

# MANIPUR : PRE-PRIMARY TEACHER

## Recruitment Exam

### GENERAL KNOWLEDGE

- Who among the following was responsible for the destruction of the famous Somnath temple on the Gujarat coast?
  - Muhammad Ghori
  - Mahmud of Ghazni
  - Bakhtiyar Khilji
  - Qutb-ud-din Aibak
- The study of coins, including visual elements such as scripts and images, metallurgical analysis and the contexts in which they have been found is called \_\_\_\_\_.
  - Epigraphy
  - Numismatics
  - Archaeology
  - History
- As per the power rule established in late 1700s in Bengal, which of the following is not true?
  - Zamindars were responsible for paying revenue to the Company.
  - Village ryot paid rent to the zamindar.
  - Jotedars gave out loans to other ryots and sold their produce.
  - Ryots distributed the revenue demand (jama) over villages.
- Who was the first President of the Indian National Congress, founded in 1885?
  - Motilal Nehru
  - W.C. Banerjee
  - Jawaharlal Nehru
  - Mahatma Gandhi
- Where among the following places, did the Ghadar Movement start?
  - Myanmar
  - Australia
  - U.S.A.
  - Japan
- In 1853, from where did the British-built Indian railway system run its first train?
  - Bombay to Thane
  - Bombay to Pune
  - Bombay to Nashik
  - Pune to Thane
- Why was Doctrine of Lapse used by Lord Dalhousie?
  - To wage war with the State of Jhansi
  - To annex the State of Jhansi
  - To arrest Rani Lakshmibai, the queen of Jhansi
  - To execute Rani Lakshmibai
- Which of the following is **not** connected at all with the purpose of Mahatma Gandhi's Dandi March?
  - Civil disobedience movement
  - To disregard the provisions of the salt laws
  - To garner countrywide mass participation for Poorna Swaraj
  - To boycott the foreign clothes
- Which of the following leader was considered as a part of moderate faction in Indian National Congress after the Congress had split between moderates and extremists groups?
  - Lala Lajpat Rai
  - Gopal Krishna Gokhale
  - Bal Gangadhar Tilak
  - Bipin Chandra Pal
- 56th International Film Festival held from 20th to 28th November, 2025 in:
  - Mumbai
  - Hyderabad
  - Chennai
  - Goa
- Who among the following led the abolition of Sati influenced by the frontal attack launched by Indian reformers?
  - Jyotiba Phule
  - Gopalhari Deshmukh
  - Raja Ram Mohan Roy
  - B.M. Malabari
- 25th Summer Deaflympics 2025 were held in:
  - Tokyo
  - London
  - Paris
  - Barcelona

|      |      |      |       |       |       |
|------|------|------|-------|-------|-------|
| 1. B | 2. B | 3. A | 4. B  | 5. C  | 6. A  |
| 7. B | 8. D | 9. B | 10. D | 11. C | 12. A |

13. Which of these were main points of the Mountbatten Plan?
- Punjab and Bengal Legislative Assemblies would meet in two groups, Hindus and Muslims, to vote for Independence with Partition.
  - Sindh would be part of Pakistan.
  - NWFP will be part of Pakistan while Sylhet district of Bengal will be part of India.
  - In case of partition, two dominions and two constituent assemblies would be created.
- A. Only I and II      B. Only II and III  
C. Only I and IV      D. I, II, III and IV
14. Yumnam Jatra Singh gets Padma Shri in 2026. He is related with:
- A. Medicine      B. Literature  
C. Art      D. Sports
15. Which among the following has Ragini as a popular form of folk song?
- A. Madhya Pradesh      B. Haryana  
C. Rajasthan      D. West Bengal
16. What do we call the market value of all final goods and services produced within a domestic territory of a country measured in a year?
- A. Gross Domestic Product at Market Prices  
B. GDP at Factor Cost  
C. Net Domestic Product at Market Prices  
D. NDP at Factor Cost
17. Average propensity to consume is \_\_\_\_.
- A. the savings per unit of income.  
B. the consumption per unit of income.  
C. the change in savings per unit change in income.  
D. the change in consumption per unit change in income.
18. Which of the following statements are true about the Silk Route?
- The Silk Route was exclusively used for trading of silk.
  - The route also served as a great channel for the transmission of cultures.
  - The Silk Route bifurcates into Eastern, Western, Northern and Southern Silk Route.
  - Khotan was one of the most important place on the Southern Silk Route.
- A. II and IV      B. I, II and III  
C. II, III and IV      D. I, II, III and IV
19. Which of the following statements are true with respect to Sufism?
- They preached spirituality through music and doctrines.
  - The Sufis were very conservative in their religious outlook.
  - The Sufis were organised into religious orders or silsilahs.
  - These started the tradition of piri-muridi.
- A. I, II and III      B. I, III and IV  
C. II, III and IV      D. I, II, III and IV
20. The difference between the value of exports and value of imports of goods of a country in a given period of time is called:
- A. The Balance of Payments (BoP)  
B. Overall balance of payments deficit (surplus)  
C. Net Invisibles  
D. Balance of Trade (BoT)
21. India is part of which of the regional and global economic groupings?
- A. G7      B. G20  
C. ASEAN      D. European Union
22. Who is the winner of ICC Men's T-20 Cricket World Cup 2026?
- A. Australia      B. England  
C. India      D. Sri Lanka
23. Whose removal is initiated by the process of impeachment for 'Violation of the Constitution'?
- A. Vice President      B. President  
C. Prime Minister      D. Speaker
24. What is Fiscal Deficit?
- A. A situation when the government's income and tax receipts fail to cover its expenditure  
B. A sustained rise in the general price level  
C. The amount of money the Government borrows to overcome revenue deficit  
D. A fall in the exchange rate which reduces the value of a currency in terms of other currencies
25. Which factors contribute to soil erosion?
- A. Only rain and human activities like construction  
B. Only human activities like construction and overgrazing of animals  
C. Only rain and wind  
D. Human activities like construction, overgrazing of animals, rain and wind

|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| 13. C | 14. C | 15. B | 16. A | 17. B | 18. A | 19. B |
| 20. D | 21. B | 22. C | 23. B | 24. C | 25. D |       |

26. For horticulture and floriculture, which of these is **not** a focus area?  
 A. Seed farms  
 B. Promoting sustainable aquaculture practices  
 C. Bee-keeping  
 D. Tissue culture laboratories
27. Surface mulching is an example of which among the following?  
 A. Mechanical and agronomic soil and water conservation  
 B. Watershed based management system  
 C. Resource conserving technologies  
 D. Water harvesting through tanks
28. The purpose of the subsidy is:  
 I. Productivity Enhancement  
 II. Promotion of Technology  
 III. Infrastructural Development  
 IV. Export Promotion  
 V. To increase the profit of farmers  
 A. I, II and III  
 B. II, III and IV  
 C. I, II, III and IV  
 D. I, II, III, IV and V
29. Ad Valorem Tax refers to:  
 A. tax imposed on the price charged in the market  
 B. tax imposed on the producers irrespective of the level of output produced  
 C. tax imposed as a levy on the units of output produced  
 D. tax imposed on the income of the producers
30. What is acidification and nitrate leaching?  
 A. Oxygen depletion reducing fish population and species diversity  
 B. A process of chemical seepage into soils  
 C. Impact on air quality manifests in terms of nitric acid gas emissions  
 D. Use of natural gas to manufacture inorganic fertilizer
31. Which of these measures will have negative impact on environment?  
 A. Tillage  
 B. Watershed based management system  
 C. Resource conserving technologies  
 D. Water harvesting through tanks
32. A method of growing two or more crops simultaneously without any definite row pattern is called \_\_\_\_\_.  
 A. Mixed-cropping  
 B. Sequence-cropping  
 C. Inter-cropping  
 D. Relay/Ratoon-cropping
33. Which of the following are effects of over-irrigation and poor drainage?  
 I. Waterlogging  
 II. Soil salinization  
 III. Water tables rising artificially  
 IV. Preventing plant roots from getting adequate oxygen  
 A. I and II  
 B. II and III  
 C. I, III and IV  
 D. I, II, III and IV
34. Contour cultivation, contour strip-cropping, mixed-cropping and tillage are examples of which of these terminologies?  
 A. Integrated pest and nutritional management  
 B. Mechanical and agronomic soil and water conservation  
 C. Watershed based management system  
 D. Resource conserving technologies
35. For successful inter-cropping, which of these conditions are required to be ideally fulfilled?  
 I. Competition for light should be minimum among the different crops sown.  
 II. Complementarity must exist between crops sown.  
 III. The time of peak nutrient demand of component crops should not overlap.  
 IV. The difference in maturity of component crops should be at least 120 days.  
 A. I, II and IV  
 B. II, III and IV  
 C. I, II and III  
 D. III and IV
36. Match the columns:
- | (Nutrient)  |                   | (Examples)               |                  |
|-------------|-------------------|--------------------------|------------------|
| (a) Protein | (b) Carbohydrates | (i) Calcium, Phosphorous | (ii) Cholesterol |
| (c) Fat     | (d) Minerals      | (iii) Glucose            | (iv) Myosin      |
| (a)         | (b)               | (c)                      | (d)              |
| A. (i)      | (iii)             | (ii)                     | (iv)             |
| B. (iii)    | (iv)              | (ii)                     | (i)              |
| C. (i)      | (ii)              | (iii)                    | (iv)             |
| D. (iv)     | (iii)             | (ii)                     | (i)              |
37. In India, who appoints the Advocate General of a State?  
 A. Governor of the State  
 B. Prime Minister of India  
 C. President of India  
 D. Chief Minister of the State

26. B

27. A

28. C

29. A

30. B

31. A

32. A

33. D

34. B

35. C

36. D

37. A

38. When did the Constitution of WHO come into force – a date which we now celebrate as World Health Day every year?  
 A. 5 April 1948                      B. 7 April 1948  
 C. 6 April 1948                      D. 8 April 1948
39. India was named 'Bharat' after the name of the Bharat tribe. In which of the following Vedas is this tribe first mentioned?  
 A. Rigveda                              B. Samaveda  
 C. Atharvaveda                      D. Yajurveda
40. What do you call the drugs that bind to the receptor site and inhibit its natural function?  
 A. Antidepressants                      B. Agonist  
 C. Antagonists                      D. Depressants
41. 'Prachand' mentioned in the news sometimes, is a:  
 A. Light Combat Aircraft  
 B. Light Combat Helicopter  
 C. Crossover Utility Vehicle  
 D. Light weight autonomous UAV
42. When was the None of the Above (NOTA) ballot option first implemented in India?  
 A. 2015                                  B. 2004  
 C. 2013                                  D. 2010
43. Which of the following is/are one of the United Nations Sustainable Development Goals?  
 (a) Zero Hunger                      (b) Climate Action  
 (c) Life Below Water                      (d) Quality Education  
 A. (a), (b), (c) and (d)                      B. (a) and (b)  
 C. (b) and (c)                      D. (a), (c) and (d)
44. Match the columns.  

| (Column-A)               | (Column-B) |
|--------------------------|------------|
| (a) Electric current     | (i) Henry  |
| (b) Potential difference | (ii) Farad |
- (c) Capacitance                      (iii) Volt  
 (d) Inductance                      (iv) Ampere  
 (a)                      (b)                      (c)                      (d)  
 A. (i)                      (ii)                      (iii)                      (iv)  
 B. (ii)                      (i)                      (iii)                      (iv)  
 C. (iv)                      (iii)                      (ii)                      (i)  
 D. (i)                      (iii)                      (ii)                      (iv)
45. The Pradhan Mantri JI-VAN Yojana aims to:  
 A. built climate resilient cities  
 B. control air pollution in metro cities  
 C. provide financial support to integrated bio-ethanol projects  
 D. promote conversion of organic waste into biogas
46. In which year the "Manipur Municipality Act" was introduced in the Urban areas of the State?  
 A. 1976                                  B. 1977  
 C. 1969                                  D. 1975
47. First Manipur State Assembly was constituted on:  
 A. August 1948                      B. July 1948  
 C. May 1948                      D. July 1949
48. Who was the last King of Manipur?  
 A. Maharaja Bodhachandra Singh  
 B. Maharaja Tikendrajit Singh  
 C. Maharaja Ranjit Singh  
 D. Maharaja Purandar Singh
49. What is the total population of Manipur as per the 2011 census?  
 A. 30,48,756                      B. 28,55,794  
 C. 32,27,309                      D. 22,18,960
50. Which one of the following is not a physical division of Manipur?  
 A. Churachandpur                      B. Manipur Hills  
 C. Manipur Valley                      D. Jiribam Plains

### BASIC MATHEMATICS

51. Find the average of the following sets of numbers.  
 693, 456, 876, 532, 934, 691, 596, 398, 682  
 A. 550.50                                  B. 750.80  
 C. 650.89                                  D. 725.90
52. The largest three-digit number that gives the same remainder 2 when divided by 3, 5 and 9 is \_\_\_\_\_.  
 A. 999                                      B. 984  
 C. 998                                      D. 992
53. A person can hit a target 5 times out of 8 shots. If he fires 10 shots, what is the probability that he will hit the target twice?  
 A.  $\frac{1135 \times 3^8}{8^{10}}$                                   B.  $\frac{1165 \times 3^8}{8^{10}}$   
 C.  $\frac{1175 \times 3^8}{8^{10}}$                                   D.  $\frac{1125 \times 3^8}{8^{10}}$

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 38. B | 39. A | 40. C | 41. B | 42. C | 43. A | 44. C | 45. C |
| 46. A | 47. B | 48. A | 49. B | 50. A | 51. C | 52. D | 53. D |

54. The angle of elevation of the top of a tower from the top of a building whose height is 680 m is  $45^\circ$  and the angle of elevation of the top of same tower from the foot of the same building is  $60^\circ$ . What is the height (in m) of the tower?
- A.  $340(3 + \sqrt{3})$       B.  $310(3 - \sqrt{3})$   
 C.  $310(3 + \sqrt{3})$       D.  $340(3 - \sqrt{3})$
55. The median of a set of 11 distinct observations is 73.2. If each of the largest five observations of the set is increased by 3, then the median of the new set:
- A. is 3 times that of the original set  
 B. is increased by 3  
 C. remains the same as that of the original set  
 D. is decreased by 3
56. In a trapezium ABCD, AB and DC are parallel to each other with a perpendicular distance of 8 m between them. Also,  $(AD) = (BC) = 10$  m, and  $(AB) = 15$  m  $<$   $(DC)$ . What is the perimeter (in m) of the trapezium ABCD?
- A. 50      B. 66  
 C. 62      D. 58
57. A prism and a pyramid have the same base and the same height. Find the ratio of the volumes of the prism and the pyramid.
- A. 2 : 3      B. 3 : 1  
 C. 1 : 3      D. 3 : 2
58. If  $x = \sqrt{64} + \sqrt{121} - \sqrt{169}$ , then find the value of  $x^2$ .
- A. 16      B. 25  
 C. 36      D. 49
59. If two LED TVs and one mobile phone cost ₹ 31,000, while two mobile phones and one LED TV cost ₹ 35,000, then the value of one mobile phone is:
- A. ₹ 13,500      B. ₹ 12,500  
 C. ₹ 13,000      D. ₹ 12,000
60. What is the volume of a cylinder if the radius of the cylinder is 10 cm and height is 20 cm? (Take  $\pi = 3.14$ )
- A.  $6280 \text{ cm}^3$       B.  $5306 \text{ cm}^3$   
 C.  $6260 \text{ cm}^3$       D.  $5280 \text{ cm}^3$
61. There is food provision for 100 men for 30 days. If the number of men is reduced to 80, then the number of days the food could last for is:
- A. 28      B. 35  
 C.  $37\frac{1}{2}$       D. 37
62. If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours?
- A. 15      B. 14  
 C. 24      D. 30
63. If  $a + b + c = 5$  and  $ab + bc + ca = 10$ , then  $a^3 + b^3 + c^3 - 3abc$  is:
- A. -25      B. 25  
 C. -50      D. -75
64. Factorisation of  $3\sqrt{3}x^3 - 8$  is:
- A.  $(\sqrt{3}x - 2)(3x^2 + 2\sqrt{3}x + 4)$   
 B.  $(\sqrt{3}x + 2)(3x^2 + 2\sqrt{3}x + 4)$   
 C.  $(\sqrt{3}x - 2)(3x^2 + 2\sqrt{3}x + 8)$   
 D.  $(\sqrt{3}x - 2)(3x^2 - 2\sqrt{3}x + 4)$
65. A can do a work in 25 days and B can do the same work in 20 days. If they work together for 5 days and then A leaves, in how many days can B finish the remaining work?
- A. 10      B. 11  
 C. 12      D. 14
66. If the exterior angle of a triangle is  $60^\circ$  and the interior opposite angles are in the ratio 1 : 3, then the angles of the triangle are:
- A.  $15^\circ, 45^\circ, 110^\circ$       B.  $120^\circ, 10^\circ, 50^\circ$   
 C.  $120^\circ, 45^\circ, 15^\circ$       D.  $60^\circ, 90^\circ, 30^\circ$
67. Which of the following is **not** true?
- A.  $\frac{8}{7} + \frac{3}{8} = \frac{3}{8} + \frac{8}{7}$       B.  $\frac{8}{7} \times \frac{3}{8} = \frac{3}{8} \times \frac{8}{7}$   
 C.  $\frac{8}{7} \div \frac{3}{8} = \frac{8}{7} \times \frac{8}{3}$       D.  $\frac{8}{7} - \frac{3}{8} = \frac{3}{8} - \frac{8}{7}$
68. The value of  $\sqrt{\sqrt{256} + \sqrt{81}}$  is:
- A. 5      B. 6  
 C. 7      D. 8
69. The standard form of 12300000 is \_\_\_\_\_.
- A.  $1.23 \times 10^8$       B.  $12.3 \times 10^8$   
 C.  $1.23 \times 10^7$       D.  $1.23 \times 10^9$
70. If a family of 10 persons purchases ration for 15 days and five guests join the family from the first day. How long will the ration last?
- A. 15 days      B. 12 days  
 C. 10 days      D. 8 days

|       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 54. A | 55. C | 56. C | 57. B | 58. C | 59. C | 60. A | 61. C | 62. C |
| 63. A | 64. A | 65. B | 66. C | 67. D | 68. A | 69. C | 70. C |       |

71. If Nidhi purchases a book of ₹ 500 and GST is 12 per cent. She will pay ₹ \_\_\_\_\_.

- A. 60                      B. 560  
C. 640                      D. 660

72. The compound interest on ₹ 10 @ 10% per annum for two years will be \_\_\_\_\_.

- A. ₹ 2                      B. ₹ 2.10  
C. ₹ 2.20                      D. ₹ 2.30

73.  $\left(\frac{3a}{5} + \frac{2b}{3}\right)\left(\frac{3a}{5} - \frac{2b}{3}\right) = ?$

- A.  $\frac{3a^2}{5} - \frac{2b^2}{3}$                       B.  $\frac{9a^2}{5} - \frac{4b^2}{9}$

C.  $\frac{9a^2}{25} - \frac{4b^2}{9}$

D.  $\frac{9a^2}{25} - \frac{4b^2}{3}$

74. The present age of the father is three times than that of his son. After three years the age of the father will be 7 years more than twice the age of the son. The present age of the son is \_\_\_\_\_ years.

- A. 8                      B. 9  
C. 10                      D. 11

75. 15 added to the product of y and 13 give us 54. The value of y is:

- A. 2                      B.  $\frac{69}{13}$   
C. 3                      D. 4

### ENGLISH LANGUAGE

76. Choose the correct option which has the same relation like that in the given words:

vociferous : noisy :: intransigent : \_\_\_\_\_

- A. pliant                      B. docile  
C. flexible                      D. stubborn

77. Convert the following sentence into Simple Past tense:  
Vinay hears a strange noise in the night.

- A. Vinay will hear a strange noise in the night.  
B. Vinay would have heard a strange noise in the night.  
C. Vinay heard a strange noise in the night.  
D. Vinay has heard a strange noise in the night.

78. Choose the appropriate one word substitute for the given words/sentence:

Fear of clowns

- A. Cynophobia                      B. Gamophobia  
C. Geraphobia                      D. Coulrophobia

79. Fill in the blank with an appropriate option:

Annu, though ill-equipped for the project, had \_\_\_\_\_ tried her best.

- A. for                      B. nevertheless  
C. last                      D. if

80. Choose from the options, the synonym of the given word:

Unassailable

- A. Vulnerable                      B. Insecure  
C. Invincible                      D. Unprotected

81. Choose the correctly spelt word from the options:

- A. Persumptious                      B. Blatant  
C. Cumullative                      D. Benovolent

82. Fill in the blank with the appropriate option:

The ancient fountain was hidden \_\_\_\_\_ the trees.

- A. among                      B. form  
C. follow                      D. during

83. Change the given sentence from direct speech to indirect speech:

Mr. Mathur said, "I want to meet your parents."

- A. Mr. Mathur said that he wanting to meet my parents.  
B. Mr. Mathur said he had wanted to meet my parents.  
C. Mr. Mathur said that he want to meet my parents.  
D. Mr. Mathur said that he wanted to meet my parents.

84. Fill in the blank with the correct option:

That white house over there \_\_\_\_\_ belong to my family.

- A. used to                      B. get used to  
C. ever                      D. uses

85. Fill in the blank with the correct option:

There are \_\_\_\_\_ birds in the countryside now than there were 30 years ago.

- A. much  
B. a little  
C. fewer  
D. least

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 71. B | 72. B | 73. C | 74. C | 75. C | 76. D | 77. C | 78. D |
| 79. B | 80. C | 81. B | 82. A | 83. D | 84. A | 85. C |       |

86. Fill in the blank with the correct option:

The cold weather has really \_\_\_\_\_ her health.

- A. effected                      B. affected  
C. affect                        D. effects

87. Choose the correct meaning of the given proverb/idiom:

Jump on the bandwagon

- A. To get out of difficulty  
B. To judge by appearance  
C. To join a popular trend  
D. To get into trouble

88. Choose the correctly spelt word from the options:

- A. Sacriligeous                B. Sacrilegious  
C. Sacriligious               D. Sacrilegeous

89. In the given question, find out which part of the sentence (I/II/III/IV) has an error. Choose the correct option accordingly.

You can drink (I)/ chocolate milk either (II)/ haute in the winter (III)/ or cold in the summer. (IV)

- A. I                                B. II  
C. III                              D. IV

90. Fill in the blank using the appropriate option.

They say that a new baby is \_\_\_\_\_ every five minutes.

- A. born                         B. borne  
C. bore                         D. bourn

91. Choose from the options, the correct synonym of the given word:

Expediency

- A. Expense                    B. Convenience  
C. Disadvantage            D. Altruism

92. Choose from the options, the correct antonym of the given word:

Demure

- A. Humble                    B. Shy  
C. Arrogant                  D. Coy

93. Fill in the blank with the correct option:

The salesman was \_\_\_\_\_ travelling up and down the country.

- A. used to                      B. got used to  
C. use                            D. uses

94. Choose the correctly spelt word:

- A. Puritanical                B. Puirtanical  
C. Pruitanical               D. Pirutanical

95. Choose the correct meaning of given proverb/idiom.

Hit the nail on the head

- A. Go to bed  
B. Do or say something exactly right  
C. Series of problems  
D. Someone who lacks intelligence

**Directions (Qs. No. 96-100):** Read the following passage carefully and answer the questions.

The history of civilization shows how man always has to choose between making the right and wrong use of the discoveries of science. This has never been more true than in our own age. In a brief period amazing discoveries have been made and applied to practical purpose.

It would be ungrateful not to recognize how immense are the boons, which science has given to mankind. It has brought within the reach of multitudes benefits and advantages which only a short time ago were the privilege of the few. It has shown how malnutrition, hunger and disease can be overcome. It has not only lengthened life but it has deepened its quality. Fields of knowledge, experience and recreation open in the past only a few, have been thrown open to millions. Through the work of science the ordinary man today has been given the opportunity of a longer and fuller life than was ever possible to his grandparents.

96. Amazing discoveries of science have been made:

- A. in a brief period        B. in a long period  
C. in our forefather's age   D. in centuries

97. The boons of science are:

- A. few                            B. found nowhere  
C. immense                    D. very few

98. Which of the following can be overcome with the help of science?

- A. Malnutrition              B. Disease  
C. Hunger                      D. All of these

99. Science provides a chance of:

- A. shorter and fuller life  
B. longer and fuller life  
C. longer and dull life  
D. none of these

100. What on the whole, has science done to mankind?

- A. It has reduced the quality of our life  
B. It has shortened our life  
C. It has deepened the quality of life  
D. It has done a great harm to mankind

|       |       |       |       |       |       |        |       |
|-------|-------|-------|-------|-------|-------|--------|-------|
| 86. B | 87. C | 88. B | 89. C | 90. A | 91. B | 92. C  | 93. A |
| 94. A | 95. B | 96. A | 97. C | 98. D | 99. B | 100. C |       |

## EXPLANATORY ANSWERS

1. Mahmud of Ghazni, the ruler of the Ghaznavid Empire, invaded India several times in the early eleventh century. In 1025–1026 CE, he attacked the famous Somnath Temple on the Gujarat coast. The temple was extremely wealthy due to donations from pilgrims and rulers, making it a major target for plunder. Mahmud destroyed the temple and carried away large quantities of treasure. This raid became one of the most well-known events of his Indian expeditions.
2. Numismatics is the scientific study of coins and currency used in different historical periods. Scholars examine the scripts, images, symbols, and portraits found on coins to understand political authority and cultural influences. It also involves metallurgical analysis to determine the metals used and their purity. The places where coins are discovered help historians reconstruct trade networks and economic conditions of past societies.
3. In Bengal during the late eighteenth century, the British introduced a revenue system in which zamindars were responsible for paying land revenue to the East India Company. The ryots were cultivators who paid rent to the zamindars for farming the land. Jotedars were relatively prosperous peasants who often lent money to ryots and sometimes controlled local agricultural production. The responsibility of distributing the revenue demand (jama) across villages belonged to zamindars, not ryots, making this statement incorrect.
4. The Indian National Congress was established in 1885 as a political platform for Indians to discuss administrative reforms and political representation. Its first session was held in Bombay, where Womesh Chandra (W.C.) Banerjee was elected as the first President. He was a distinguished lawyer and nationalist leader who presided over the meeting of early Congress leaders from different parts of India. His presidency marked the formal beginning of organized nationalist politics in India.
5. The Ghadar Movement originated among Indian immigrants living in the United States, particularly on the west coast around California in the early twentieth century. Many Indian workers and students living there formed the Ghadar Party in 1913 to organize revolutionary activities against British rule in India. The movement published the newspaper "Ghadar" to spread nationalist and revolutionary ideas. From the United States, the movement tried to mobilize Indians worldwide for armed revolt against colonial rule.
6. The first passenger train in India began its journey on 16 April 1853 during British rule. It ran between Bombay (now Mumbai) and Thane, covering a distance of about 34 kilometres. The train had 14 carriages and was pulled by three steam locomotives named Sahib, Sindh, and Sultan. This railway line marked the beginning of the Indian railway system and played an important role in improving transportation, trade, and administrative control during the colonial period.
7. The Doctrine of Lapse was a policy introduced by Lord Dalhousie, the Governor-General of India from 1848 to 1856. According to this doctrine, if a ruler of a princely state died without a natural male heir, the British could annex that state. When the ruler of Jhansi, Raja Gangadhar Rao, died in 1853, his adopted son was not recognized by the British. Using the Doctrine of Lapse, Dalhousie annexed Jhansi to the British Empire, which later became one of the causes of the Revolt of 1857.
8. The Dandi March, led by Mahatma Gandhi in March–April 1930, was organized as part of the Civil Disobedience Movement. Its main objective was to protest against the British salt laws, which imposed a monopoly and tax on salt production. Gandhi marched from Sabarmati Ashram to Dandi to symbolically produce salt and break the law. The movement aimed to mobilize nationwide participation for Poorna Swaraj (complete independence). Boycotting foreign clothes was associated with the Swadeshi movement and earlier nationalist campaigns, not specifically with the purpose of the Dandi March.
9. After the split in the Indian National Congress at the Surat Session in 1907, the Congress was divided into moderates and extremists. Gopal Krishna Gokhale was one of the most prominent leaders of the moderate faction. Moderates believed in achieving reforms through constitutional methods, petitions, and dialogue with the British government. In contrast, leaders like Bal Gangadhar Tilak, Lala Lajpat Rai, and Bipin Chandra Pal were associated with the extremist group advocating stronger political action.
10. The 56th International Film Festival of India (IFFI) was held from 20 to 28 November 2025 in Goa. Goa has been the permanent venue of this prestigious film festival for many years. The festival showcases Indian and international cinema, promotes cultural exchange, and provides a platform for filmmakers from around the world. It is organized by the Ministry of Information and Broadcasting, Government of India, along with other film-related institutions.

11. Raja Ram Mohan Roy was a prominent social reformer of early nineteenth-century India who strongly opposed the practice of Sati, in which a widow was forced or persuaded to immolate herself on her husband's funeral pyre. Through writings, petitions, and public debates he highlighted the inhuman nature of the practice and argued that it had no true sanction in Hindu scriptures. His efforts greatly influenced Governor-General Lord William Bentinck, who finally passed Regulation XVII in 1829 banning Sati in British India.
12. The 25th Summer Deaflympics 2025 were held in Tokyo, Japan from 15 November to 26 November 2025. This edition was historically important because it marked the 100th anniversary of the Deaflympics, which first started in Paris in 1924. Japan hosted the Deaflympics for the first time, using several modern sports facilities originally developed for the Tokyo 2020 Olympic and Paralympic Games. Thousands of athletes from many countries participated in multiple sporting events designed for deaf athletes.
13. The Mountbatten Plan, announced on 3 June 1947, proposed the transfer of power from British rule to two separate dominions. According to the plan, the Punjab and Bengal Legislative Assemblies were to meet in two groups—Muslim and non-Muslim members—to decide whether their provinces should be partitioned, which corresponds to statement I. It also provided that if partition occurred, two dominions (India and Pakistan) and separate constituent assemblies would be formed, which matches statement IV. The other statements do not correctly reflect the provisions of the plan as framed.
14. Yumnam Jatra Singh, a noted personality from Manipur, was awarded the Padma Shri in 2026 for his contribution in the field of art and culture. He is known for preserving and promoting traditional cultural practices and artistic heritage of the region. His work has helped in sustaining indigenous artistic expressions and encouraging younger generations to remain connected with traditional forms. The Padma Shri recognizes such distinguished contributions to Indian cultural life.
15. Ragini is a well-known folk song tradition of Haryana and forms an important component of the state's cultural expression. These songs are usually performed in a narrative style, often accompanied by traditional instruments and presented in village gatherings or folk theatre forms such as Saang. Ragini compositions frequently deal with themes of heroism, romance, morality, and social issues. Because of its popularity and cultural significance, Ragini has become a defining element of Haryana's folk music heritage.
16. The market value of all final goods and services produced within the domestic territory of a country during a year is called Gross Domestic Product at Market Prices (GDPMP). It includes the total value of output produced within the country's borders irrespective of whether the producers are domestic residents or foreign entities. The term "gross" indicates that depreciation is not deducted, and "market prices" means the valuation includes indirect taxes and excludes subsidies. Therefore GDP at market prices represents the total market value of final production within a year.
17. Average Propensity to Consume (APC) refers to the proportion of total income that households spend on consumption. It is calculated using the formula  

$$APC = \text{Consumption} \div \text{Income}.$$

This shows how much of each unit of income is used for consumption rather than saving. For example, if a household earns 100 units of income and spends 80 units on consumption, the APC equals  $80/100 = 0.8$ . Hence, it represents consumption per unit of income.
18. The Silk Route was a vast network of trade routes connecting China, Central Asia, India, Persia and the Mediterranean world. It was not limited only to silk trade; many commodities such as spices, precious stones, horses and textiles were exchanged along these routes. The routes also acted as important channels for the spread of religions, technologies, art and cultural ideas between different civilizations. Khotan, located in Central Asia, was an important centre on the Southern Silk Route, known for trade and cultural exchange.
19. Sufism refers to the mystical tradition within Islam that emphasizes spiritual devotion, love of God and inner purification. Sufi saints often spread their teachings through music, poetry and spiritual doctrines, making their message accessible to common people. They organised themselves into spiritual lineages called silsilahs (orders), such as the Chishti and Suhrawardi orders. The relationship between the spiritual master (pir) and disciple (murid) became an important tradition known as piri-muridi.
20. The difference between the value of exports and the value of imports of goods of a country during a specific period is called the Balance of Trade. It measures the trade position of a country in terms of goods only. If exports exceed imports, the country has a trade surplus, while if imports exceed exports, it results in a trade deficit. Balance of Trade is a major component of the broader Balance of Payments, which also includes services, investments and financial flows.

21. India is a member of the Group of Twenty (G20), a major international forum of the world's leading economies created to discuss global economic stability, financial cooperation and development issues. The G20 includes both developed and developing countries and collectively represents a large share of global GDP and trade. India actively participates in G20 summits and policy discussions. India is not a member of the G7, ASEAN, or the European Union, though it maintains diplomatic and economic relations with them.
22. The ICC Men's T-20 Cricket World Cup 2026 was won by India. The tournament was co-hosted by India and Sri Lanka, and the final was played on 8 March 2026 at Ahmedabad. In that final, India defeated New Zealand by 96 runs to win the title and secure their third ICC Men's T20 World Cup crown. Therefore, among the given options, India is the correct answer.
23. The President of India can be removed from office through the process of impeachment for 'violation of the Constitution', as provided under Article 61 of the Indian Constitution. The impeachment procedure may begin in either House of Parliament and requires a special majority to pass the charge. After investigation, if the second House also approves the motion with the required majority, the President is removed from office.
24. Fiscal deficit refers to the difference between the government's total expenditure and its total receipts excluding borrowings. When the government spends more money than it earns through taxes and other revenues, the gap must be financed by borrowing. It therefore indicates the total borrowing requirement of the government in a financial year and reflects the financial position of the government.
25. Soil erosion occurs when the fertile upper layer of soil is removed from the land surface. Natural agents such as rainfall and wind can wash or blow away loose soil particles. Human activities like construction, deforestation, and overgrazing of animals remove vegetation cover and disturb soil structure, making the land more vulnerable to erosion. Therefore both natural processes and human activities together contribute to soil erosion.
26. Horticulture and floriculture focus on the cultivation of fruits, vegetables, flowers, ornamental plants and plantation crops. Important support activities include seed farms for quality planting material, bee-keeping for pollination and honey production, and tissue culture laboratories for rapid multiplication of disease-free plants. These activities directly support horticultural crop production and quality improvement. Aquaculture, however, relates to fish and aquatic organism farming, which belongs to fisheries rather than horticulture or floriculture.
27. Surface mulching involves covering the soil surface with materials such as crop residues, straw, leaves or plastic sheets. This practice helps reduce evaporation, control soil erosion, maintain soil moisture and suppress weed growth. It is widely used as an agronomic soil and water conservation technique, sometimes combined with mechanical measures to protect soil structure. By conserving moisture and preventing runoff, mulching improves soil productivity and supports sustainable crop production.
28. Subsidies in agriculture are provided by governments to support farmers and strengthen agricultural development. They aim at enhancing productivity through access to inputs such as seeds, fertilizers and irrigation facilities. Subsidies also help in promoting modern technologies, encouraging farmers to adopt improved cultivation practices. In addition, they support infrastructural development such as irrigation systems, storage and transport, and sometimes assist export promotion by making agricultural products more competitive in global markets.
29. Ad valorem tax is a tax calculated as a percentage of the value or price of a good or service. Instead of being fixed per unit of output, it varies according to the market price of the product. For example, sales tax or value-added tax is often imposed as a percentage of the product's price. When the price of the commodity increases, the amount of ad valorem tax collected also increases proportionally.
30. Acidification and nitrate leaching occur when excessive use of fertilizers or chemical substances causes nitrates and acidic compounds to move downward through the soil with water. These chemicals seep into deeper soil layers and sometimes reach groundwater. This process can reduce soil fertility, alter soil pH and contaminate water sources. Therefore acidification and nitrate leaching refer to the movement and accumulation of chemical substances in soil and groundwater through seepage.
31. Tillage refers to the mechanical turning and loosening of soil before sowing crops. Excessive or improper tillage disturbs soil structure, accelerates soil erosion and leads to loss of soil organic matter. Continuous deep tillage can also reduce soil moisture retention and increase vulnerability to wind and water erosion. Because of these negative ecological effects, intensive tillage is considered to have a harmful impact on the environment compared to conservation practices.

32. Mixed cropping is the practice of growing two or more crops simultaneously on the same piece of land without maintaining any specific row arrangement. The crops are mixed together and grown randomly. This method helps farmers reduce the risk of crop failure because if one crop performs poorly, the other may still yield produce. It also helps in better utilization of soil nutrients and reduces the spread of pests and diseases.
33. Over-irrigation and poor drainage create several problems in agricultural soils. Excess water accumulates in the soil leading to waterlogging, which restricts normal plant growth. Continuous water accumulation also causes soil salinization, where salts build up in the soil surface. Over-irrigation raises the water table artificially, bringing salts upward. These conditions prevent plant roots from receiving sufficient oxygen, which ultimately reduces crop productivity.
34. Practices such as contour cultivation, contour strip-cropping, mixed cropping and tillage are methods used to conserve soil and water in agricultural fields. Contour cultivation and strip cropping reduce runoff and soil erosion on sloping land. Mixed cropping helps protect soil from erosion by maintaining vegetation cover. These practices together fall under mechanical and agronomic soil and water conservation techniques aimed at maintaining soil fertility and preventing land degradation.
35. Successful inter-cropping requires proper compatibility between the crops grown together. Competition for light, water and nutrients should be minimal so that each crop can grow efficiently. The crops should show complementarity, meaning they utilize resources differently and support each other's growth. The peak nutrient demand of the crops should occur at different times, preventing excessive competition. However, a fixed maturity difference of 120 days is not necessary for successful inter-cropping.
36. Nutrients perform different biological functions and have characteristic examples. Proteins are structural and functional biomolecules, and myosin, a muscle protein involved in contraction, is an example of protein. Carbohydrates serve as the main source of energy, and glucose is a simple carbohydrate widely used by cells for energy production. Fats (lipids) include substances such as cholesterol, which plays roles in membrane structure and hormone synthesis. Minerals are inorganic nutrients required in small amounts, and calcium and phosphorus are important examples involved in bone formation and metabolic processes.
37. The Advocate General is the highest law officer of a state government in India. According to Article 165 of the Constitution of India, the Governor appoints the Advocate General. The person appointed must be qualified to be appointed as a judge of a High Court. The Advocate General advises the state government on legal matters and represents the state in legal proceedings before courts when required.
38. The Constitution of the World Health Organization (WHO) came into force on 7 April 1948 after the required number of countries ratified it. This date is commemorated every year as World Health Day. The day is observed globally to raise awareness about important public health issues and to promote international cooperation in improving health standards and healthcare systems worldwide.
39. The Bharata tribe is first mentioned in the Rigveda, the oldest of the four Vedas and one of the earliest literary sources of ancient Indian history. The Rigvedic hymns describe various tribes, including the Bharatas, who were prominent in the region of the Saraswati-Drishadvati area. Over time the name Bharata came to symbolize the people and the land, and later texts used the term Bharat to refer to the Indian subcontinent.
40. Antagonists are drugs or chemical substances that bind to receptor sites but block or inhibit the normal biological response that would occur when the natural ligand binds to the receptor. By occupying the receptor, antagonists prevent activation and thereby reduce or stop the physiological effect. This mechanism is widely used in pharmacology to control or counteract excessive biological activity caused by certain neurotransmitters or hormones.
41. 'Prachand' is the Light Combat Helicopter (LCH) developed by Hindustan Aeronautics Limited (HAL) for the Indian Armed Forces. It is designed for high-altitude combat operations, particularly in mountainous regions such as the Himalayas. The helicopter is equipped with advanced avionics, stealth features, air-to-air and air-to-ground missiles, rockets and a 20 mm gun. It strengthens India's indigenous defence manufacturing capability and improves combat readiness in difficult terrains.
42. The None of the Above (NOTA) option was introduced in Indian elections following a Supreme Court judgment in September 2013. The Court directed the Election Commission of India to include NOTA on electronic voting machines so that voters could express disapproval of all candidates contesting in a constituency. The option was first implemented in the 2013 Assembly elections in several states. It promotes voter freedom and strengthens democratic participation.

43. The United Nations Sustainable Development Goals (SDGs) were adopted in 2015 as part of the 2030 Agenda for Sustainable Development. These goals aim to address global challenges such as poverty, inequality, environmental degradation and climate change. Zero Hunger, Climate Action, Life Below Water, and Quality Education are all among the 17 SDGs adopted by the United Nations. Each goal targets sustainable development and improved quality of life across the world.
44. In physics, electrical quantities are associated with specific SI units.  
Electric current is measured in Ampere, which corresponds to (iv).  
Potential difference is measured in Volt, corresponding to (iii).  
Capacitance is measured in Farad, corresponding to (ii).  
Inductance is measured in Henry, corresponding to (i).  
Therefore the correct matching is (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i).
45. The Pradhan Mantri JI-VAN (Jaiv Indhan-Vatavaran Anukool Fasal Awashesh Nivaran) Yojana aims to promote the production of second-generation (2G) bio-ethanol from agricultural residues such as crop stubble. The scheme provides financial assistance for setting up integrated bio-ethanol plants that convert biomass into fuel. This initiative helps reduce crop residue burning, supports renewable energy production and contributes to environmental sustainability.
46. The Manipur Municipality Act, 1976 was introduced to provide a legal framework for the administration and governance of urban areas in the state. The Act established municipal bodies responsible for urban local governance, including civic services such as sanitation, water supply, roads and town planning. It also defined the structure, powers and functions of municipal councils in urban areas of Manipur. Through this Act, urban administration in the state was organized under statutory municipal institutions.
47. The first Manipur State Assembly was constituted in July 1948 following the introduction of a democratic form of government under the Manipur Constitution Act of 1947. Elections were conducted on the basis of adult franchise, making Manipur one of the earliest regions in India to introduce a representative democratic system before the integration with the Indian Union. The assembly consisted of elected representatives who participated in legislative governance of the state.
48. Maharaja Bodhachandra Singh was the last ruling king of the princely state of Manipur. He ascended the throne in 1941 after the death of his father Maharaja

Churachand Singh. During his reign, Manipur adopted a constitutional system with an elected assembly in 1948. In September 1949, he signed the Manipur Merger Agreement, through which Manipur was integrated into the Indian Union. After the merger, the princely monarchy came to an end, making Bodhachandra Singh the last king of Manipur.

49. According to the 2011 Census of India, the total population of Manipur was 28,55,794. The census provides detailed demographic information including population distribution, literacy rates, sex ratio and urban-rural composition. This data helps governments in planning development programmes, infrastructure and welfare policies within the state.
50. The major physical divisions of Manipur are broadly classified into the Manipur Valley, the surrounding Manipur Hills, and smaller plain regions such as the Jiribam Plains. These divisions are based on geographical and physiographic characteristics of the land. Churachandpur is not a physical division but a district of Manipur, located in the hill region of the state.

51. Average

$$\begin{aligned} & \frac{693 + 456 + 876 + 532 + 934}{9} = \frac{5858}{9} \\ & = 650.8888 = 650.89. \end{aligned}$$

52. LCM of 3, 5 and 9 = 45,

The largest three-digit number = 999

$$\begin{aligned} \therefore 999 &= 90 \times 11 + 9 \\ &= 45 \times 2 \times 11 + 9 \\ &= 45 \times 22 + 9 \\ \Rightarrow 45 \times 22 &= 999 - 9 = 990 \\ \Rightarrow 45 \times 22 &= 990 \end{aligned}$$

$\therefore$  Required number =  $990 + 2 = 992$  that gives the same remainder 2 when divisible by 3, 5 and 9.

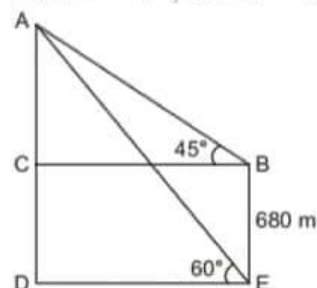
54. Let,

AD = tower,

BE = Building,

BE = CD = 680 m

$\angle ABC = 45^\circ$ ,  $\angle AED = 60^\circ$



$$\therefore BC = ED \Rightarrow CB = DE$$

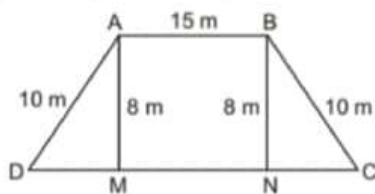
$$\begin{aligned} \text{In } \triangle ACB, \tan 45^\circ &= \frac{AC}{CB} \Rightarrow 1 = \frac{AC}{CB} \\ \Rightarrow CB &= AC \quad \dots(i) \end{aligned}$$

$$\begin{aligned} \text{In } \triangle ADE, \tan 60^\circ &= \frac{AD}{DE} \\ \Rightarrow \sqrt{3} &= \frac{AC+CD}{DE} \Rightarrow DE = \frac{AC+CD}{\sqrt{3}} \\ \Rightarrow CB &= \frac{AC+680}{\sqrt{3}} \quad \dots(ii) \end{aligned}$$

from (i) and (ii)

$$\begin{aligned} AC &= \frac{AC+680}{\sqrt{3}} \\ \Rightarrow AC\sqrt{3} &= AC+680 \\ \Rightarrow AC\sqrt{3}-AC &= 680 \\ \Rightarrow AC(\sqrt{3}-1) &= 680 \Rightarrow AC = \frac{680}{\sqrt{3}-1} \\ \Rightarrow AC &= \frac{680}{\sqrt{3}-1} \times \frac{\sqrt{3}+1}{\sqrt{3}+1} \\ &= \frac{680(\sqrt{3}+1)}{2} \\ &= 340(\sqrt{3}+1) \\ \therefore AD &= AC+CD = 340(\sqrt{3}+1)+680 \\ &= 340(\sqrt{3}+1+2) = 340(\sqrt{3}+3) \\ &= 340(3+\sqrt{3}) \text{ m.} \end{aligned}$$

56. Given, In a trapezium ABCD.



$AB \parallel DC$

$$AD = BC = 10 \text{ m}$$

and  $(AB) = 15 \text{ m} < (DC)$

Let perpendicular distance  $= AM = BN = 8 \text{ m}$

$$\begin{aligned} \text{In } \triangle AMD, MD &= \sqrt{AD^2 - AM^2} = \sqrt{(10)^2 - (8)^2} \\ &= \sqrt{100 - 64} = \sqrt{36} = 6 \text{ m} \end{aligned}$$

$$\therefore MD = NC = 6 \text{ m}$$

$$\begin{aligned} \text{Now, } DC &= MD + MN + NC \\ &= 6 + 15 + 6 = 27 \text{ m} \end{aligned}$$

$$\begin{aligned} \therefore \text{The perimeter of the trapezium ABCD} \\ &= AB + BC + DC + AD \\ &= 15 + 10 + 27 + 10 = 62 \text{ m.} \end{aligned}$$

$$\begin{aligned} 57. \text{ Volume of a triangular prism} &= \frac{\sqrt{3}}{4} a^2 h \\ \text{and volume of triangular pyramid} &= \frac{\sqrt{3}}{12} a^2 h \end{aligned}$$

$$\begin{aligned} \therefore \text{The ratio of the volume} &= \frac{\sqrt{3}}{4} a^2 h : \frac{\sqrt{3}}{12} a^2 h \\ &= \frac{1}{4} : \frac{1}{12} = 3 : 1. \end{aligned}$$

$$\begin{aligned} 58. \text{ Given, } x &= \sqrt{64} + \sqrt{121} - \sqrt{169} \\ &= 8 + 11 - 13 = 19 - 13 = 6 \\ \therefore x^2 &= (6)^2 = 36 \Rightarrow x^2 = 36. \end{aligned}$$

$$\begin{aligned} 59. \text{ Let 1 LED TV} &= x \text{ and 1 mobile phone} = y \\ \text{then } 2x + y &= 31,000 \quad \dots(i) \end{aligned}$$

$$\begin{aligned} x + 2y &= 35,000 \\ \Rightarrow 2x + 4y &= 70,000 \quad \dots(ii) \end{aligned}$$

Subtracting (i) from (ii),

$$\begin{aligned} 4y - y &= 70,000 - 31,000 \\ \Rightarrow 3y &= 39,000 \Rightarrow y = 13,000 \\ \therefore \text{the value of 1 mobile phone} &= y = ₹ 13000. \end{aligned}$$

$$\begin{aligned} 60. \text{ The volume of a cylinder} &= \pi r^2 h \\ &= (3.14) \times (10)^2 \times 20 \text{ cm}^3 \\ &= 3.14 \times 100 \times 20 \\ &= 314 \times 20 = 6280 \text{ cm}^3. \end{aligned}$$

61. Here, More men, less Day  $\rightarrow$  Indirect proportion

Men Day

$$100 : 80 :: x : 30$$

$$\Rightarrow 80 \times x = 100 \times 30$$

$$\Rightarrow x = \frac{3000}{80} = \frac{300}{8} = \frac{75}{2} \Rightarrow x = 37\frac{1}{2}$$

$$\text{Hence, the number of boys} = 37\frac{1}{2}.$$

62. Let the number of workers  $= x$

More workers, less time  $\rightarrow$  Indirect proportion

$\therefore$  Workers time

$$15 : x :: 30 : 48$$

$$\Rightarrow 15 \times 48 = x \times 30$$

$$\Rightarrow x = \frac{15 \times 48}{30} = 24$$

Hence, the number of workers  $= 24$ .

63. Given that,  $a + b + c = 5$  and  
 $ab + bc + ca = 10$   
 $\therefore (a + b + c)^2 = (5)^2$   
 $\therefore a^2 + b^2 + c^2 + 2(ab + bc + ca) = 25$   
 $\Rightarrow a^2 + b^2 + c^2 + 2 \times 10 = 25$   
 $\Rightarrow a^2 + b^2 + c^2 = 25 - 20$   
 $\Rightarrow a^2 + b^2 + c^2 = 5$   
 $\therefore a^3 + b^3 + c^3 - 3abc$   
 $= (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ac)$   
 $= 5(5 - 10) = 5 \times -5 = -25.$

64.  $3\sqrt{3}x^3 - 8$   
 $= 3^{1+\frac{1}{2}} \cdot x^3 - 2^3 = 3^{\frac{3}{2}} \cdot x^3 - 2^3$   
 $= (\sqrt{3})^3 \cdot x^3 - 2^3 = (\sqrt{3}x)^3 - 2^3$   
 $= (\sqrt{3}x - 2)((\sqrt{3}x)^2 + \sqrt{3}x \cdot 2 + 2^2)$   
 $= (\sqrt{3}x - 2)(3x^2 + 2\sqrt{3}x + 4).$

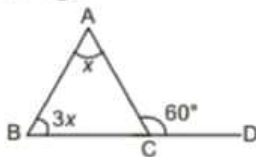
65. A's 1 day's work =  $\frac{1}{25}$   
 B's 1 day's work =  $\frac{1}{20}$   
 $\therefore (A + B)$ 's 1 day's work  
 $= \frac{1}{25} + \frac{1}{20} = \frac{4+5}{100} = \frac{9}{100}$

$\Rightarrow (A + B)$ 's 5 day's work  
 $= 5 \times \frac{9}{100} = \frac{9}{20}$

Remaning work =  $1 - \frac{9}{20} = \frac{20-9}{20} = \frac{11}{20}$

The number of days can B finish the remaining work  
 $= \frac{11/20}{1/20} = 11.$

66. Let the interior opposite angles are  $x$  and  $3x$   
 $\therefore$  The sum of interior opposite angles  
 $=$  the exterior angle



$\therefore x + 3x = 60^\circ$   
 $\Rightarrow 4x = 60^\circ$   
 $\Rightarrow x = 15^\circ$

$\therefore$  The interior angles are  $x = 15^\circ$   
 and  $3x = 45^\circ$

Hence, the angles of the triangle are  
 $180^\circ - (45^\circ + 15^\circ), 45^\circ, 15^\circ = 120^\circ, 45^\circ, 15^\circ.$

67. A.  $\frac{8}{7} + \frac{3}{8} = \frac{3}{8} + \frac{8}{7}$   
 $\Rightarrow \frac{64+21}{56} = \frac{21+64}{56}$

$\Rightarrow \frac{75}{56} = \frac{75}{56}$

B.  $\frac{8}{7} \times \frac{3}{8} = \frac{3}{8} \times \frac{8}{7}$

$\Rightarrow \frac{3}{7} = \frac{3}{7}$

C.  $\frac{8}{7} / \frac{3}{8} = \frac{8}{7} \times \frac{8}{3}$

$\Rightarrow \frac{8}{7} \times \frac{8}{3} = \frac{64}{21}$

$\Rightarrow \frac{64}{21} = \frac{64}{21}$

D.  $\frac{8}{7} - \frac{3}{8} = \frac{3}{8} - \frac{8}{7}$

$\Rightarrow \frac{64-21}{56} = \frac{21-64}{56}$

$\Rightarrow \frac{43}{56} = \frac{-43}{56}$

Here,  $\frac{43}{56} \neq \frac{-43}{56}$

$\therefore \frac{8}{7} - \frac{3}{8} \neq \frac{3}{8} - \frac{8}{7}.$

68.  $\sqrt{\sqrt{256} + \sqrt{81}} = \sqrt{16+9} = \sqrt{25} = 5.$

69.  $12300000 = 123 \times 100000$   
 $= 123 \times 10^5$   
 $= 1.23 \times 100 \times 10^5$   
 $= 1.23 \times 10^2 \times 10^5$   
 $= 1.23 \times 10^7$

The standard form of  $12300000 = 1.23 \times 10^7.$

70.  $\therefore$  Rations of 10 persons last for 15 days  
 $\therefore$  Rations of 1 person will last for  $15 \times 10$  days  
 $\therefore$  Ration of  $(10 + 5) = 15$  person will last for  
 $= \frac{15 \times 10}{15} = 10$  days.

71. Cost price of a book = ₹ 500

$$\text{GST} = 500 \times \frac{12}{100} = ₹ 60$$

$$\therefore \text{Nidhi will pay} = ₹ 500 + ₹ 60 = ₹ 560.$$

72. Here,  $P = ₹ 10$ ,  $r = 10\%$ , time =  $n = 2$  years

$$\begin{aligned} \therefore A &= P \left( 1 + \frac{r}{100} \right)^n \\ &= 10 \left( 1 + \frac{10}{100} \right)^2 = 10 \left( 1 + \frac{1}{10} \right)^2 \\ &= 10 \left( \frac{11}{10} \right)^2 = 10 \times \frac{121}{100} = \frac{121}{10} \\ &= ₹ 12.10 \end{aligned}$$

$$\begin{aligned} \therefore \text{Compound interest} &= A - P \\ &= ₹ 12.10 - ₹ 10 = ₹ 2.10. \end{aligned}$$

$$\begin{aligned} 73. \left( \frac{3a}{5} + \frac{2b}{3} \right) \left( \frac{3a}{5} - \frac{2b}{3} \right) \\ &= \left( \frac{3a}{5} \right)^2 - \left( \frac{2b}{3} \right)^2 \quad [\because x^2 - y^2 = (x + y)(x - y)] \\ &= \frac{9}{25}a^2 - \frac{4}{9}b^2. \end{aligned}$$

74. Let the present age of the son =  $x$   
Then, the present age of the father =  $3x$   
After 3 years,

$$\begin{aligned} 3x + 3 &= 2(x + 3) + 7 \\ \Rightarrow 3x + 3 &= 2x + 6 + 7 \\ \Rightarrow 3x + 3 &= 2x + 13 \\ \Rightarrow 3x - 2x &= 13 - 3 \\ \Rightarrow x &= 10. \end{aligned}$$

$$\begin{aligned} 75. y \times 13 + 15 &= 54 \\ \Rightarrow 13y + 15 &= 54 \\ \Rightarrow 13y &= 54 - 15 \\ \Rightarrow 13y &= 39 \\ \Rightarrow y &= \frac{39}{13} = 3 \end{aligned}$$

$\therefore$  The value of  $y = 3$ .

76. *Vociferous* means extremely noisy or loud in expressing opinions. Similarly, *intransigent* means refusing to change one's views or compromise, which closely corresponds to *stubborn*. The relation is between a descriptive word and its synonym. Therefore, just as *vociferous* relates to *noisy*, *intransigent* relates to *stubborn*.

77. The given sentence is in the simple present tense ("hears"). To convert it into simple past tense, the verb must change to its past form. The past form of hear is heard. Therefore, the correct sentence in simple past tense becomes "Vinay heard a strange noise in the night."

78. The fear of clowns is known as coulrophobia. It is a specific phobia in which people experience intense anxiety or fear when seeing clowns. Other options refer to different fears: cynophobia is fear of dogs, gamophobia is fear of marriage, and gerophobia refers to fear of aging or old people.

79. The sentence requires a conjunction or adverb indicating contrast. Although Annu was ill-equipped for the project, she still attempted to do her best. The word "nevertheless" appropriately expresses this contrast between lack of preparation and effort made.

80. *Unassailable* means impossible to attack, defeat, or criticize successfully. The closest synonym among the options is *invincible*, meaning something that cannot be overcome or defeated. The other options such as *vulnerable*, *insecure*, and *unprotected* indicate weakness, which is opposite in meaning.

81. *Blatant* is the correctly spelled word meaning very obvious or done in an open and unashamed manner. The other options contain spelling errors: *Persumptious* should be *presumptuous*, *Cumulative* should be *cumulative*, and *Benovolent* should be *benevolent*.

82. The correct preposition is "among", which is used when something is surrounded by or located within a group of objects. Since the fountain is hidden within a group of trees, "among" fits correctly. The other options do not function properly as prepositions in this context.

83. When converting from direct to indirect speech, the pronoun and tense usually change. The present tense "want" becomes "wanted" in indirect speech when the reporting verb is in the past. The pronoun "your" also changes appropriately according to the context, resulting in the correct sentence.

84. The phrase "used to" is used to describe something that happened regularly in the past but no longer happens. The sentence indicates that the white house once belonged to the speaker's family earlier. The other options do not correctly fit the grammatical structure or meaning of the sentence.

85. "Fewer" is used with countable nouns, and "birds" is a countable noun. The sentence compares the number of birds now with the number 30 years ago, indicating a reduction. Therefore the correct comparative word is *fewer*, meaning a smaller number of countable items.

86. The verb affect means to influence or produce a change in something. In the sentence, the cold weather has influenced or harmed her health, so the past participle affected is required after "has". Effected means brought about or caused to happen, which does not fit the meaning here. Therefore, the correct usage is affected.
87. The idiom "jump on the bandwagon" means to join something because it is currently popular or widely supported. People often adopt a trend, opinion, or activity simply because many others are already doing it. The expression originated from political campaigns where supporters would climb onto a bandwagon to show support for a candidate.
88. The correct spelling is sacrilegious, meaning showing disrespect or violation of something considered sacred or holy. The other options contain spelling errors due to incorrect placement of letters or missing syllables. Therefore sacrilegious is the properly spelled word.
89. The error occurs in part III where the word "haute" is used. The correct word should be "hot", since the sentence refers to drinking chocolate milk hot in the winter or cold in the summer. "Haute" is a French-derived word used in phrases like *haute couture* and is incorrect in this context.
90. The word born is used when referring to birth. The sentence indicates that a baby comes into the world every five minutes, so born is the correct form. Borne is the past participle of bear in the sense of carrying or supporting, while bore and bourn do not fit the grammatical meaning of the sentence.
91. Expediency refers to something that is convenient or advantageous for achieving a particular purpose, often without considering moral principles. It suggests choosing what is practical or beneficial at a given moment. Among the options, convenience is the closest synonym.
92. Demure describes a person who is modest, reserved, or shy in behavior. The opposite meaning would indicate someone who is overly confident or proud. Arrogant fits this opposite meaning because it describes someone who behaves with excessive pride or self-importance.
93. The phrase "used to" is used to describe a habit or situation that was normal in the past. The sentence indicates that the salesman had the habit of travelling frequently across the country. Therefore used to travelling correctly expresses a past habit or familiarity.
94. Puritanical is the correct spelling and refers to attitudes that are extremely strict, moralistic, or opposed to pleasure. The other options contain incorrect letter arrangements and are not valid spellings of the word.
95. The idiom "hit the nail on the head" means to describe a situation or problem exactly and accurately. It is used when someone identifies the precise cause or solution to a matter. Thus, it refers to saying or doing something perfectly correct or precise.
96. The passage clearly states that "in a brief period amazing discoveries have been made and applied to practical purpose." This shows that scientific discoveries have advanced rapidly within a short span of time. The author emphasizes the speed with which science has progressed in modern times. Therefore, the correct answer is that amazing discoveries of science have been made in a brief period.
97. The passage mentions that it would be ungrateful not to recognize "how immense are the boons which science has given to mankind." This means the benefits provided by science are very large and significant. Science has improved human life through advancements in health, knowledge, and technology. Hence, the passage clearly indicates that the boons of science are immense.
98. The passage explicitly states that science has shown how malnutrition, hunger and disease can be overcome. This means scientific progress has contributed to improvements in food production, nutrition, and medical treatment. All the three problems listed—malnutrition, disease and hunger—are mentioned together in the passage as challenges science can help solve. Therefore, the correct option is all of these.
99. According to the passage, scientific developments have allowed ordinary people to enjoy a longer and fuller life than was possible for earlier generations. Advances in medicine, nutrition and technology have increased life expectancy and improved living conditions. Science has therefore enhanced both the duration and quality of life for many people. Hence, the correct answer is longer and fuller life.
100. The passage states that science "has not only lengthened life but it has deepened its quality." This means science has improved living standards, health, and opportunities for knowledge and recreation. Instead of harming mankind, scientific progress has made life richer and more meaningful. Therefore, the correct answer is that science has deepened the quality of life.