

**MIZORAM PUBLIC SERVICE COMMISSION**

**TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO  
INSPECTOR OF STATISTICS**

**UNDER PLANNING & PROGRAMME IMPLEMENTATION DEPARTMENT, FEBRUARY, 2017**

**PAPER - II**  
**{ General Mathematics (50 Marks) }**  
**{ General Knowledge (50 Marks) }**

Time Allowed : 2 hours

Full Marks : 100

*All questions carry equal marks of 1 each.*

*Attempt all questions.*

- In a group of 40 people, 30 play Volley ball, 5 play both volley ball and Chess, then the number of people who play chess only is  
(a) 15 (b) 10  
(c) 5 (d) 20
- The least number which must be added to 315 so that it becomes a perfect square is  
(a) 20 (b) 15  
(c) 9 (d) 10
- Cube root of 0.001728 is  
(a) 0.17 (b) 0.15  
(c) 0.13 (d) 0.12
- The number  $2.5\bar{4}$  is equal to  
(a)  $\frac{229}{90}$  (b)  $\frac{225}{90}$   
(c)  $\frac{229}{99}$  (d)  $\frac{225}{99}$
- The value of  $(\sqrt{3})^{-4} \times (\sqrt{3})^2$  is  
(a)  $\frac{1}{2}$  (b)  $\frac{1}{3}$   
(c)  $\frac{1}{5}$  (d)  $\frac{1}{7}$

6. A and B together can do a piece of work in 6 days. If B alone can finish it in 8 days, then A alone can do the same work in
- (a) 8 days (b) 12 days  
(c) 10 days (d) 24 days
7. A car run at 36 Km/hr. How far can it go in 13 seconds ?
- (a) 360 m (b) 210 m  
(c) 130m (d) 110 m
8. The total surface area of a cube is  $150 \text{ m}^2$ , then the length of its edge is
- (a) 15 m (b) 5 m  
(c) 20 m (d) 10 m

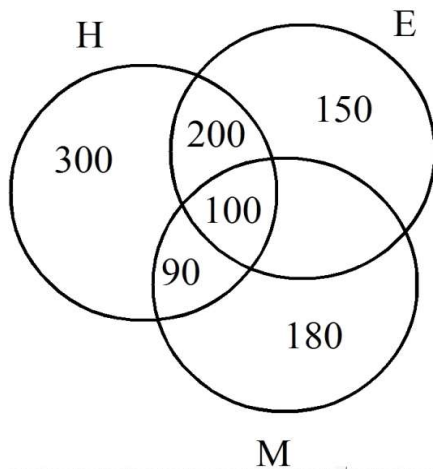
9. Read the given frequency table :

| Class     | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
|-----------|-------|-------|-------|-------|-------|
| Frequency | 2     | 5     | 7     | 4     | 6     |

The median class is

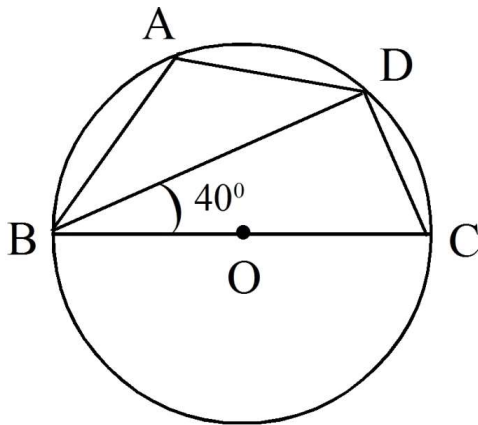
- (a) 20-30 (b) 40-50  
(c) 30-40 (d) 50-60
10. The volume of a right cylinder is  $567\pi \text{ cm}^2$  and its height is 7 cm. The radius of the cylinder is
- (a) 81 cm (b) 9 cm  
(c) 18 cm (d) 21 cm
11. One-fourth of a number decreased by 5 is equal to 4, the number is
- (a) 20 (b) 36  
(c) 44 (d) 40
12. 25% of a number is 400, then the number is
- (a) 1600 (b) 1400  
(c) 1200 (d) 1000
13. A table was sold for Rs 900 at a loss of 10%. The cost price of the table is
- (a) Rs 800 (b) Rs 950  
(c) Rs 1000 (d) Rs 1050
14. The selling price of 16 articles is the same as the cost price of 20 articles. The gain percent is
- (a) 4% (b) 15%  
(c) 20% (d) 25%
15. The cost of 20 chairs is Rs 25000. How many chairs can be purchased for Rs 45000?
- (a) 30 (b) 26  
(c) 36 (d) 140
16. The perimeter of a rectangle whose area is  $650 \text{ cm}^2$  and breadth 13 cm is
- (a) 156 (b) 126  
(c) 139 (d) 40

17. The diagonal of a square is 5.4 cm. Its area is  
(a)  $14.58 \text{ cm}^2$  (b)  $41.85 \text{ cm}^2$   
(c)  $14.85 \text{ cm}^2$  (d)  $15.48 \text{ cm}^2$
18. A bus left a station at 10:15pm and reached its destination at 7:45am next day. How much time was taken by the bus in this journey?  
(a) 10hours 45 minutes (b) 9hours 45 minutes  
(c) 9hours 30minutes (d) 8hours 30minutes
19. A result of a survey of persons with respect to their knowledge of Hindi (H), English (E) and Mizo (M) is given below:



- What is the ratio of those who know all the three languages to those who do not know Mizo?
- (a)  $\frac{13}{2}$  (b)  $\frac{5}{9}$   
(c)  $\frac{10}{9}$  (d)  $\frac{2}{13}$
20. Two numbers when added becomes 97 and one of the numbers exceeds the other by 51. The numbers are  
(a) 37, 64 (b) 74, 23  
(c) 33, 58 (d) 49, 62
21. If  $a : b = 3 : 4$  and  $c : b = 2 : 5$ , then the value of  $a : c$  is  
(a) 5:8 (b) 15:8  
(c) 8:15 (d) 2:15
22. The value of  $\sqrt{28} + \sqrt{63} - \sqrt{112}$  is  
(a)  $\sqrt{11}$  (b)  $\sqrt{17}$   
(c)  $\sqrt{13}$  (d)  $\sqrt{7}$

23. The average age of 40 employees in a company is 25 years. If the age of a new employee is included, then the average increases by 1 year. What is the age of the new employee ?
- (a) 26 years (b) 62 years  
(c) 66 years (d) 60 years
24. If the point (2,3) is on the graph of the equation  $2x - ky = 4$ , then the value of  $k$  will be
- (a) 0 (b) 1  
(c) 2 (d) 3
25. In the figure, O is the center of the circle. If  $\angle CBD = 40^\circ$ , then  $\angle BAD$  is



- (a)  $40^\circ$  (b)  $130^\circ$   
(c)  $90^\circ$  (d)  $140^\circ$
26. The radius of a wire is decreased to one-third. If its volume remain the same, length will increase
- (a) 2 times (b) 3 times  
(c) 6 times (d) 9 times
27. If  $x = a \sin \theta$ ,  $y = b \tan \theta$ , then  $\left(\frac{a}{x}\right)^2 - \left(\frac{b}{y}\right)^2 =$
- (a) 0 (b)  $\frac{1}{4}$   
(c)  $\frac{1}{2}$  (d) 1
28. If  $\sin(A+B) = \sin A \cos B + \cos A \sin B$ , then the value of  $\sin 135^\circ$  is
- (a) 1 (b)  $\sqrt{2}$   
(c)  $\frac{1}{\sqrt{2}}$  (d)  $\frac{1}{2}$
29. A tap can empty a tank in 30 minutes. A second tap can empty it in 45 minutes. If both the tap operate simultaneously, how much time is needed to empty the tank ?
- (a) 18 minutes (b) 14 minutes  
(c) 15 minutes (d) 30 minutes

30. If the area of a circle is A, radius of the circle is r and circumference of it is C, then

- (a)  $rC = 2A$  (b)  $\frac{C}{A} = \frac{r}{2}$   
(c)  $AC = \frac{r^2}{4}$  (d)  $\frac{A}{r} = C$

31. Nine years ago, the ratio of A's age to B's age was 8:13. Their present ratio's are 5:7. What is the present age of B ?

- (a) 30years (b) 35years  
(c) 40years (d) 45years

32. If a chord of a circle is equal to the radius of the circle, then the angle subtended by the chord at a point on the minor arc is

- (a)  $60^\circ$  (b)  $120^\circ$   
(c)  $30^\circ$  (d)  $150^\circ$

33. The altitude drawn to the base of an Isosceles triangle is 8cm and its perimeter is 64cm. The area of the triangle is

- (a)  $180 \text{ cm}^2$  (b)  $120 \text{ cm}^2$   
(c)  $360 \text{ cm}^2$  (d)  $240 \text{ cm}^2$

34. If  $x + y + z = 13$  and  $x^2 + y^2 + z^2 = 69$ , then the value of  $xy + yz + zx$  is equal to

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

35. The missing term of 1, 9, 25, 49, 81, ? is

- (a) 90 (b) 135  
(c) 121 (d) 125

36. At an instant the length of the shadow of a pole is  $\sqrt{3}$  times the height of the pole. The angle of elevation is

- (a)  $30^\circ$  (b)  $45^\circ$   
(c)  $60^\circ$  (d)  $75^\circ$

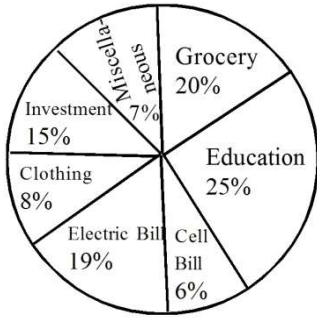
37. Yearly production( in thousands) of Motor cycles in different factories are given below:

| Year             | 1985       | 1986       | 1987       | 1988       | 1989       |
|------------------|------------|------------|------------|------------|------------|
| <b>Factories</b> |            |            |            |            |            |
| <b>P</b>         | 20         | 15         | 24         | 13         | 17         |
| <b>Q</b>         | 16         | 23         | 41         | 20         | 15         |
| <b>R</b>         | 14         | 21         | 30         | 16         | 12         |
| <b>S</b>         | 25         | 17         | 15         | 12         | 22         |
| <b>T</b>         | 40         | 32         | 39         | 41         | 35         |
| <b>TOTAL</b>     | <b>115</b> | <b>108</b> | <b>149</b> | <b>102</b> | <b>101</b> |

In which year, the production of Motor cycles of all factories was equal to the yearly average number of Motor cycles produced during 1985-1989 ?

- (a) 1985 (b) 1986  
(c) 1987 (d) 1988

38. Budget estimated by a family is shown below for their monthly expenditure. The total salary of the family per month is Rs 32000.

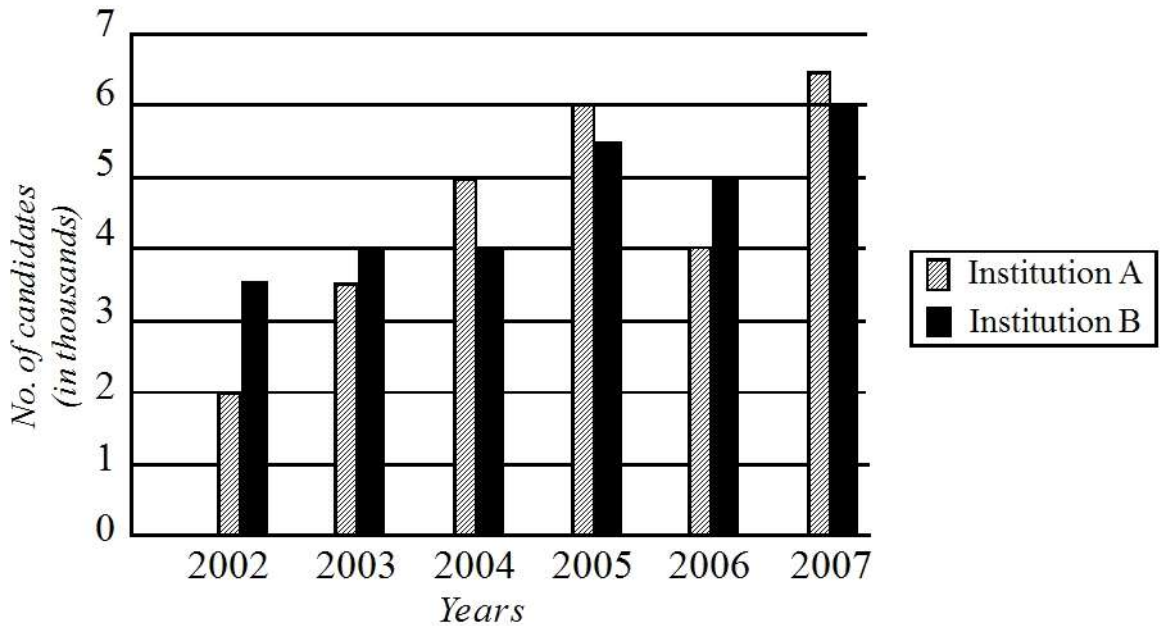


What is the budget estimated by the family on clothing and grocery together ?

- (a) Rs 8850
- (b) Rs 8960
- (c) Rs 8690
- (d) Rs 8780

39. Study the following graph and answer the questions that follow:

Number of candidates (in thousand) qualified in the written test for admission to two different institutions.



What was the respective ratio between the number of candidates qualified in the written test in the year 2002 for admission in institution B and the number of candidates qualified in the written test in the year 2006 for admission to institution A ?

- (a) 8:5
- (b) 7:8
- (c) 7:4
- (d) 7:5

40. The average temperature of 5 major cities in India during a day of summer season are given as:

| Cities      | Delhi | Kolkata | Mumbai | Chennai | Bangalore |
|-------------|-------|---------|--------|---------|-----------|
| Temperature | 42    | 40      | 35     | 38      | 25        |

The central angle for Mumbai to draw a pie-chart is

- (a)  $80^{\circ}$  (b)  $70^{\circ}$   
(c)  $90^{\circ}$  (d)  $60^{\circ}$
41. If Median = 15 and Mode = 30, the value of mean is equal to  
(a) 8.5 (b) 9.5  
(c) 7.5 (d) 6.5
42. If  $x + \frac{1}{x} = 5$ , the value of  $x^3 + \frac{1}{x^3}$  is  
(a) 130 (b) 150  
(c) 110 (d) 140
43. The number of spherical lead balls each of radius 2 cm can be made from a sphere of radius 8 cm are  
(a) 64 (b) 46  
(c) 74 (d) 86
44. The mean of six numbers is 23. If one of the numbers is excluded, the mean of the remaining numbers is 20, then the excluded number is  
(a) 25 (b) 43  
(c) 38 (d) 20
45. The number of natural numbers between 1 and 1000 which are divisible by 5 is  
(a) 197 (b) 198  
(c) 200 (d) 199
46. The sum of all natural numbers from 1 to 150 is  
(a) 11235 (b) 12135  
(c) 11325 (d) 11352
47. A bag contains 8 red, 2 black and 5 white balls. One ball is drawn at random. The probability that the ball drawn is not black is  
(a)  $\frac{2}{15}$  (b)  $\frac{13}{15}$   
(c)  $\frac{8}{15}$  (d)  $\frac{1}{3}$
48. A boy goes to school with a speed of 3 km per hour and returns with a speed of 2 km per hour. If he takes 5 hours in all, the distance between his home and the school is  
(a) 6 km (b) 5 km  
(c) 4 km (d) 8 km

49. Find the HCF of  $\frac{4}{5}$  and  $\frac{7}{15}$

(a)  $\frac{1}{13}$

(b)  $\frac{1}{5}$

(c)  $\frac{1}{15}$

(d)  $\frac{1}{25}$

50. Find the dividend when divisor is 13, quotient is 30 and remainder is 12

(a) 402

(b) 543

(c) 436

(d) 455

51. New Economic Development Policy is:

(a) A five year policy

(b) A long term policy

(c) A short term policy

(d) A seven year policy

52. National Judicial Appointments Commission (NJAC) wanted to replace the collegiums system and paves the way for:

(a) Equal say to politicians

(b) Collegium system is 22-years old

(c) Appointment of judges to High Court and Supreme Court

(d) All of the above

53. 'Pradhan Mantri Fasal Bima Yojana' launch in 2016 has replaced:

(a) Modified National Agricultural Insurance Scheme

(b) Comprehensive Crop Insurance Scheme

(c) Experimental Crop Insurance

(d) Farm Income Insurance Scheme

54. The technology behind the bitcoin digital technology is:

(a) Blockchain

(b) Bitchain

(c) Brickchain

(d) Barchain

55. Central Board of Direct Taxes (CBDT) has recently launched online redressal of taxpayers' grievances related to refunds:

(a) E-swakaran

(b) E-nivaran

(c) E- saksham

(d) E-sankalp

56. Reserve Bank of India published Payment and Settlement Systems in India: Vision -2018 revolve around 5 Cs known as:

(a) coverage, convenience, confidence, convergence and cost

(b) care, compact, confidence, convergence and cost

(c) coverage, convenience, cure, care and cost

(d) coverage, convenience, compact, care and cost

57. Department of Disinvestment has been renamed as:

(a) Ministry of Disinvestment

(b) Department of Disinvestment and Public Asset Management

(c) Department of Investment and Public Asset Management

(d) Ministry of Investment and Public Asset Management



58. The Railway Budget of 2016 is based on three pillars, what are they?
- (a) New Revenue, New Norms and New Structures
  - (b) New Expenditure, New Rules and New Structures
  - (c) New Revenue, New Rules and New Structures
  - (d) New Expenditure, New Norms and New Structures
59. According to the 14<sup>th</sup> Finance Commission recommendation, the inter-se share of taxes for the state of Mizoram increased from 0.269% to:
- (a) 0.369%
  - (b) 0.460%
  - (c) 0.469%
  - (d) 0.569%
60. The Union Budget 2015-16 has delinked eight Centrally Sponsored Schemes (CSS) from the support of central government, which one of the following isn't among them?
- (a) NEGAP
  - (b) BRGF
  - (c) RGPSA
  - (d) PMGSY
61. Who is the author of 'The Great Derangement: Climate Change and the Unthinkable'?
- (a) Amitav Ghosh
  - (b) Jhumpa Lahiri
  - (c) Roddy Doyle
  - (d) Barry Unsworth
62. 'Midnight's Furies: The Deadly Legacy of India's Partition' is a book written by:
- (a) Nisid Hajari
  - (b) Salman Rushdie
  - (c) Hilary Mantel
  - (d) Howard Jacobson
63. 'Capital in the 21<sup>st</sup> Century' is a book written by Thomas Piketty which has been translated into English by:
- (a) Charles Wheelan
  - (b) Thomas Piketty
  - (c) Paul Krugman
  - (d) Arthur Goldhammer
64. The 'White Tiger' is a book written by:
- (a) Kiran Desai
  - (b) Arundhati Roy
  - (c) Aravind Adiga
  - (d) Peter Carey
65. Who has written a book titled 'Globalization and Its Discontent'?
- (a) Thomas Sowell
  - (b) Milton Friedman
  - (c) Joseph Stiglitz
  - (d) James Robinson
66. Who among the following India sportperson has been appointed as a member of International Olympic Committee's (IOC) Athletes' Commission?
- (a) Mahendra Singh Dhoni
  - (b) Abhinav Bindra
  - (c) Saina Nehwal
  - (d) Sania Mirza
67. The 2016 Nobel Prize in Literature is awarded to Bob Dylan, his birthname was:
- (a) George Michael Zimmerman
  - (b) Robert Allen Zimmerman
  - (c) Ryan Allen Zimmerman
  - (d) Charles Allen Zimmerman

68. Sikkim Chief Minister Pawan Kumar Chamling was honoured with the Sustainable Development Leadership Award of the TERI, in recognition of his achievement in:
- (a) Sikkim the cleanest state (Swachha Bharat Abhiyan)
  - (b) Sikkim the first clean energy state
  - (c) Sikkim the first organic state
  - (d) Sikkim the land of flowers
69. Who has become the Chairman of Insolvency and Bankruptcy Board of India in the month of October?
- (a) Ajay Tyagi
  - (b) GS Yadav
  - (c) Unnikrishnan
  - (d) MS Sahoo
70. Yoshinori Ohsumi has won the Nobel Prize in Medicine for his pioneering work on autophagy, what is autophagy?
- (a) Cell eat themselves
  - (b) Re-engineering Cell
  - (c) To destroy cell
  - (d) Multiplication of cell
71. The highest ever FIFA ranking for India was achieved on 20<sup>th</sup> October, 201 with a ranking of:
- (a) 127<sup>th</sup>
  - (b) 137<sup>th</sup>
  - (c) 147<sup>th</sup>
  - (d) 157<sup>th</sup>
72. Indian Boxing Council (IBC) was inducted into the World Boxing Organization (WBO) in the second week of October, the headquarter of WBO is:
- (a) San Juan, Puerto Rico
  - (b) Isla Margarita, Venezuela
  - (c) Santo Domingo, Dominica
  - (d) Bogota, Colombia
73. Which Indian wrestler's bronze medal in London Olympics has been upgraded to silver medal due to the silver medallist failing a dope test?
- (a) Yogeshwar Dutt
  - (b) Rajkumar Baisla
  - (c) Uday Chand
  - (d) Sushil Kumar
74. NITI Ayog has made a short-term and medium-to-long term plan for India to achieve
- (a) 25 medals in 2020 Summer Olympics
  - (b) 50 medals in 2020 Winter Olympics
  - (c) 25 medals in 2024 Summer Olympics
  - (d) 50 medals in 2024 Summer Olympics
75. The first Indian women to win a medal at the Paralympics is:
- (a) Fatima Malik
  - (b) Deepa Malik
  - (c) Sakshi Malik
  - (d) Sushila Malik
76. What is the full form of MASCOS?
- (a) Mizoram Apex Sericulture Co-operative Society Ltd.
  - (b) Mizoram State Agricultural Producers Co-operative Society Ltd.
  - (c) Mizoram Apex Sundry Co-operative Society Ltd.
  - (d) Mizoram State Agricultural Marketing Co-operative Society Ltd.
77. The full form of the abbreviation 'UNODC' is:
- (a) United Nations Organization for Development and Crime
  - (b) United Nations Office on Drugs and Crime
  - (c) United Nations Organization on Disaster and Climate Change
  - (d) United Nations Office for Disaster and Climate Change

78. The full form of MRSAM is:
- (a) Medium Range Surface-to-Air Weapon System
  - (b) Medium Range Surface-to-Air Missile
  - (c) Middle Range Surveillance Assault Missile
  - (d) Middle Range Surveillance Assault Missile System
79. The full form of FFDA in India is:
- (a) Forum for Development Administration
  - (b) Fish Farmers Development Agency
  - (c) Forum for Development Association
  - (d) Families for Depression Awareness
80. What is the acronym of IDSP?
- (a) Integrated Disease Surveillance Practise
  - (b) Integrated Development Studies and Practices
  - (c) Integrated Disease Surveillance Project
  - (d) Integrated Development System and Programme
81. Which country is known as the ‘Garden in the Desert’?
- (a) Abhu Dabi
  - (b) Kenya
  - (c) Morocco
  - (d) Ethiopia
82. The ‘City of Golden Gate’ is:
- (a) Beijing
  - (b) San Francisco
  - (c) Amritsar
  - (d) Tokyo
83. Which country is known as the ‘Land of Pagodas’?
- (a) China
  - (b) Bhutan
  - (c) Tibet
  - (d) Myanmar
84. Which city is known as the ‘Eternal City’?
- (a) Jerusalem
  - (b) Damascus
  - (c) Rome
  - (d) Istanbul
85. Which country is known as the ‘Land of the Golden Fleece’?
- (a) Canada
  - (b) Scotland
  - (c) Australia
  - (d) Ireland
86. British Statistician Sir David Cox was bestowed upon the International Prize in Statistics – 2016 for his work on:
- (a) Survival Analysis Model
  - (b) Probability Analysis Model
  - (c) Data Analysis Model
  - (d) Mortality Analysis Model
87. Haryana has won ‘Best Horticulture State’ award of the Indian Council of Food and Agriculture (ICFA) in September for its efforts on:
- (a) Increase of farmer’s income
  - (b) Increase ceiling of land holdings
  - (c) Standardisation of machinery
  - (d) Irrigation facilities

88. Choose the odd one out of the following options:

The new Secretary-General of United Nations, Antonio Guterres is:

- (a) Portuguese politician and diplomat
- (b) Prime Minister of Portugal from 1995-2000
- (c) UNHCR during June 2005 – December 2015
- (d) Entered politics in 1986 after Carnation Revolution

89. An Indian who will be bestowed in the later part of 2016, the prestigious Knight of Legion of Honor by France for her contribution in biosciences and research is:

- (a) Indra Nooyi
- (b) Kiran Majumdar Shaw
- (c) Naina Lal Kidwai
- (d) Chanda Kochar

90. The first recipient of Nobel Peace Prize from India is:

- (a) Kailash Satyarthi
- (b) Mother Teresa
- (c) Dalai Lama
- (d) Mahatma Gandhi

91. Who has invented 'Plastic Roads'?

- (a) R. Vasudevan
- (b) KS Radhakrishnan
- (c) Arun Mishra
- (d) KP Nair

92. 'Paper Microscope' was invented by:

- (a) Prakash Jha
- (b) Satya Prakash
- (c) Arvind Prakash
- (d) Manu Prakash

93. Bionic Lens was developed by:

- (a) Dr. Simon Webb
- (b) Dr. Sidney Webb
- (c) Dr. Garth Webb
- (d) Dr. Byron Webb

94. Who has invented artificial heart?

- (a) Willem Kolff
- (b) Valdemar Poulsen
- (c) Marvin Camras
- (d) Joseph Burckhalter

95. The first patent for Bar Codes were issued to:

- (a) Joseph Woodland and Bernard Silver
- (b) Ladislo Biro and Leo Hendrik Baekeland
- (c) Stephen Poplawski and Jacques Heim
- (d) Babcock and Wilcox

96. Match the following:

**Items**

**Characteristics**

- |            |  |
|------------|--|
| 1. Virus   | A) secretly monitors computer activity, attempting to gain private information     |
| 2. Trojan  | B) any software, of whatever sort, written with a malicious intent                 |
| 3. Malware | C) gains access to a computer by pretending to be benign                           |
| 4. Spyware | D) that can attach itself to some other program in order to survive and replicate. |

Choose the correct option:

- |     |   |   |   |   |
|-----|---|---|---|---|
|     | 1 | 2 | 3 | 4 |
| (a) | A | B | C | D |
| (b) | A | C | B | D |
| (c) | D | B | C | A |
| (d) | D | C | B | A |

97. A small text file sent to your computer by a web site you have visited is:
- (a) Spam (b) Firewall  
(c) Cookie (d) CAPTCHA
98. A set of rules for solving a problem in a given number of steps is:
- (a) Analog (b) Algorithm  
(c) Backup (d) Binary
99. A measurement of the rate of electrical signals, or “signaling elements,” for modems, networks, serial cables, and other data transfer mediums is:
- (a) Batch process (b) Bits per second  
(c) Baud (d) Batch File

100. Match the following:

**Items**

**Characteristics**

- |                    |  |
|--------------------|--|
| 1. AT keyboard     | A) US standard <u>keyboard</u> introduced in <u>1986</u> by <u>IBM</u> |
| 2. 12-key keyboard | B) consists of keys for the numbers zero through nine                  |
| 3. 20-key keyboard | C) sometimes called half-QWERTY  |
| 4. 104 keyboard    | D) incorporates three additional <u>Microsoft Windows keys</u>         |

Choose the correct option:

- 1 2 3 4
- (a) A B C D  
(b) A C B D  
(c) D B C A  
(d) D C B A

\* \* \* \* \*