

***Instructions for questions 1 to 6***

Identify the most appropriate word or phrase in the following:

1. General surroundings of a place or the general atmosphere
  - (a) Weather
  - (b) Landscape
  - (c) Atmosphere
  - (d) Ambience
2. A general feeling of anxiety about anything but especially about the state of the world and the human condition
  - (a) Angst
  - (b) Anxiety
  - (c) Anger
  - (d) Anorexia
3. Some extraordinary indefinable quality of a person that sets them apart
  - (a) Charisma
  - (b) Genius
  - (c) Chauvinism
  - (d) Brilliance
4. They arrived at an \_\_\_\_\_ settlement of their dispute
  - (a) Amiable
  - (b) Alternative
  - (c) Amicable
  - (d) Unusual
5. At Tiflis, she was handed over to a \_\_\_\_\_ of her relatives and neighbours, who keened over her as if they were receiving her corpse.
  - (a) Horde
  - (b) Hoard
  - (c) Clutch
  - (d) Group
6. If we want to make a big impact, \_\_\_\_\_ consider a TV campaign.
  - (a) we'll have to
  - (b) we better
  - (c) we had to
  - (d) we've had to

***Instructions for questions 7 to 10***

Choose the correct phrase / idiom:

7. Jack was so annoyed with the class that he was ready to \_\_\_\_\_.
  - (a) read between the lines
  - (b) read them like a book
  - (c) read their minds
  - (d) read them the Riot Act
8. To have a worm's eye view means:
  - (a) to be worried sick
  - (b) to know or understand only a part of something, usually the worst or least important

- (c) to look at someone or something closely  
(d) to have small eyes
9. If you wouldn't like to do something at all, you wouldn't like to do something at all, you wouldn't do it *for all the tea in* \_\_\_\_\_.
- (a) England  
(b) China  
(c) India  
(d) Japan
10. If you deal with a difficult or dangerous situation in a direct or brave way, you take the bull by the \_\_\_\_\_.
- (a) leg  
(b) tail  
(c) horns  
(d) mouth

***Instructions for questions 11 to 14***

Read the passage given below and choose the appropriate response to the questions that follow:

Most stories, in later literature are of the same kind. A person is shown to possess one virtue to an excessive degree. Instead of this excess leading him to inevitable ruin, he is rewarded extravagantly in the end. The literature upto and including the *Mahabharata* is entirely different in tone. Take for example, the story of the *Mahabharata* itself. The people in it do what they must, and pay for it when they have to. The wheel of life turns at a certain speed in one direction. The direction cannot change nor can the movement of the wheel be halted; men, women, kings, beggars, even Gods cannot be liberated from the course of fate. They all have to see sorrow, hardship and ruin along with happiness, well-being and success. Bhishma could not escape this, nor could Dharma, nor Krishna himself. The *Mahabharata* is a history ('Thus it was') and while recounting what was, it also portrays the hopes, struggles, ambitions and despair of the characters. But all emotion and strife are at a human level. No superhuman or divine agents come to rescue the people from their human plight. There was a tight framework of values and behaviour behind this literature. Whatever was done was done as a duty or as an unavoidable task. Nothing was done for the sake of happiness. If happiness there was, it was gained at the price of much sacrifice. In the battle the loser lost his life and the winner had but an empty victory. There is no scope in such a story for a contrived happy ending. There was no God who could fulfil all human desires. God and man alike were yoked to an inevitable fate which none could escape.

11. In the above passage, what do you think is the writer's opinion of later literature?
- (a) Is appreciative of the way it awards the hero.  
(b) Is critical of the treatment of the hero.  
(c) Does not pass any judgment about later literature.  
(d) None of the above.
12. Who can escape the wheel of fortune?
- (a) Gods  
(b) Kings  
(c) Poor people  
(d) None of the above
13. What, according to the writer, is special about the narrative of the Mahabharata?
- (a) It is history  
(b) It portrays the hopes, struggles, ambitions and despair of the characters

- (c) All emotion and strife are at a human level.
  - (d) None of the above.
14. What values does the Mahabharata impart?
- (a) All happiness is empty.
  - (b) All action is done as a duty or unavoidable task.
  - (c) Happiness is not a goal.
  - (d) Any happiness is gained at the price of much sacrifice.

***Instructions for questions 15 to 17***

Choose the antonyms of the following words:

15. SPUR
- (a) embitter
  - (b) discourage
  - (c) impress
  - (d) mislead
16. LUCID
- (a) ornate
  - (b) arrogant
  - (c) embroiled
  - (d) obscure
17. AUTONOMY
- (a) dependence
  - (b) animation
  - (c) altruism
  - (d) antipathy

***Instructions for questions 18 to 20***

Choose the synonyms of the following words:

18. DEXTERITY
- (a) disadvantage
  - (b) exclusion
  - (c) dimmer
  - (d) skill
19. OVERAWE
- (a) to intimidate
  - (b) to surpass
  - (c) to excel
  - (d) to exclude
20. VERBOSE
- (a) vent
  - (b) laconic
  - (c) talkative
  - (d) suspense

***Instructions for questions 21 to 26***

21. Ben Bernanke is
- (a) Finance Secretary of the USA

- (b) Chief of the World bank
  - (c) Chairman of America's Central Bank
  - (d) USA's envoy to India
22. Swat is
- (a) A famous beach resort in Thailand.
  - (b) A city where political leaders of the G-20 met recently.
  - (c) A valley in Pakistan.
  - (d) A stress test for banks.
23. Who is the chairman of SEBI?
- (a) M. Damodaran
  - (b) C. B. Bhave
  - (c) C. Rangarajan
  - (d) Y.V. Reddy
24. Dow Jones is
- (a) Finance Minister of UK
  - (b) New York Stock Exchange
  - (c) A famous economist
  - (d) Promoter of General Motors
25. Chanda Kochar is
- (a) CEO of ICICI bank
  - (b) a social worker
  - (c) a famous law luminary
  - (d) a famous economist
26. Karla Bruni is
- (a) a famous Hollywood actress
  - (b) 2008 winner of Australian Open
  - (c) former model and wife of French president
  - (d) social worker working on women's rights in India
27. Repo is
- (a) a trade agreement between India & Thailand
  - (b) the currency of Italy
  - (c) a financial instrument
  - (d) short form of a financial report
28. Which five year plan is currently in operation in India?
- (a) Tenth
  - (b) Eleventh
  - (c) Twelfth
  - (d) None of the above
29. PLR is related to
- (a) Interest rate
  - (b) Public litigation
  - (c) Public sector
  - (d) Private roadways
30. The term fiscal deficit is used when
- (a) a company borrows more than its sale value
  - (b) A country imports more than its exports

- (c) Government's expenditure is more than its revenue  
(d) None of the above
31. The onset of the current global economic meltdown is attributed to:  
(a) high budgetary deficits  
(b) failure of the Doha round of WTO  
(c) China's excessive trade surplus with the US  
(d) US housing finance market
32. Which film personality received 'Legion of Honour' by the French government in 2008  
(a) Dilip Kumar  
(b) A.R. Rehman  
(c) Amitabh Bachchan  
(d) Yash Chopra
33. The Governor of RBI is:  
(a) Y.V. Reddy  
(b) Rakesh Mohan  
(c) D. Subbarao  
(d) C. Rangarajan
34. Operation Tornado is the anti-terror operation of the Indian government during  
(a) Kargil intrusion  
(b) Mumbai Taj Hotel attack  
(c) Parliament attack  
(d) Akshardham temple attack
35. The Director General of WTO is:  
(a) Kofi Annan  
(b) Pascal Lamy  
(c) Supachai Panichapakdi  
(d) Kim Beazley
36. Which committee has been constituted by the Supreme Court recently to curb the menace of ragging?  
(a) Yashpal committee  
(b) Raghuvansh committee  
(c) Chakrabarty committee  
(d) Raghavan committee
37. The Parliament of Japan is called  
(a) Diet  
(b) Tamasek  
(c) Sejim  
(d) Cortes
38. Which company has bought over the tainted IT giant Satyam?  
(a) L & T  
(b) Cognizant technologies  
(c) Tech Mahindra  
(d) Infosys Technologies

39. Which company is the highest profit making PSU in India?  
(a) ONGC  
(b) SAIL  
(c) IOC  
(d) HPCL
40. Which city shall host the 2012 Olympic Games?  
(a) New York  
(b) Sydney  
(c) London  
(d) Berlin
41. R is the son of L, L and P are brothers, M is the mother of P, and N is the daughter of M. Select the correct statement  
(a) N and P are sisters  
(b) L and N are brothers  
(c) N is the aunt of R  
(d) R and P are cousins

***Instructions for questions 42 to 44***

Read the following information and answer the questions. A, B, C, D, E, and F are members of a family. There are two married couples. B is an engineer and the father of E. F is the grandfather of C and is a lawyer. D is the grandmother of E and is a housewife. There is one engineer, one lawyer, one teacher, one housewife and two students in the family.

42. Which of the following are the two married couples?  
(a) (A,B) & (D,E)  
(b) (C,D) & (E,F)  
(c) (D,F) & (A,B)  
(d) (A,D) & (D,F)
43. Who is the sister of E?  
(a) A  
(b) B  
(c) D  
(d) data insufficient
44. Which of the following is likely to be the profession of A?  
(a) Engineer  
(b) Housewife or teacher  
(c) Teacher  
(d) Lawyer

***Instructions for questions 45 to 47***

Read the following information and answer the questions. Five products A, B, C, D, and E have been organised on a shelf.

- i) A is kept next to B  
ii) C is kept next to D  
iii) D is not kept with E  
iv) E is on the left end of the shelf  
v) C is on the second position from the right

- vi) A is on the right of B and E  
vii) A and C are kept together
45. Where is A kept?  
(a) between B and D  
(b) between B and C  
(c) between E and D  
(d) between C and E
46. C is kept between:  
(a) B and D  
(b) A and E  
(c) A and D  
(d) D and E
47. What is the position of B?  
(a) Centre  
(b) Third from right  
(c) Second from left  
(d) None of these
48. Seema's sister reached Agra one day earlier than Seema. Seema's brother reached Agra two days later than Seema. However, Seema's mother reached Agra on Thursday, which was two days later than the arrival of her sister. When did Seema's brother reach Agra?  
(a) Monday  
(b) Tuesday  
(c) Friday  
(d) Data insufficient
49. A bag contains 28 balls of red, blue and orange colours. The number of blue balls is double the number of orange balls, while the number of red balls is half the number of orange balls. What is the number of blue balls?  
(a) 4  
(b) 8  
(c) 16  
(d) 12
50. These days a number of people are losing their jobs and newcomers are finding it tough to get jobs. In this kind of scenario, many people don't even mind working in night shifts in BPOs, as it at least assures them a job. This has led to an increase in the number of kidnappings and murders as these people require to go to the office and/or return at odd hours and sometimes all alone. Which of the following courses of action should the authorities adopt?  
I. The law and order situation should be tightened.  
II. BPOs should be closed.  
III. People should not be allowed to travel alone and unprotected during night hours.  
IV. An anti-kidnapping squad should be formed within the police.  
Indicate your choice in the following options:  
(a) I and III  
(b) I and IV  
(c) I, III, and IV  
(d) I, II, III, and IV

51. If C=26, CAT=63, then CATHOLIC=?  
 (a) 39  
 (b) 399  
 (c) 140  
 (d) 161

**Instructions for questions 52 AND 53**

The questions use a coding system in which digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are substituted by a, b, c, d, e, f, g, h, i and j respectively. For example 209 is written as caj. Use this coding to answer.

52. The value of  $\frac{ef \times df}{cf \times h}$  is equal to the value of:  
 (a)  $\frac{cg \times be}{bfg}$   
 (b)  $\frac{dg \times bd}{fc}$   
 (c)  $\frac{cg \times bf}{ce}$   
 (d)  $\frac{ce \times bd}{bi}$
53. The value of  $\frac{(ef - d)cc}{bb \times bc}$  is equal to  
 (a) 77  
 (b) 7  
 (c) 9  
 (d) 40
54. Which is the wrong term in the number series 1, 6, 11, 22, 33, 46, 61 ?  
 (a) 33  
 (b) 46  
 (c) 11  
 (d) 6
55. If (p - q) is six more than (r + s) and (p + q) is three less than (r - s), then the value of (p - r) is:  
 (a) 0.5  
 (b) 2  
 (c) 1.5  
 (d) 1
56. If Jaya's mother is Vibha's mother's daughter, then how is Vibha's mother related to Jaya?  
 (a) Mother  
 (b) Aunt  
 (c) Grandmother  
 (d) None of these
57. A is 40 m South-west of B. C is 40 m South-east of B. Then the direction of C from A is:  
 (a) East  
 (b) West

- (c) North-east
- (d) South

***Instructions for questions 58 to 61***

Following are the criteria for selecting a marketing officer by a company.

The candidate must:

- (1) be a graduate with at least 50% marks
- (2) have secured at least 40% marks in the written test
- (3) not be less than 24 years and more than 29 years as on 10 October 2007
- (4) should have work experience of at least two years as an officer.

However, if a candidate:

- (5) fulfils all other criteria except (4) above, but has a diploma in Marketing Management, his/her case to be referred to General Manager – Marketing
- (6) fulfils all other criteria except (3) above, but has worked as marketing officer at least for three years, his/her case is to be referred to Director – Marketing

Based on the above criteria and the information given in each of the following questions, you have to take the decision in regard to each case. These cases are given to you as on 10 October 2007.

Mark answer (a) if candidate is to be appointed; (b) if the data given is not sufficient to take decision; (c) if it is to be referred to General Manager – Marketing; (d) if it is to be referred to Director – Marketing.

- 58. Amit Khanna born on 5 June 1983 has done his post-graduation in Marketing Management with first class. He has secured 50% marks in the written test. He has been working in an organisation as a marketing officer for the last four years.
- 59. Rohit Verma has been working in an organisation as officer for the last ten years. His date of birth is 17 February 1974. He has secured 60% marks in the degree examination and 40% marks in the written test.
- 60. Manju Sharma is a first class graduate and has done a diploma in marketing management. She has secured 50% marks in the written test. She was 23 years old on 5 September 2006.
- 61. Nitin Narang was born on 25 August 1985. He has secured 60% and 50% marks in graduation and in the written test, respectively. He has been working in an organisation as officer for the last four years.
- 62. A motorist knows four different routes from Bristol to Birmingham. From Birmingham to Sheffield he knows three different routes and from Sheffield to Carlisle he knows two different routes. How many routes does he know from Bristol to Carlisle?
  - (a) 4
  - (b) 8
  - (c) 12
  - (d) 24
- 63. How many 3's are there in the following sequence  
9 3 6 6 3 9 5 9 3 7 8 9 1 6 3 9 6 3 9  
which are neither preceded by 6 nor immediately followed by 9 ?
  - (a) One
  - (b) Two
  - (c) Three
  - (d) Four

**Instructions for questions 64 and 65**

Study the information carefully and answer the questions below:

- I. Kamal is available at home from 12 noon to 4 p.m. on Tuesday, Thursday and Sunday.
- II. His younger brother Navin is available at home on Monday, Thursday, Friday and Sunday between 10 a.m. to 2 p.m.
- III. The eldest brother Rajiv is available between 9 a.m. to 12 noon on Monday, Wednesday and Thursday and from 2 p.m. to 4 p.m. on Friday, Saturday and Sunday.

64. At the same time on which day of the week are all the three brothers available at home?
- (a) None
  - (b) Sunday
  - (c) Thursday
  - (d) Cannot be determined
65. On which day(s) of a week, the youngest and the eldest brothers are available at home at the same time?
- (a) Only Monday
  - (b) Only Thursday
  - (c) Both Sunday and Friday
  - (d) Both Monday and Thursday

**Instructions for questions 66 and 67**

In each question is given a statement followed by two assumptions numbered I or II. Consider the statement and decide which of the given assumptions is implicit.

Give answer (a) if only assumption I is implicit; (b) if only assumption II is implicit; (c) if either I or II is implicit; (d) if neither I nor II is implicit.

66. **Statement:**  
In Mumbai, railway trains are indispensable for people in the suburbs to reach their places of work on time.  
**Assumptions:**  
I: Railway trains are the only mode of transport available in the suburbs of Mumbai.  
II. Only railway trains run punctually.
67. **Statement:**  
The office building needs repairing just as urgently as it needs internal as well as external painting.  
**Assumptions:**  
I: Efficiency of the people working in the office cannot be improved unless the office building is repaired.  
II. Repairing and painting of the office building requires funds.

**Instructions for question 68**

In the question a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true, and then decide which of the two suggested courses of action follows logically.

68. **Statement:**  
The government has decided not to provide financial support to voluntary organisations from the next five year plan and has communicated that all such organisations should raise funds to meet their financial needs.  
**Courses of action:**

- I. Voluntary organisations should collaborate with foreign agencies
- II. Voluntary organisations should explore other sources of financial support

**Instructions for question 69 and 70**

In each question a statement or group of statements is given followed by some conclusions. Choose the conclusion which logically follows from the given statement.

69. **Statement**  
The government is soon going to introduce a bill which would permit the institution of private universities under very strict directions.  
**Conclusion**  
(a) The government gives directions to establish anything in the private sector.  
(b) Such directions can also be issued without informing the Parliament  
(c) The demand for more universities is being stepped up.  
(d) Unless or until the directions are given, the private universities can charge exorbitant fees.
70. **Statements**  
1. Only students can participate in the race.  
2. Some participants in the race are female.  
3. All female participants in the race are invited for coaching.  
**Conclusion**  
(a) All participants in the race are invited for coaching.  
(b) All participants in the race are males.  
(c) All students are invited for coaching.  
(d) All participants in the race are students.
71. An integer  $m$  is said to be related to another integer  $n$  if  $m$  is a multiple of  $n$ . Then the relation is  
(a) reflexive and symmetric  
(b) reflexive and transitive  
(c) symmetric and transitive  
(d) equivalence relation
72. If  $a_1, a_2, a_3$  is an AP such that  $a_1 + a_5 + a_{10} + a_{15} + a_{20} + a_{24} = 225$ , then  $a_1 + a_2 + a_3 + \dots + a_{23} + a_{24}$  is equal to  
(a) 909  
(b) 75  
(c) 750  
(d) 900
73. Points (1,2) and (-2,1) are  
(a) on the same side of the line  $4x + 2y = 1$   
(b) on the line  $4x + 2y = 1$   
(c) on the opposite sides of  $4x + 2y = 1$   
(d) none of these
74. Everybody in a room shakes hands with everybody else. The total number of handshakes is 66. The total number of persons in the room is  
(a) 11  
(b) 12  
(c) 13  
(d) 14

75. The number of ways of painting the faces of a cube with six different colours is  
 (a) 1  
 (b) 6  
 (c) 6!  
 (d) none of these
76. The line which is parallel to the x axis and crosses the curve  $y = \sqrt{x}$  at  $45^\circ$  is  
 (a)  $x = 1/4$   
 (b)  $y = 1/4$   
 (c)  $y = 1/2$   
 (d)  $y = 1$
77. Ten years ago, the average age of a family of 4 members was 24 years. Two children having been born, the average age of the family is the same today. What is the present age of the youngest child if they differ in age by 2 years?  
 (a) 1 year  
 (b) 2 years  
 (c) 3 years  
 (d) 5 years
78. The price of an article was increased by p%. Later the new price was decreased by p%. If the latest price was Re. 1, the original price was:  
 (a) Re. 1  
 (b) Rs.  $\frac{1 - p^2}{100}$   
 (c) Rs.  $\frac{10,000}{10,000 - p^2}$   
 (d) Rs.  $\frac{\sqrt{1 - p^2}}{100}$
79. For the curve  $y = xe^x$ , the point  
 (a)  $x = -1$  is a point of minimum  
 (b)  $x = 0$  is a point of minimum  
 (c)  $x = -1$  is a point of maximum  
 (d)  $x = 0$  is a point of maximum
80. The probability that a person will hit a target in shooting practice is 0.3. If she shoots 10 times, the probability that she hits the target is  
 (a) 1  
 (b)  $1 - (0.7)^{10}$   
 (c)  $(0.7)^{10}$   
 (d)  $(0.3)^{10}$
81. Out of 13 applicants for a job, there are 5 women and 8 men. It is desired to select two persons for the job. The probability that at least one of them is a woman is  
 (a)  $25 / 39$   
 (b)  $14 / 39$   
 (c)  $5 / 13$   
 (d)  $10 / 13$
82. A man rows upstream 16 km and downstream 28 km, taking 5 hours each time. The velocity of the current is  
 (a) 2.4 km/hr

- (b) 1.2 km/hr  
(c) 3.6 km/hr  
(d) 1.8 km/hr
83. The radius of a circular cylinder is the same as that of a sphere. Their volumes are equal. The height of the cylinder is:  
(a)  $\frac{4}{3}$  times its radius  
(b)  $\frac{2}{3}$  times its radius  
(c) equal to its radius  
(d) equal to its diameter
84. A person sees a train passing over a 1 km long bridge. The length of the train is half that of the bridge. If the train clears the bridge in 2 minutes, the speed of the train is:  
(a) 50 km/hr  
(b) 45 km/hr  
(c) 60 km/hr  
(d) 30 km/hr
85. Let  $0 \leq x \leq 2\pi$ . Then  $\sin x$  and  $\cos x$  are both increasing on the intervals  
(a)  $[0, \pi/2]$   
(b)  $[\pi/2, \pi]$   
(c)  $[\pi, 3\pi/2]$   
(d)  $[3\pi/2, 2\pi]$
86. The three solutions of the equation  $f(x) = 0$  are -3, 0, 1. Therefore the three solutions to the equation  $f(x-5)$  are:  
(a) -8, -5, -4  
(b) 2, 5, 6  
(c) -15, 0, 5  
(d) -2, 5, 3
87. The mean of a data is 20 and the standard deviation is 2. If 2 is added to each value, then  
(a) mean = 22, standard deviation = 4  
(b) mean = 20, standard deviation = 4  
(c) mean = 22, standard deviation = 2  
(d) data is insufficient to calculate the new mean and standard deviation
89. A family of linear functions is given by  $f(x) = mx + (4 - 2m)$ , where  $m$  is a parameter. Choose the correct statement  
(a) this represents a family of straight lines with the same slope  
(b) this represents a family of parallel lines  
(c) this represents a family of straight lines passing through a common point  
(d) this represents a family of straight lines with equal  $y$  intercepts
90. The cost of producing  $x$  books by a publisher is given by:  
 $C(x) = 800x + 1000$  (in Rs.)  
The slope of the graph  $C(x)$  represents:  
(a) cost of one book  
(b) cost of 800 books  
(c) basic cost involved in publishing a book  
(d) increase in the cost when the number of books is increased by 1.

91. The set S consists of all possible 3 digit natural numbers. What is the possibility of choosing a number which leaves a remainder of 5 when divided by 7 ?  
 (a)  $129 / 900$   
 (b)  $128 / 900$   
 (c)  $128 / 990$   
 (d)  $129 / 990$
92. What is the highest integral value of 'n' for which the quadratic equation  $x^2 - 6x + n = 0$  have two real and distinct roots ?  
 (a) 12  
 (b) 9  
 (c) 8  
 (d) 7
93. In a class of 120 students numbered 1 to 120, all even numbered students opt for physics, whose numbers are divisible by 5 opt for chemistry and those whose numbers are divisible by 7 opt for mathematics. The number of students that opt none of the three subjects is:  
 (a) 79  
 (b) 23  
 (c) 41  
 (d) 19
94. Let f be a function defined by the following:  

$$f(x) = \begin{cases} \sin x, & x < 0 \\ x^2, & 0 \leq x < 1 \\ 2 - x, & 1 \leq x < 2 \\ x - 3, & x \geq 2 \end{cases}$$
 for what values of x is f not continuous?  
 (a) it is continuous everywhere  
 (b) 0  
 (c) 1  
 (d) 2
95. paper copy attached
96. If coordinates of the midpoints of the sides of a triangle are (1,-1), (2,3) and (3,2), then the area of the triangle is:  
 (a) 5 sq. units  
 (b) 6 sq. units  
 (c)  $11/2$  sq. units  
 (d) 12 sq units
97. Distance between the lines  $5x + 12y - 1 = 0$  and  $10x + 24y + k = 0$  is 2, then possible value of k is  
 (a) 52  
 (b) - 52  
 (c) - 54  
 (d) 54

98. If for a matrix  $A$ ,  $A^2 + I = 0$ , where  $I$  is the  $2 \times 2$  identity matrix, then  $A$  is:

(a)  $\begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix}$

(b)  $\begin{pmatrix} -i & 0 \\ 0 & i \end{pmatrix}$

(c)  $\begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$

(d)  $\begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix}$

99. An experiment can result in only three mutually exclusive events  $A, B$  and  $C$ .

If  $P(A) = 2.P(B) = 3.P(C)$ , then  $P(A) =$

(a)  $6/11$

(b)  $5/11$

(c)  $9/11$

(d) cannot be determined

100. The variance of the first  $n$  natural numbers is:

(a)  $(n^2 + 1) / 12$

(b)  $(n^2 + 1) / 6$

(c)  $(n^2 - 1) / 6$

(d)  $(n^2 - 1) / 12$