

## REASONING

**Directions (1 – 5) :** Read the following statements and answer the questions that follow :

Of the six men of literature A, B, C, D, E and F being considered here, two belonged to the 17th century, three to the 19th and one to the 20th. Four were recognised as great poets, three as great novelists and three as great dramatists. One contributed to Bengali literature, two to Hindi, two to Marathi and one to Tamil. The 20th century writer wrote poetry only and contributed to Marathi literature and the other Marathi writer contributed to poetry, novel and drama. One Hindi writer and the only Tamil writer belonged to the 19th century. The former contributed to poetry and novel while the latter to novel and drama. The Bengali writer belonged to the 17th century and contributed to poetry only. A belonged to the 20th century. B wrote drama only. C contributed to Marathi literature. D was a Hindi poet and novelist and belonged to the 19th century. E also belonged to the 19th century, and F contributed to poetry only.

- To which language did B contribute ?  
 (1) Bengali (2) Hindi  
 (3) Marathi (4) Tamil
- Among these, who was the Tamil writer ?  
 (1) A (2) B  
 (3) E (4) F
- To which branch of literature did A contribute ?  
 (1) Poetry (2) Novel  
 (3) Drama (4) All the three
- Among these who was the Bengali writer ?  
 (1) A (2) B  
 (3) E (4) F
- To which branch of literature did C contribute ?  
 (1) Poetry (2) Drama  
 (3) Novel (4) All the three

**Directions (6 – 10) :** An arrangement machine, when given an input line of numbers, rearranges them following a particular rule in each step. The following is the illustration of the input and the steps of arrangement :

Input : 37, 29, 17, 51, 46, 22, 71, 33  
 Step I : 71, 29, 17, 51, 46, 22, 37, 33  
 Step II : 71, 37, 17, 51, 46, 22, 29, 33  
 Step III : 71, 37, 29, 51, 46, 22, 17, 33  
 Step IV : 71, 37, 29, 46, 51, 22, 17, 33  
 Step V : 71, 37, 29, 46, 51, 17, 22, 33  
 Step VI : 71, 37, 29, 46, 51, 17, 33, 22

Since the numbers are already arranged, the machine stops after this step. Otherwise the machine may carry on its logic until the numbers get fully arranged. Study the logic and answer the questions that follow :

- Input :** 19, 59, 23, 36, 60, 75, 71  
 What will be the 3rd step ?  
 (1) 71, 59, 23, 36, 60, 75, 19  
 (2) 71, 19, 59, 36, 60, 75, 23  
 (3) 71, 59, 75, 36, 60, 23, 19  
 (4) 71, 59, 60, 75, 23, 36, 19
- Input :** 81, 89, 72, 43, 69, 28, 90  
 Which of the following will be the last step ?  
 (1) 89, 90, 43, 72, 81, 69, 28  
 (2) 90, 89, 72, 81, 43, 69, 28  
 (3) 90, 89, 81, 72, 69, 43, 28  
 (4) 90, 81, 89, 69, 43, 72, 28
- Input :** 28, 63, 65, 58, 57, 42, 40  
 How many steps will it take to arrange the above input ?  
 (1) Two (2) Three  
 (3) Four (4) Five
- The step two of an input is as follows :  
 54, 27, 45, 36, 63, 17  
 Which of the following would definitely be the first step ?

- 27, 45, 54, 36, 63, 17
- 17, 63, 45, 36, 27, 54
- 54, 17, 45, 36, 63, 27
- Can't be determined

**10. Input :** 7, 17, 27, 37, 47, 57, 67  
 Which of the following will be the last two terms of Step IV ?

- 57, 27 (2) 27, 7
- 17, 7 (3) 67, 7

**Directions (11 – 15) :** Exactly seven persons A, B, C, D, E, F and G participate in and finish all of a series of 1 km races. There are no ties for any position at the finish of any of the races.

G always finishes somewhere ahead of A

A always finishes somewhere ahead of B

Either C finishes first and E finishes last, or D finishes first and F or B finishes last.

- If in a race C finishes second and B finishes fifth, which of the following MUST be TRUE ?  
 (1) G finishes fourth  
 (2) F finishes sixth  
 (3) E finishes sixth  
 (4) D finishes fourth
- If in a race G finishes fifth, which of the following MUST be TRUE ?  
 (1) B finishes fourth  
 (2) D finishes first  
 (3) C finishes second  
 (4) E finishes third
- If in a race D finishes second, which of the following CAN be TRUE ?  
 (1) A finishes before C  
 (2) E finishes before B  
 (3) A finishes before G  
 (4) F finishes before G
- If in a race D finishes sixth and B finishes fifth, which of the following CAN be TRUE ?  
 (1) F finishes third or fourth  
 (2) G finishes first or fourth  
 (3) E finishes fourth or fifth  
 (4) C finishes second or third

15. If in a race C finishes first, G can finish no lower than

(1) Second (2) Third  
(3) Fourth (4) Fifth

**Directions (16-20) :** In each of these questions, there is a word written in capital letters, with one letter underlined. For each letter in that word there is a code written in small letters. That code is denoted by either 1, 2, 3 or 4 not in the same order. For each question, you have to find out the exact code for the underlined letter in the word. The number of that code is the answer to that question. Please note that the same letter appearing in other word (s) may be coded differently.

16. AVJD

(1) lm (2) de  
(3) gh (4) yz

17. GUST

(1) fw (2) hu  
(3) gv (4) ii

18. PRIM

(1) f (2) j  
(3) m (4) o

19. RJET

(1) i (2) q  
(3) u (4) f

20. TOWN

(1) s (2) q  
(3) p (4) r

**Directions (21-23) :** In each of the following questions, there is a certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same relation with this word as the words of the given pair bear. Choose the correct alternative.

21. Illiteracy : Education :: Flood : ?

(1) Bridge (2) Dam  
(3) River (4) Rain

22. Water : Convection :: Space : ?

(1) Conduction  
(2) Transference  
(3) Vacuum  
(4) Radiation

23. Skirmish : War :: Disease : ?

(1) Medicine (2) Patient  
(3) Epidemic (4) Infection

24. Engineer is related to Machine in the same way as Doctor is related to

(1) Body (2) Medicine  
(3) Disease (4) Hospital

25. Select the pair of words that has same relationship as the original pair of words.

Pedant : Erudition

(1) Blunt : Politician  
(2) Diplomat : Tactless  
(3) Enemy : Friendly  
(4) Prude : Modesty

**Directions (26-30) :** In the following questions, the symbols +, -, ×, ÷ and = are used with the following meanings :

A + B means A is greater than B.

A - B means A is either greater than or equal to B.

A × B means A is equal to B.

A ÷ B means A is smaller than B.

A = B means A is either smaller than or equal to B.

For each question, you have to assume given statements to be true and then decide which of the two given conclusion(s) is/are definitely true.

**Give answer :**

- (1) if only conclusion I is true  
(2) if only conclusion II is true  
(3) if either conclusion I or II is true  
(4) if neither I nor II is true.

26. Statements :

P - Q, R × S, P + T, Q + R

**Conclusions :** I. P × R  
II. T + Q

27. Statements :

F × G, K + G, L + F, K = R

**Conclusions :** I. L + K  
II. G × R

28. Statements :

M - N, Z + Y, T = N, Y × T

**Conclusions :** I. T + M  
II. M × T

29. Statements :

E × G, D + F, H = E, D ÷ G

**Conclusions :** I. H × G  
II. E + F

30. Statements :

U + V, W - Y, W + F, Y × U

**Conclusions :** I. W + U  
II. F + V

31. Three of the following four groups of letters are alike in some way while one is different. Find out which one is different.

(1) EJNO (2) HMQR  
(3) KPSU (4) NSWX

32. Three of the following four are alike in a certain way and hence form a group. Which is the one that does not belong to that group?

(1) GASWORKS : DXROWSNV  
(2) KNIGHTLY : HKHTGIPC  
(3) OUTHOUSE : LRUOHTWI  
(4) MARTYRED : JXRYTRIH

33. Find the missing element in the series given below :

30, ....., 390, 784, 786

(1) 328 (2) 228  
(3) 128 (4) 75

34. If the first three letters of English alphabet are reversed and so on ..... and the last two letters are reversed, then which letter will be 19th letter to the right of 17th letter to the left of 5th letter from right ?

(1) W (2) V  
(3) B (4) X

35. Number of letters skipped in between adjacent letters in the series decreases by one, which of the following series observes this rule ?

(1) DBYPU (2) DBPUY  
(3) DBUYP (4) DBYUP

**Directions (36-40) :** Below are given three statements a, b and c followed by four conclusions. You have to take the given statements to be true even if they appear at variance with commonly known facts and then decide which of the conclusions logically follow(s) from the given statements. For each question, mark out an appropriate answer choice that you think is correct.

36. Statements :

(a) Some men are books.  
(b) All schools are boats.  
(c) No books are schools.

**Conclusions :**

- I. Some men are not schools.  
II. Some books are not boats.  
III. Some men are not boats.  
IV. Some boats are not books.  
(1) I and IV follow  
(2) II and IV follow  
(3) I and III follow  
(4) II and III follow

37. Statements :

(a) Some chairs are cups.  
(b) All cups are roads.  
(c) Some roads are trains.

**Conclusions :**

- I. Some chairs are trains.
- II. Some cups are trains.
- III. Some trains are cups.
- IV. Some roads are chairs.

- (1) I, II and III follow
- (2) II and III follow
- (3) I and IV follow
- (4) Only IV follow

**38. Statements :**

- (a) No men are boys.
- (b) No women are girls.
- (c) All boys are women.

**Conclusions :**

- I. Some men are not women.
- II. Some women are not men.
- III. No boys are girls.

- IV. Some women are men
- (1) Only I and III follow
- (2) Only II and III follow
- (3) Either II or IV follows
- (4) Only II and IV follow

**39. Statements :**

- (a) No kite is a slate.
- (b) No jug is a slate.
- (c) Some jugs are ropes.

**Conclusions :**

- I. Some ropes are slates.
- II. Some ropes are not slates.
- III. No kite is a jug.

- IV. Some jugs are kites.
- (1) Either II or III follows
- (2) Either I or II and IV follow
- (3) Either III or IV and II follow
- (4) Either I or II and either III or IV follow

**40. Statements :**

- (a) All banks are shops.
- (b) All markets are shops.
- (c) All markets are roofs.

**Conclusions :**

- I. Some roofs are shops.
- II. Some banks are roofs.
- III. Some banks are markets.
- IV. Some markets are not roofs.

- (1) Only I follows
- (2) Only II follows
- (3) Only III follows
- (4) Either II or III follows

**Directions (41 - 44) :** Choose the word which is opposite in meaning to the given word.

- 41. Exorbitant**  
(1) barbaric (2) famished  
(3) counterfeit (4) moderate

- 42. Humane**  
(1) cruel (2) proud  
(3) cheerful (4) tranquil

- 43. Obsolete**  
(1) heated (2) desolate  
(3) renovated (4) automatic

- 44. Suppress**  
(1) stimulate (2) lengthen  
(3) abandon (4) smother

**Directions (45 - 47) :** In the following sentences replace the words printed in bold with the appropriate expression from the given alternatives.

**45.** He is always **prominent** in a crowd because of his height.

- (1) stands out (2) looks out
- (3) stands up (4) looks up

**46.** The rebels **offered resistance** for almost a month.

- (1) held over (2) held up
- (3) held out (4) held in

**47.** He generally **overlooked** the faults of his subordinates.

- (1) passed out (2) passed by
- (3) passed through
- (4) passed over

**Directions (48 - 51) :** Fill in the blanks with the most appropriate words.

**48.** While a great deal of change and modernisation has taken place in India since 1947, the basic values and family roles have been generally \_\_\_\_\_

- (1) overturned (2) stable
- (3) modified (4) appropriate

**49.** It would be difficult for one so \_\_\_\_\_ to be led to believe that all men are equal and that we must disregard race, colour and creed.

- (1) emotional (2) democratic
- (3) intolerant (4) obsolete

**50.** The linguistic \_\_\_\_\_ of refugee children is reflected in their readiness to adopt the language of their new homeland.

- (1) conservatism
- (2) inadequacy
- (3) adaptability (4) structure

**51.** Rent control restrictions on small apartment owners may unfortunately \_\_\_\_\_ rather than alleviate the housing problem.

- (1) resolve (2) diminish
- (3) castigate (4) aggravate

**Directions (52 - 55) :** In the following questions the word at the top is used in four different ways. Choose the option in which the usage of the word is **incorrect or inappropriate**.

**52. Court**

- (1) He has been courting Jane for six months.
- (2) He has difficulty in courting his feelings into words.
- (3) The prisoner was brought to court for trial.
- (4) The tennis match will take place on the grass court.

**53. Expense**

- (1) Most children in India are educated at public expense.
- (2) We had a good laugh at his expense.
- (3) He became a good scholar, but only at the expense of his health.
- (4) A man of your expense should do well in life.

**54. Demand**

- (1) The policeman demanded his name and address.
- (2) He came to my house and demanded help.
- (3) How would you demand that the world is round ?
- (4) The worker's demands were refused by the employer.

**55. Master**

- (1) She could not master the courage to tell her friend about her loss.
- (2) She quickly mastered the art of interviewing people.
- (3) The terrorist was a master of disguise.
- (4) He is the master of his house.

**Directions (56 - 59) :** Each question below consists of a related pair of words followed by four pairs of words. Select the pair that best expresses the relationship similar to the original pair.

**56. Cobbler : shoes :**

- (1) Mechanic : automobile
- (2) Carpenter : saw
- (3) Painter : easel
- (4) Interrogator : question





57. Museum : exhibit ::  
 (1) Sculptor : statue  
 (2) Prison : cell  
 (3) Painting : frame  
 (4) Theatre : performance
58. Grain : silo ::  
 (1) Seed : plant  
 (2) Water : bucket  
 (3) Druggist : doctor  
 (4) Furlong : mile
59. Doctor : disease  
 (1) Moron : imbecility  
 (2) Paediatrician : senility  
 (3) Broker : stocks  
 (4) Psychiatrist : maladjustment

**Directions (60-62) :** Fill in the blanks with appropriate alternative.

60. These weaknesses could \_\_\_\_\_ if you tried hard to improve your standard.  
 (1) overcome  
 (2) overcame  
 (3) be overcome  
 (4) have been overcome
61. \_\_\_\_\_ the timely help the patient would have died.  
 (1) In spite of (2) Because of  
 (3) But for (4) Even after
62. The topic that we were discussing now was first raised by our boss, \_\_\_\_\_ ?  
 (1) wasn't it (2) isn't it  
 (3) was it  
 (4) hasn't it been

**Directions (63-66) :** In the following questions choose the alternative which best expresses the meaning of the given word.

63. Fastidious  
 (1) doubtful (2) particular  
 (3) hesitant (4) cautious
64. Emancipate  
 (1) pass (2) confuse  
 (3) free (4) imagine
65. Hamper  
 (1) open (2) hide  
 (3) notice (4) hinder
66. Despicable  
 (1) undesirable (2) contemptible  
 (3) desperate (4) faithless

**Directions (67-70) :** In each of the following sentences four words or phrases have been printed in **bold**. One **bold** part in each sentence is not acceptable in standard English. Pick up that part.

67. If (1)/anyone cares to **join** (2)/me in this campaign, **either** (3)/now or in future, **they** (4)/are most welcome.
68. The government **initiated** (1)/various **measure** (2)/to **raise** (3)/the living **standards** (4)/of the people.
69. The reason (1)/for my **prolonged** (2)/**absence** (3)/from the class was **because** (4)/I was ill.
70. We **admired** (1)/his **many**(2)/attempts **bravely** (3)/to **enter** (4)/the burning building.

### GENERAL AWARENESS

71. The State of Orissa has been named as  
 (1) Odisha (2) Orisa  
 (3) Odisa (4) Orisha
72. Indira Gandhi Prize for Peace, Disarmament and Development for 2010 has been conferred on  
 (1) Asma Jahangir  
 (2) Tony Blair  
 (3) Susilo Bambang Yudhoyono  
 (4) Lula Da Silva
73. Match List-I with List-II  
**List-I (Programme)**  
 (A) Ballka Vadhu  
 (B) Jhansi ki Rani  
 (C) Ye Rishta Kya Kahalata Hai  
 (D) Jhalak Dikhla Jaa  
**List-II (Channel)**  
 (1) Zee TV (2) Star Plus  
 (3) Sony (4) Colours
- |     | A | B | C | D |
|-----|---|---|---|---|
| (1) | 3 | 4 | 2 | 1 |
| (2) | 4 | 1 | 2 | 3 |
| (3) | 1 | 3 | 4 | 2 |
| (4) | 2 | 3 | 1 | 4 |
74. Rajeew Gandhi Scheme for Empowerment of Adolescent Girls named as 'Saksham' includes the girls of the age group  
 (1) 11 to 18 years  
 (2) 12 to 18 years  
 (3) 12 to 19 years  
 (4) 13 to 19 years
75. Contribution to Prime Minister's Relief Fund enjoys Income Tax benefit up to  
 (1) 50% Under Section 80 - G  
 (2) 75% Under Section 80 - G  
 (3) 100% Under Section 80 - G  
 (4) 100% Under Section 88

76. Who is the author of the book 'Jinnah and Struggle - comrades in the Freedom Fight' ?  
 (1) A. G. Noorani  
 (2) Jagat S. Mehta  
 (3) Jaswant Singh  
 (4) Lal Krishna Advani
77. The term 'Tee' is associated with which of the following sports ?  
 (1) Table Tennis  
 (2) Polo  
 (3) Judo (4) Golf
78. The Constitution of India provides for nomination of two members of Lok Sabha by the President to represent  
 (1) Men of eminence  
 (2) The Parsis  
 (3) The Anglo-Indian Community  
 (4) The business community
79. In the event of a ministerial proposal being defeated on the floor of the legislature, under the parliamentary system  
 (1) the Government waits for a general no-confidence motion  
 (2) the minister concerned is taken to task by the Prime Minister  
 (3) the minister is forced to resign  
 (4) the whole Council of Ministers resign
80. Which of the following represents the ratio of equity of the RBI held by the Central Government, the sponsoring banks and the concerned State Government respectively ?  
 (1) 40 : 35 : 25 (2) 40 : 40 : 20  
 (3) 50 : 30 : 20 (4) 50 : 35 : 15
81. Which country has World's biggest solar power station ?  
 (1) United States  
 (2) United Kingdom  
 (3) Germany (4) Spain
82. The enzyme that coagulates milk into curd is  
 (1) Renin (2) Pepsin  
 (3) Resin (4) Citrate
83. Capital of Libya is  
 (1) Loti (2) Pepsin  
 (3) Tripoli (4) Pula
84. The Headquarters of United Nations Environmental Programme are located in  
 (1) Vienna (2) Nairobi  
 (3) Geneva (4) Berne

85. The concept that under a system of free enterprise, it is consumers who decide what goods and services shall be produced and in what quantities, is known as

- (1) Consumers's Decision  
(2) Consumer Sovereignty  
(3) Consumer Protection  
(4) Consumer Preference

86. Bhagat Singh, Sukh Dev and Rajguru were executed on

- (1) 1929, December 31  
(2) 1931, March 23  
(3) 1933, May 9  
(4) 1935, August 4

87. Nuclear explosion at Pokhran took place on

- (1) November 2, 1970  
(2) December 10, 1972  
(3) February 18, 1973  
(4) May 18, 1974

88. Which one of the following is the hottest planet?

- (1) Venus (2) Mars  
(3) Saturn (4) Mercury

89. Which city is situated on the banks of Darling river?

- (1) Rome, Italy  
(2) Paris, France  
(3) Sidney, Australia  
(4) Bristol, UK

90. Durand line is the important boundary between

- (1) China and Pakistan  
(2) Pakistan and Afghanistan  
(3) India and Pakistan  
(4) India and China

91. Which one of the following National Highways connects Delhi and Lucknow?

- (1) NH-8 (2) NH-12  
(3) NH-24 (4) NH-27

92. Which port is called the 'offspring of partition' as it was developed after the partition as a substitute of Karachi port?

- (1) Jawaharlal Nehru Port  
(2) Kandla Port  
(3) New Mangalore Port  
(4) Tuticorin Port

93. Who among the following was elected unopposed as no one else filed nomination for the post of the President?

- (1) V.V. Giri  
(2) Dr. Zakir Hussain  
(3) Neelam Sanjeeva Raddy  
(4) R. Venkaraman

94. Accepting the policy 'a step towards village', Union Government launched a scheme, named 'Bharat Nirman Yojana'. When was this scheme launched?

- (1) December 16, 2005  
(2) February 9, 2004  
(3) November 14, 2004  
(4) April 12, 2005

95. It is the total money value of all final goods and services produced within the geographical boundaries of the country during a given period of time.

- (1) GNP (2) GDP  
(3) NNP (4) GND

96. Who has been elected as the first female President of Brazil?

- (1) Dilma Rousseff  
(2) Marina Silva  
(3) Manuela Davila  
(4) Ana Maria Rangel

97. What is the position of China in World Prosperity Index?

- (1) 28th (2) 38th  
(3) 48th (4) 58th

98. Match List I with List II and select the correct answer using the codes given below the lists.

**List-I (Diseases)**

- (a) Goitre (b) Dwarfism  
(c) Hyperglycemia  
(d) Addison's syndrome

**List-II (Endocrine glands affected)**

- (A) Adrenal glands  
(B) Pancreas  
(C) Pituitary gland  
(D) Thyroid gland

- |     | A | B | C | D |
|-----|---|---|---|---|
| (1) | 4 | 3 | 1 | 2 |
| (2) | 3 | 4 | 2 | 1 |
| (3) | 4 | 3 | 2 | 1 |
| (4) | 3 | 4 | 1 | 2 |

99. Which country has become the first Latin American country to legalise same-sex marriage, following a land mark senate vote live on national TV?

- (1) Uruguay (2) Mexico  
(3) Argentina (4) France

100. 'TRDW' is abbreviation of

- (1) Train Research and Development Wing  
(2) Telecommunication Research and Development Wing  
(3) Tata Research and Development Wing  
(4) Talent Resource Development Wing

## NUMERICAL ABILITY/DATA INTERPRETATION

101. The remainder when  $7^{1987}$  is divided by 5 is

- (1) 1 (2) 2  
(3) 3 (4) 4

102. Let A, B and C be natural

numbers such that  $\frac{24}{5}$

$$= A + \frac{1}{B + \frac{1}{C+1}}. \text{ The value of}$$

- $A + B - C$  is
- (1) 1 (2) 2  
(3) 4 (4) 5

103. The value of

$$\frac{(1.111)^3 + (2.212)^3 - (3.323)^3}{(1.111)(2.212)(-3.323)} \text{ lies between}$$

- (1) -0.5 and 0 (2) 0 and 0.5  
(3) 0.5 and 1 (4) 2.5 and 3.5

104. Two numbers are such that their difference, sum and product are in the ratio of 1 : 7 : 18. The product of the two numbers is

- (1) 24 (2) 27  
(3) 30 (4) 48

105. The sum  $1 + 3 - 5 + 7 + 9 - 11 + 13 + 15 - 17 + \dots + 61 + 63 - 65$  is equal to

- (1) 319 (2) 330  
(3) 341 (4) 451

106. In the figure, ABCDEFGH is a regular octagon. What fraction of its area is shaded?



- (1)  $\frac{1}{3}$  (2)  $\frac{1}{4}$   
(3)  $\frac{1}{5}$  (4)  $\frac{3}{8}$

107. In the figure there are two rectangles ABCD and DEBG, each of length 7 cm and width 3 cm. The area of shaded region, in  $\text{cm}^2$ , is approximately



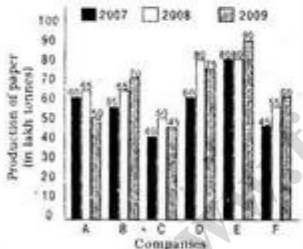
- (1) 12            (2) 10  
(3) 8             (4) 4

106. If the area of a square inscribed in a circle is  $15 \text{ cm}^2$ , then the area of the square inscribed in a semicircle of the same circle, in  $\text{cm}^2$ , is  
(1) 5                (2) 6  
(3) 7.5             (4)  $\sqrt{50}$

109. Diameter of a cylindrical jar is increased by 25%. By what percent must the height be decreased so that there is no change in its volume?  
(1) 18%            (2) 25%  
(3) 32%            (4) 36%

110. Four numbers are written in a row. The average of first two numbers is 7, the average of the middle two terms is 2.3 and the average of the last two numbers is 8.4. The average of first number and the last number is  
(1) 5.9  
(2) 10.7  
(3) 13.1  
(4) cannot be determined

**Directions (111–115):** Study the graph given below and answer the questions.



111. What is the difference between average production (in lakh tonnes) of paper of the six companies in 2008 and average production of the same companies in 2007?  
(1) 8.33            (2) 8.73  
(3) 9.17            (4) 7.86
112. The percentage increase in production by company B from 2008 to 2009 is approximately.  
(1) 7.7              (2) 8.3  
(3) 9                 (4) 18.2

- Which of the four companies A, B, C, and F has recorded the maximum percentage growth from 2007 to 2008?  
(1) A                (2) B  
(3) C                (4) E

114. Production of company C in 2008 and production of company F in 2007 together is what percent of production of company D in 2009?  
(1) 106.73        (2) 126.67  
(3) 142.76        (4) 146.67

115. In which of the following pairs of companies the difference between average production for the years 2008 and 2009 is minimum?  
(1) A and B        (2) B and C  
(3) B and D        (4) E and D

116. Unit's digit in  $13^{2002}$  is  
(1) 1                (2) 3  
(3) 7                (4) 9
117. If  $(6^{20} + 6^{-20}) (6^{30} - 6^{-30}) = 3^A 8^B - 3^C 8^D$ , then value of  $A + B$  is  
(1) 30              (2) 40  
(3) 60              (4) 80

118. Define the operation  $*$  as  $A * B = \frac{A+2B}{3}$ , then the value of  $[(4 * 7) * 8] - [4 * (7 * 8)]$  is  
(1) 0                (2)  $\frac{8}{9}$   
(3)  $\frac{9}{8}$               (4)  $\frac{29}{9}$

119. Which is the largest?  
(1)  $10^{10}$             (2)  $(2^{10})^2$   
(3)  $(5^{10})^2$         (4)  $(4^9)^4$
120. If  $(2^{2a} - 1) = 68 + 19476735$ , where  $a$  is any digit, then the value of  $a$  is  
(1) 1                (2) 3  
(3) 5                (4) 7

121. When one litre of water is added to a mixture of acid and water, the new mixture contains 20% acid. When one litre of acid is added to the new mixture, then the resulting mixture contains  $33\frac{1}{3}\%$  acid. The percentage of acid in the original mixture was  
(1) 20%            (2) 22%  
(3) 24%            (4) 25%

122. A person bought 864 articles and sold 800 of them for the price he paid for 864 articles. He sold the remaining articles at the same

- price per article as the other 800. The percentage gain on the entire transaction is  
(1) 7.5%            (2) 8%  
(3) 8.5%            (4) 9%

123. Suppose  $x$  and  $y$  are inversely proportional and positive. If  $x$  increases by 10%, then  $y$  decreases by  
(1) 10%            (2)  $\frac{10}{11}\%$   
(3)  $9\frac{1}{11}\%$           (4)  $\frac{1}{11}\%$

124. There is a hill behind a person's house. He walks up the top of the hill at a speed of  $1\frac{1}{2}$  km/hour,

but walks down it at  $4\frac{1}{2}$  km/hour. If it takes him 6 hours for the entire journey, the distance, in km, from his house to the top of the hill is

- (1)  $5\frac{1}{4}$                 (2) 6  
(3)  $6\frac{3}{4}$               (4) 9

125. A certain number of persons can complete a work in 100 days. If there be 10 persons less, it would have taken 10 days more for the work to be completed. The number of persons in the beginning was  
(1) 90                (2) 105  
(3) 110              (4) 120

126. Let  $x$  be an odd natural number. If  $x$  is divided by 6, it leaves a remainder  $y$ . If  $y^2$  is divided by 4, it leaves remainder  $z$ . Which of the following must be true for  $z$ ?  
(1)  $z = 3$             (2)  $z = 5$   
(3)  $z = 1$             (4)  $z$  is even

127. When a number is divided by 2, 3, 4, 5 or 6, remainder in each case is 1. But the number is exactly divisible by 7. If the number lies between 250 and 350, the sum of digits of the number will be  
(1) 4                (2) 5  
(3) 7                (4) 10

128. Given the numbers  $2^{5005}$ ,  $3^{3333}$ ,  $6^{2222}$ . These can be written in ascending order as  
(1)  $2^{5005}$ ,  $3^{3333}$ ,  $6^{2222}$   
(2)  $3^{3333}$ ,  $2^{5005}$ ,  $6^{2222}$



(3)  $2^{555}$ ,  $6^{222}$ ,  $3^{333}$

(4)  $6^{222}$ ,  $2^{555}$ ,  $3^{333}$

129. The prime number 1999 can be written as  $a^2 - b^2$ , where  $a$  and  $b$  are natural numbers. Then the value of  $a^2 + b^2$  is

(1) 1998000 (2) 1998001

(3) 1999000 (4) 1999001

130. HCF of two numbers each of 4 digits is 103 and their LCM is 19261. Sum of the numbers is

(1) 2884 (2) 2488

(3) 4288 (4) 4882

131. The value of  $\sqrt{\frac{4}{9}} - \sqrt{\frac{2}{9}} + \sqrt{\frac{1}{9}}$  is

(1)  $\frac{1}{\sqrt{3}}$  (2)  $\sqrt{3}$

(3)  $\frac{\sqrt{3}}{\sqrt{2}+1}$  (4)  $\frac{3}{\sqrt{2}+1}$

132. The value of  $\sqrt{2+\sqrt{3}} + \sqrt{2-\sqrt{3}}$  is

(1)  $\sqrt{6}$  (2) 6

(3)  $2\sqrt{2}$  (4)  $2\sqrt{3}$

If  $x = \frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} + \frac{1}{42}$

+  $\frac{1}{56} + \frac{1}{63}$ , then value of  $\frac{1}{x}$  is

closest to

(1) 1.1 (2) 1

(3) 0.9 (4) 0.8

134. The expression  $64^{0.9} \times 32^{0.08}$  is equal to

(1) 8 (2) 24

(3) 32 (4) 64

135. The number of zeros in the value of  $(10^{50}-1)^2$  is

(1) 99 (2) 98

(3) 51 (4) 49

136. A sum of money at simple interest amounts to Rs. 14,160 in 3 years. If the rate of interest is increased to 25%, the same sum amounts to Rs. 14,700 in the same time. The rate of interest is

(1) 5% (2)  $5\frac{1}{2}$ %

(3) 6% (4) 7%

## ANSWERS

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

Directions (137 - 140): Read the following table and answer questions.

City	Percentage population below poverty	Ratio of total number of males (M) and females (F)	
		Below poverty line	
		M : F	Above poverty line M : F
A	18	5 : 4	3 : 2
B	14	3 : 4	5 : 7
C	25	2 : 3	4 : 5
D	22	5 : 6	3 : 2
E	10	3 : 2	6 : 5
F	18	4 : 5	2 : 3

137. If the population of females below poverty line in city D is 24000, then the population of males above poverty line in that city is:

(1) 62400

(2) 70000

(3) 93600

(4) 130000

138. If the total population of city A is 300000, then the difference of number of males below poverty line and number of females above poverty line in this city is

(1) 54000

(2) 68400

(3) 74400

(4) 93600

139. If the total population of city B and city C is 500000 and 350000 respectively, the ratio of number of females below poverty line in B and C is

(1) 16 : 21

(2) 28 : 35

(3) 6 : 7

(4) 7 : 6

140. If the population of males below poverty line in city F is 32000 and that in city E is 39000, then what percent of total population of E is total population of F?

(1) 90.28%

(2) 82.05

(3) 71.45

(4) 61.54