (favourable) is the most appropriate word which goes into the blank- because according to the context she intended to wait for a more favourable occasion before she announced her plans Choice (1)

16. Germane is the appropriate word, which goes into the blank (germane relevant to a subject under consideration). The sentence says that the judge ruled that the evidence was inadmissible on the grounds that it was not germane (relevant) to the issue at hand. Choice (3)

17. To seek respite (a short period of rest) from the scorching (burn or become burnt) summer of the plains. Choice (2)

18. The columnist was almost reverential (showing reverse) when he…but he was unpleasant and acrimonious (bitter and angry). When he discussed people who irritated him.
    Choice (1)   recalcitrant (unwilling to obey orders) sarcastic- (ironical)
    Choice (3)   Sensitive -easily included, changed o r damaged).
                  Remorseful- (strong feeling of quilt)
    Choice (4)   Insipid   - (lacking a strong lasts or character)
                  militant - (active, determined and; often willing to use force).

It is understood that choices (1), (3), (4) do not suit the context. Choice (2)

19. Choice: (4) is the most appropriate choice. The sentence says that because of their immunity cockroaches are so hardy (strong, able to bear extreme conditions) that even a professional exterminator' may fail to eliminate to remove or take away). Hence, Choice (4) is the best answer.

   The meanings of the remaining choices are:

   (1) Vulnerable: easily physically hurt)
       eradicate: (to get rid of)
   (2) Wide spread existing or happening in many places.
   (3) fragile: (easily damaged)
       destroy: (to cause, to exist no longer)

   Choices (1), (2) and (3) do not go into the blanks

   Choice (4)

Solutions for questions 20 to 24:

20. The given pair of words
    Rotate: Gyrate are synonyms. From the given pair of words.
    Absolve: Exonerate also bear the same relationship.
    (Absolve -free from guilt)
    (Exonerate - to show or state to not have blame)
    Choice (4)

21. Tepee: Red Indian
    The given pair of words bear a relationship of dwelling place and dweller Similar relationship is found in Choice (3)
    Igloo: Eskimos
    Igloo is the dwelling place of Eskimos Choice f(3)

22. Wool: Acrylic
    Acrylic is a type of wool
    Similarly, Rayon is a type of Nylon Choice (4)

23. Commitment-growth
    From the given word pair we find mat commitment leads to growth, similarly ingenuity leads to invention. Choice (1)

24. Fish: Mermaid
    Mermaid is a creature with the upper body of a Woman and the tail of a fish (especially in stories). A similar relationship is found between
    Horse: Centaur
    Centaur is a creature in Greek Mythology with the head and arms of a man and they body and legs of a horse. Choice (2)

SECTION 2

1. Let the person have Rs. 100. The price of an orange is Rs. 2 and that of a mango is Rs. 2.5. If the man keeps Rs. 10 for taxi fare and spends Rs. 50 on mangoes, he can buy 20 oranges in the Rs. 40 he has left.

2. Out of 100 voters, 40 promise to vote for P and 60 for Q. 6 voters change form P to Q and 15 voters change from Q to P. So P gets 49 votes and Q gets 51 votes. The difference is 2 voters, which is the actual. So the actual number of voters is 100.

3. $1/a + 1/(a + 4) = 10/21$ So $a = 3$.

4. Side of square = 2. Diagonal = $2\sqrt{2}$. Sum of perimeters of the triangles = perimeter of square + 2(sum of diagonals) = $4(2) + 2(4\sqrt{2}) = 8(1 + \sqrt{2})$.

5. $3m^2 – 21m + 30 < 0$? $m^2 - 7m + 10 < 0$, or $(m -5)(m - 2) < 0$. So $2 < m < 5$.

6. $[a^3 + b^3]/[a^2 - ab + b^2] = a + b$

7. OR = OT + TR = OT + OS = 24. Also, OS = r.
   ? SR = $\sqrt{[(2r)^2 - r^2]} = r\sqrt{3}$. So area of square = $3r^2$. Area of circle = πr^2. So ratio = $\pi/3$.

8. $5^6 - 1 = 125^2 - 1 = (125 + 1)(125 - 1) = 124 ? 126 = 31 ? 4 ? 126$
   ? $5^6 - 1$ is divisible by 31.

9. The triangle is a right-angled triangle. So its area = $(5)(12)/2 = 30$.
   ? the length of the rectangle = $30/10 = 3$. So perimeter = $2(10 + 3) = 26$.

10. The largest angle in a right-angled triangle will be the right angle. For each of the given ratios, find the other angles and see if the sum is 180^0. If the angles are in the ratio 1 : 3 : 6, they are 15^0, 45^0 and 90^0. These do not add up to 180^0

11. The bells will chime together after a time that is LCM (18, 24, 32) = 288 minutes = 4 hours 48 minutes.

12. To construct 2 roads, three towns can be selected out of 4 in 4 ? 3 ? 2 = 24 ways. Now if the third road goes form the third town to the first town, a triangle is formed, and if it goes to the fourth town, a triangle is not formed. So there are 24 ways to form a triangle and 24 ways of avoiding a triangle.

13. For n = 118, 2n + 1 = 237 and n(n + 1) ()2n + 1) will be divisible by 237.

14 to 17:
   Substitute the values and check.

14. After two years, the flat costs $(1.10)^2 (1)$ = Rs. 1.21 lakh and the land costs $(1.05)^2 (1.1)$ = Rs. 1.21275 lakh = Rs. 275 more than the flat. This is the amount that Ram plays Prem

15. Try the division for various primes and check.

16. In the time that A takes to run 200 m., S runs 180 m. and N runs 160 m. So in the time S takes to run 200 m., N runs 200(160/180) = 177.77 m., or is beaten by 22.22 m. So in 100 m., N is beaten by 11.11 m

17. If AB = x, BC = y and AC = z; then x + z = 5y and z - y = 8. So z = y + 8 and x = 4(y - 2). By the Pythagoras theorem, $x^2 + y^2 = zv$. Substituting, we get, y = 5. ? x = 12 and z = 13.

18. The price increases by 60, to 66 units this year. Next year it increases by 660, and becomes 726.

19. Each box can have either a red ball or blue ball, so total number of ways of filling are $2^5 = 32$. In adjacent positions, two blue balls can be filled in 4 ways, three blue in 3 ways, four blue in 2 ways, and five blue in 1 way. Total ways with blue balls in adjacent positions = 10. So total number of ways where blue balls are not adjacent = 32 - 10 = 22.

20. The % of respondents who watch all 3 channels = [30 + 20 + 85 - 20 - (100 - 5)]/2 = 10.

21. Those watching L and B only (= 16 - 10) = 6, while those watching A and B only (= 20 - 10) = 10. ? those watching L and A only (20 - 6 - 10) = 4. ? those watching L = 20 - (6 + 10 + 4) = 0, which is not among the choices given.
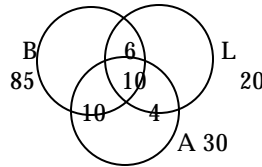
22. Plug in values. Roots are 2 and -4
23. $\angle C = 180 - 90 - 30 = 60^0$ $\because$ $\angle DCE = 30^0$, $\angle CDE = 90 - 30 = 60^0$
   $\therefore \angle D = 180 - 70 = 110^0$ (cyclic) $\angle ACD = 180 - \angle CAD - \angle D = 180 - 30 - 110 = 40^0$
24. If the height of the ladder is x, $(x - 3)^2 + 9^2 = x^2$, or x = 15 m.
25. For x < 1, $2 + x^2$ is the value of the function, which is less than 3. For x > 1, 6 - 3x is the value of the function, which is less than 3. The largest value of the function occurs for x = 1, and is equal to 3.
26. By allegation, the ratio of the amounts invested at 5% and 8% should be in the ratio 2 : 1 to get a yield at 6%. So Rs. 1500 should be invested at 8%.
27. If the numbers are a - 2, a, a + 2, then 3(a - 2) - 2 = 2(a + 2). $\therefore$ a + 2 = 14.

28 to 30
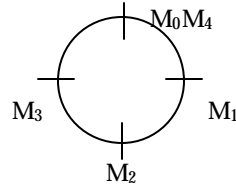
The circumference of the circle is 44 m. Between meetings, the faster person always moves 33 m. and the slower moves 11 m. Assuming that A started moving anticlockwise, the given figure is obtained. The successive meeting points are 90^0. Apart. The shortest distance between M_1 and M_3, along the curve, is therefore the perimeter of the semi-circle. All other questions can then be answered.

SECTION 3

1. Percentage of schools where enrolment is below 120 are given by

$$\frac{526 + 620 + 674 + 717 + 681}{5439} \times 100$$

$$\Rightarrow \frac{3218}{5439} \times 100$$

$\Rightarrow$ 59.16%

Ans. (1)

2. Percentage of schools, with enrolment above 79 & below are given by

$$\frac{717 + 681 + 612 + 540 + 517}{5439} \times 100$$

$$\Rightarrow \frac{3067}{5439} \times 100$$

$\Rightarrow$ 56.39%

Ans. (2)

3. Under the class 80-99, maximum no. of schools (717) falls.

Ans. (2)

4. The least no. of schools (517) are in class 160-179.

The percentage of least no. of schools $= \dfrac{517}{5439} \times 100$

$=$ 9.5%

Ans. (2)

5. No. of schools with enrolment above 99 & below 160 are

= 681 + 612 + 540+

= 1833 schools

Ans. (3)

6. In order to find out the average enrolment (high school) we will have to convert the present class interval are in inclusive (Upper limit included) from to exclusive form. For this we subtract 0.5 from the lower limit of each interval and add 0.5 to the upper limit.

After doing that we find the mean of the interval.

Total enrolments = $526 \times 29.5 + 620 \times 49.5 + 674 \times 69.5 + 717 \times 89.5 + 681 \times 109.5 + 612 \times 129.5 + 540 \times 149.5 + 517 \times 169.5 + 522 \times 189.5$

=> $15517 + 30690 + 46843 + 64171.5 + 74569.5 + 79254 + 80730 + 87631.5 + 98919$

=> 578325.5

Average enrolment / high school $= \dfrac{578325.5}{5439}$

$= 106.33$

Ans. (4)

7. Average of rural male population in millions $= \dfrac{39.7 + 36.1}{2}$

$= 37.9$

Ans. (3)

8. Rural females (10-14) have the lowest percentage of children in school.

Ans. (4)

9. Percentage of students not in school $= \dfrac{57.75}{185.5} \times 100$

$= 31.13$

Ans. (4)

10. Percentage of ratio b / w urban male & rural males not in school is

$= \dfrac{1.79 + 1.5}{13.02 + 8.44} \times 100$

$= 15.33$

Ans. (3)

11. No. of children in millions who are worker is calculated as

$39.7 \times \dfrac{1.3}{100} + 35.7 \times \dfrac{3}{100} + 11.3 \times \dfrac{0.3}{100} + 10.2 \times \dfrac{1.3}{100} +$

$36.1 \times \dfrac{12.8}{100} + 30.3 \times \dfrac{30.3}{100} + 11.7 \times \dfrac{7}{100} + 10.5 \times \dfrac{13.1}{100}$

$= 0.52 + 1.07 + 0.03 + 0.13 + 4.62 + 9.18 + 0.82 + 1.38$

$= 17.75$ (approx.)

Ans. (2)

12. Percentage of all categories of children not working & not in school is calculated as follows.

$$\dfrac{39.7 \times \dfrac{31.5}{100} + 35.7 \times \dfrac{40.8}{100} + 11.3 \times \dfrac{15.2}{100} + 10.2 \times \dfrac{18.6}{100} + 36.1 \times \dfrac{10.6}{100} + 30.3 \times \dfrac{14}{100} + 11.7 \times \dfrac{5.8}{100} + 10.5 \times \dfrac{5.3}{100}}{\dfrac{185.5}{100}}$$

$$= \dfrac{12.50 + 14.56 + 1.12 + 1.90 + 3.83 + 4.24 + 0.68 + 0.56}{185.5} \times 100$$

$$= \frac{39.9}{185.5} \times 100$$
$$= 21.56\%$$
Ans.   (2)

13. Maximum number of children who are not in school & also not working are in the category of rural females of age (5 -9) which amount to 14.56 millions.
    Ans.   (3)

14. Maximum number of children, who are not in school and working are in the category of rural females (10-14) which amounts to 9.18 millions.
    Ans.   (2)

15. Percentage of children in school
    $$= \frac{185.5 - 57.75}{185.5} \times 100$$
    $$= 68.87\%$$
    Ans.   (1)

16. Percentage ratio between the total number of children not in school and in school is:
    $$\frac{57.75}{127.75} \times 100 = 45.20\%$$
    Ans.   (3)

17. Year 1996 shows the maximum percentage of exports with respect to production
    $$= \frac{450}{660} \times 100$$
    $$= 68.18\%$$
    Ans.   (3)

18. Population of India in 1983 is calculated as
    $$= \frac{(Production - Exports) in\, gms}{Per Capital availability}$$
    $$= \frac{(720 - 288)}{400} \times 1000000000$$
    $$= 1080\, million$$
    Ans.   (2)

19. (4) None of the above-productivity of tea cannot be determined, since it is not defined in the question.

20. Average proportion of tea exported to tea produced is calculated as:
    $$\frac{96 + 180 + 288 + 340 + 400 + 450}{480 + 540 + 720 + 700 + 600 + 660} \times \frac{1754}{3700} \times 0.47$$
    Ans.   (2)

21. First half decade's average per capita availability of tea is :
    $$= \frac{390 + 410 + 400 + 450 + 500}{5}$$
    $$= \frac{2150}{5}$$
    $$= 430$$
    Ans.   (4)

22. Per capita availability of tea is minimum in the year 1991 (390gm)
    Ans.   (3)

23. Percentage of export with respect to production is minimum in the year 1991
    $$= \frac{96}{480} \times 100 \qquad = 20\%$$
    Ans.   (1)

24. Maximum tea availability was in the year 1993.
= (720 – 288)
= 432 million kg
Ans. (3)

25. Total availability for domestic consumption over the period
= (480-96)+(540-180)+(720-288)+(700-340)+(600-400)+(660-450)
= 384+360+432+360+200+210
= 1946

Average availability = $\dfrac{1946}{6}$? 324.3

Ans. (1)

26. Population in 1991 = $\dfrac{384}{390}$? 1000 = 984

Population in 1992 = $\dfrac{360}{410}$? 1000 = 878

Population in 1993 = $\dfrac{432}{400}$? 1000 = 1080

Population in 1994 = $\dfrac{360}{450}$? 1000 = 800

Population in 1995 = $\dfrac{200}{500}$? 1000 = 400

Population in 1996 = $\dfrac{210}{550}$? 1000 = 382

Total Population = 4524 million

Average Population = $\dfrac{4524}{6}$ = 754 million

Ans. (4)

27. Most trade for India is in the year 1998-99 equal to(-8199)
Ans. (3)

28. Percentage growth rate during the period = $\dfrac{33659 ? 16613}{16613}$? 100
= 102.6%

Average percentage growth = $\dfrac{102.6\%}{10}$
= 10.26%

Ans. (4)

29. Trade Balance is best in the year 1993-94 equal to (-1068)
Ans. (4)

30. (1)

31. If the time is the same and speed is less, the distance to the cinema hall would be lesser. Statement I does not imply that the distance are covered at the same speed.

32. If $1/a + 1/b = 1/n$, then it would not matter whether A starts or B does. As an example, let A finish the work alone in 2 days, and B alone in 9 days. ? In 2 days, $(1/2) + (1/9) = 11/18$ (? $1/n$) of the work is done, and 7/18 of the work remains. If A has worked on the first day, he will work again one the third day, and since he can finish ½ of the work in a day, the work will get completed on the third day itself. However, if B has started, then B will work on the third day, and complete only $1/9^{th}$ of

the work and some work remains.   Now as a second case, let A complete the work in 3 days and B in 6 days, such that $(1/6) + (1/3) = $ ½ = 1/n.   No matter who starts, it will now always take 4 days for the work to get complete.

33. $2g + 3b = 20$ and $2b + 3g = 20$. Solve simultaneously.

34.   If the selling price is s, the cost price is c and the volume of sales is v, the profit is $v(s - c)$. If s changes   to 1.1s, c to 1.1c, and v to 0.9v, then new profit $= 0.9v(1.1s - 1.1c) = 0.99v(s - c) = 0.99$ times original   profit. Note that if c remains constant, this change in profit cannot be found.

35.   As long as the previous average weight is not known, the new average weight cannot be found.

36. $PQ = PB + BQ$ and $RS = RE = RE + ES$. If $BQ = ES$ and $PB > RE$, then $PQ > RS$. But statement II is   required to establish that $P - B - Q$, and $R - E - S$.

37.   If the number of toffees with them initially is x, $(x + 4)$ and $(x + 8)$, then after distributing, these numbers   are, respectively, $(x - 2)$, x and $(x + 4)$. ? $x^2 = (x + 4)(x - 2)$, ? $x = 4$.

38.   If the number of sheep last year was x, then $x + 400 = x(1.2)^2$ Hence x can be found.

39.   If the dimensions of each tile are not known, the number of tiles cannot be found, and hence the total cost   cannot be found, as the unit cost of only a tile has been given.

40.   It is not known whether the number of mangoes stolen by each boy form a series, and hence the sum   cannot be found.

SECTION 4

1.2;   4% of 30%.
2.4;   230+13% of 230.
3.1;   II is not correct. In 1998, there was a drop in production but less production does not necessarily mean loss.
4.2;   In 1999, there was less growth than 1998. but growth there was, which means more production.
5.1;   (180? 1.05? 0.97) growth of 5% in 1995 and drop of 3% in 1996.
6. 2   7. 2   8. 4   9. 3   10. 1
11. 4   The sequence in the given series is 1? 1=1, 1? 2=2, 2? 3=6, 6? 4=24, 24? 5=120, 120? 6=720.
12. 4   The sequence in the given series is + 10, + 18, + 26, + 34, + 42, + 50.
13. 1   The sequence in the alternate terms (odd) is ÷ 5. The sequence in the alternate terms (even) is ?5.
14. 3   First letter moves +2 steps each time. Third letter moves +3 steps each time. The sequence in the middle number is + 2, + 3, + 4, + 5.
15. 4   The sequence in the given series is + 6, + 5, + 4, + 3, + 2.
16. 2   The 1st and the 4h letters are interchanged. Then the 2nd and the 3d letters are interchanged. Then each letter is moved + 2 steps.
17. 1   Each letter moves +5 steps.
18. 4   4 = Good, 7 = Pictures, 8 = See
19. 2   20. a   21. b
22. 2   E < B < D, A < B< D, C < D.
23. 2
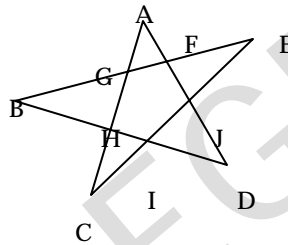
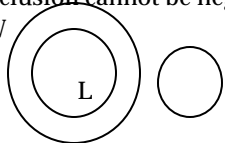ACJ, ADH, AFG, BDFG, BEI, BGH, CEG, CHI, DIJ, EFJ
24. 1   25. 1
26. 2   Let the numbers in G.P. be a/r, a, ar, where r is the common ratio. ? a^3 = 512 and a/r + a + ar = 28 ? r = 2, r = ½, a = 8
27. 2   n(n + 1) (2n + 1)/6 [n = 15]
28. 2   nth term = 4n + 1 1st term = 4 ? 1 + 1 = 5 2nd term = 4 ? 2 + 1 = 9 ? Common difference = 4.
29. 3   To show a, b, c are in H.P., i.e. to show 1/a, a/b, a/c are in A.P., i.e. to show b = 2ac/a + c Now to show 1/b - a + 1/b - c = 1/a + 1/c Consider L.H.S. = 1/b- a + 1 /b - c = 1/2ac/a + c - 1 + 1/2ac/a + c - c = a + c/2ac - a^2 - ac + a + c/2ac - ac - c^2 = (a + c) [1/ac - a^2 + 1/ac - c^2] = (a + c) [ac - c^2 + ac - a^2/ca(c - a) (a - c) = (a + c) (a - c)²/ca(a - c(a - c) = a + c/ca = 1/a + 1/c
30. 3   2nd term = ar = 2, S? = sum to infinity = a/1 - r = 8 ? a a = 4, r = ½ (where a = 1 st term, r = common ratio)
31. 1   32. 4   33. 2   34. 2   35. 1   36. 1   37. 1   39. 1
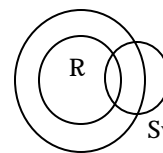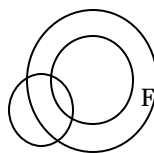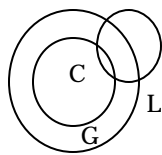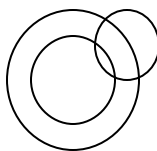
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39. 1   The conclusion cannot be negative.
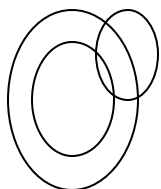
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L   B

40. 3