

# SSC CGL Examination

## Grand Test

Questions: 200

Time: 2 hours

Max marks: 200

**Directions (Q. 1-4):** In each of the following questions, select the related letters/word/number from the given alternatives.

- Book : Publisher : : Film : ?  
a) Producer                      b) Director  
c) Editor                         d) Writer
- 20 : 11 : : 102 :  
a)49            b)52            c) 61            d) 98
- PALE : LEAP : : POSH : ?  
a) HSOP                         b) POHS  
c) SHOP                         d) None of these
- Cells : Tissues : : Atoms : ?  
a) Elements                      b) Molecules  
c) Electrons                      d) Organs
- If LBAEHC is the code for BLEACH, then which of the following is coded as NBOLZKMH?  
a) OBNKZLHM                      b) LOBNHMKZ  
c) OCPMALNI                      d) BNLOKZHM
- The positions of how many digits in the number 321465987 will remain same when the digits are arranged in ascending order?  
a) Four                              b) One  
c) Two                                d) Three

**Directions (Q.7-8):** In each of the following questions, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

- ab\_\_aa\_\_bbb\_\_aaa\_\_bbba  
a) abba    b) baab    c) aaab    d) abab
- \_\_bbca\_\_bcc\_\_ac\_\_a\_\_cb  
a)abcba    b) acbab    c) bacab    d) bcaab

**Directions (Q.9-13):** In each of the following questions, find the odd word/number-pair from the given alternatives.

- a) Coal                              b)Petroleum  
c) Natural gas                      d) Biogas
- a) 140-45                              b) 110-35  
c) 100-30                              d) 80-25
- a) Teach                              b) Instruct  
c) Educate                              d) Explain
- 6, 15, 35, 77, 165, 221  
a) 35            b)77            c)165            d) 221
- a) Eye            b) Ear            c) Nose            d) Brain

**Directions (Q.14-18):** In each of the following questions, a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.

- KM5, IP8, GS11, EV14, ?  
a) BX17    b)BY17    c) CY17    d) CY18
- A, I, P, V, A, E, ?  
a) E            b)F            c)G            d) H
- 3, 12, 27, 48, 75, 108, ?  
a) 147            b) 162            c) 183            d) 192
- MK: $\frac{169}{121}$ ::JH:?  
a)  $\frac{100}{64}$             b)  $\frac{100}{81}$             c)  $\frac{64}{120}$             d)  $\frac{81}{100}$
- Computer : fqprxvht : : Language : ?  
a) oxpidxdig                      b) ocqicyig  
c) ocqixcjcjg                      d) ocqixcig
- If X is brother of son of Y's son, then how is X related to Y?  
a) Brother                              b) Cousin  
c) Grandson                              d) Son
- A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?

- a) Nephew                      b) Son  
c) Cousin                      d) Uncle
21. If  $\div$  means  $\times$ ,  $\times$  means  $+$ ,  $+$  means  $-$  and  $-$  means  $\div$ , find the value of  $16 \times 3 + 5 - 2 \div 4$ .
- a) 9                                      b) 10  
c) 19                                      d) None of these

22. Number of letters skipped between adjacent letters in a series increases by one.
- a) CIOUBK                      b) HLPTXN  
c) CHMRWB                      d) CEHLQW

**Directions (Q.23-25):** In each of the following questions, from the given alternatives select the word which cannot be formed using the letters of the given word.

23. OBSTETRICIAN
- a) SOBER                      b) TERMITE  
c) RETAIN                      d) SIREN

24. REPRIMAND
- a) MAIDEN                      b) REPAIR  
c) MUNDANE                      d) REMAND

25. KALEIDOSCOPE
- a) SCALE                      b) PADLOCK  
c) PACKET                      d) DIESEL

26. Select the correct combination of mathematical signs to replace \* signs and to balance the given equation
- $$5 * 6 * 5 * 8 * 14$$
- a)  $+- \times =$                       b)  $\times \div + =$   
c)  $\div + = -$                       d)  $+ \times - \div$

27. Which of the following interchanges of numbers would make the given equation correct?
- $$8 \times 20 \div 3 + 9 - 5 = 38$$
- a) 3, 9      b) 3, 8      c) 8, 9      d) 3, 5

28. If the first and second letters in the word 'COMMUNICATIONS' were interchanged, also the third and the fourth letters, the 5<sup>th</sup> and 6<sup>th</sup> letters and so on, which letter would be the tenth letter counting from your right?
- a) N      b) U      c) A      d) T

29. If A is to the South of B and C is to the East of B, in which direction is A with respect to C?
- a) North-East                      b) North-West  
c) South-East                      d) South-West

30. Which of the following words will come fourth in the English dictionary?
- a) False                      b) Follow  
c) Faithfully                      d) Fool

31. If P denotes 'multiplied by', T denotes 'subtracted from', M denotes 'added to' and B denotes 'divided by', then  $28 B 7 P 8 T 6 M 4 = ?$
- a)  $-\frac{3}{2}$       b) 30      c) 32      d) 34

**Directions (Q.32-34):** In each of the following questions, select the missing number from the given responses.

32.                                      ?
- |        |        |        |        |
|--------|--------|--------|--------|
|        | 49     |        | 64     |
| 16     | 9      | 25     |        |
| a) 100 | b) 225 | c) 121 | d) 169 |

33. AD                      17                      39                      CF  
BP                      258                      108                      HJ  
GN                      ?                      ?                      LM
- a) 9, 29                      b) 18, 210  
c) 179, 239                      d) 203, 181

34. 

42	44	38
23	55	28
37	?	39
- (a) 22      (b) 33      (c) 66      (d) 77

35. A certain number of horses and an equal number of men are going somewhere. Half of the owners are on their horses back while the remaining ones are walking along leading their horses. If the number of legs walking on the ground is 70, how many horses are there?
- a) 10      b) 12      c) 14      d) 16

36. If 'train' is called 'bus', 'bus' is called 'tractor', 'tractor' is called 'car', 'car' is called 'scooter', 'scooter' is called 'bicycle',

'bicycle' is called 'moped', which is used to plough a field?

- a) Train
- b) Bus
- c) Tractor
- d) Car

**Directions (Q.37-38):** In each of the following questions, one/two statements are given followed by two/three conclusions I, II and III. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follow from the given statements.

**37. Statements:**

No gentleman is poor.  
All gentlemen are rich.

**Conclusions:**

I. No poor man is rich.  
II. No rich man is poor.

- a) If only conclusion I follows;
- b) If only conclusion II follows;
- c) If either conclusion I or II follows;
- d) If neither conclusion I nor II follows.

**38. Statements:**

All trains are buses.  
No room is bus.  
All boats are rooms.

**Conclusions:**

I. No boat is train.  
II. No bus is boat.  
III. No train is room.

- a) All follow
- b) Only I and II follow
- c) Only II and III follow
- d) Only I and III follow

**39.** Six students A, B, C, D, E and F are sitting in the field. A and B are from Delhi while the rest are from Bangalore. D and F are tall while others are short. A, C and D are girls while others are boys. Who is the tall girl from Bangalore?

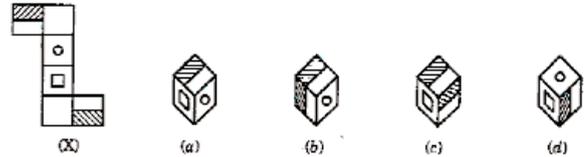
- a) C
- b) D
- c) E
- d) F

**40.** Namita walks 14 metres towards West, then turns to her right and walks 14 metres and then turns to her left and walks 10 metres. Again turning to her left she walks 14 metres.

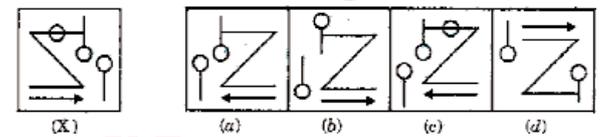
What is the shortest distance (in metres) between her starting point and the present position?

- a) 10
- b) 24
- c) 28
- d) 38

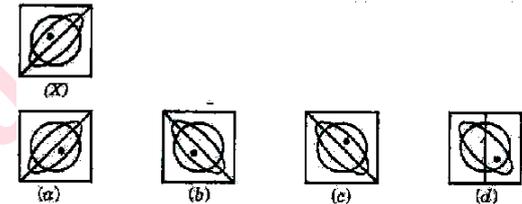
**41.** The sheet of paper shown in the figure (X) given on the left hand side is folded to form a box. Choose from amongst the alternatives (a), (b), (c) and (d), the box that can be formed.



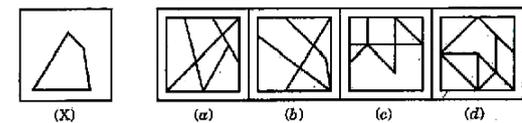
**42.** The mirror image of X given below is



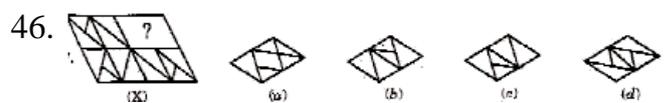
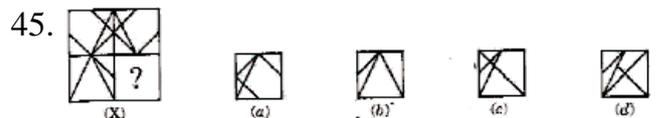
**43.** The water image of X given below is



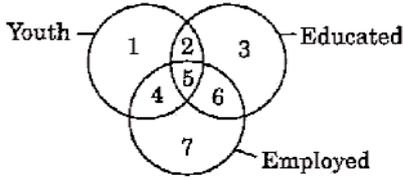
**44.** Mark the correct response which has the figure X embedded



**Directions (Q.45-46):** In each of the following questions, which answer figure will complete the pattern in the question figure?

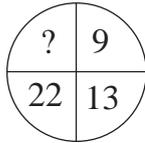


47. Study the diagram below and identify the region representing youth who are employed but not educated.



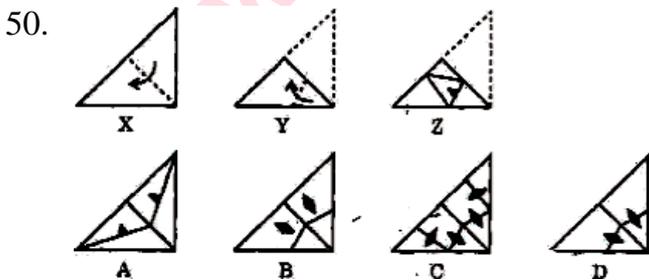
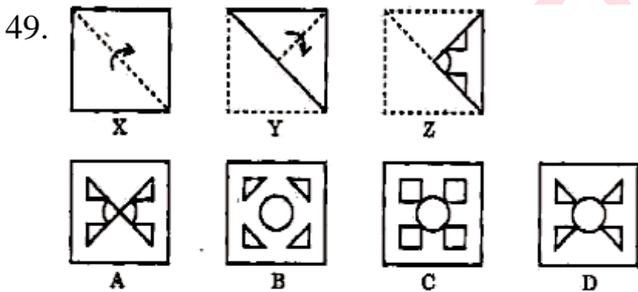
- a) 4 only                      b) 5, 6  
c) 1, 4, 7                    d) 4, 7

48. Insert the missing number from the given responses.



- a) 38      b) 39      c) 40      d) 44

**Directions (Q.49-50):** Each of the following question, consists of a set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Fig.(Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of Fig.(Z).



51. The premise, that benefit of economic growth will reach all sections of population is called  
a) Trickle up effect      b) Trickle down effect  
c) Take-off effect        d) Backlash effect

52. In whose growth model, state/government significance is pivotal?  
a) Keynes                      b) Schumpeter  
c) Harrod                      d) Domar

53. The classical model of economic development emphasising on Laissez-Faire Policy was propounded by  
a) Thomas Friedman      b) Ricardo  
c) Adam Smith            d) Weber

54. Which one of the following pairs is not correctly matched?

Author	Book
a) Simon Kuznets	Asian Drama
b) J. Robinson	Essays in the Theory of Economic Growth
c) Karl Marx	Das Kapital
d) A.W. Lewis	Theory of Economic Growth

55. What does change in Economic growth mean?  
a) Structure of economy  
b) Mindsets of people  
c) National Income  
d) None of these

56. **Assertion (A):** PL-480 grants was used to import foodgrains.  
**Reason (R):** PL-480 grants facility was granted by Japan.

- Codes:**  
a) Both (A) and (R) are true and (R) is the correct explanation of (A).  
b) Both (A) and (R) are true and (R) is not the correct explanation of (A).  
c) (A) is true, but (R) is false.  
d) (A) is false, but (R) is true.

57. A proportionate increase in tax revenue to a proportionate increase in the tax base is called  
a) Elasticity of a tax      b) Buoyancy of a tax  
c) Neutrality of a tax     d) None of the above

58. Percentage share of the manufacturing output of India in the world total is now  
a) 2.2 percent              b) 3.9 percent  
c) 6.2 percent              d) 7.5 percent

59. India's Current Account Deficit in Balance of Trade is mainly due to
- 1) Increasing imports of oil and petroleum
  - 2) Increasing imports of gold and silver
  - 3) Increasing imports of food grains
  - 4) Increasing imports of iron and steel
- Codes:**
- a) (1), (2) and (3)
  - b) (1) and (3)
  - c) (1) and (2)
  - d) (1) and (4)
60. Who was the founder of Utilitarianism ?
- a) Bentham
  - b) James Mill
  - c) David Hume
  - d) Priestley
61. Which one of the following is not a totalitarian form of Government ?
- a) Military Government
  - b) Fascist Government
  - c) Communist Government
  - d) Parliamentary form of Government
62. Identify the correct chronological order of the following Prime Minister/Chief Minister of J & K :
- a) Sheikh Abdullah, Bakshi Ghulam Mohammad, Farooq Abdullah, Omar Abdullah.
  - b) Sheikh Abdullah, G.M. Sadiq, Mir Qasim, Farooq Abdullah.
  - c) Sheikh Abdullah, G.M. Sadiq Shamsuddin, Mufti Mohammad Sayeed.
  - d) Sheikh Abdulla, Bakshi Ghulam Mohammad, Shamsuddin, G.M. Sadiq.
63. Which one of the following is not a sufficient ground for convening a joint sitting of both Houses of Parliament?
- a) Rejection of a bill by one House of the Parliament when the other House has passed it.
  - b) Both Houses have finally disagreed as to the amendments to be made in a bill.
  - c) More than six months has elapsed from the date of the reception of the Bill by the other House without the Bill being passed by it.
  - d) President has refused to give his assent to the Bill.
64. Which one of the following States does not have a Bicameral Legislature ?
- a) Uttar Pradesh
  - b) Bihar
  - c) Maharashtra
  - d) Kerala
65. "Atoms for Peace" was a disarmament plan put forward by which world leader ?
- a) J. Nehru
  - b) Khrushchev
  - c) Eisenhower
  - d) Kennedy
66. Who created the Global Environmental Facility (GEF) as an international mechanism specifically for funding environmental projects in developing countries ?
- a) IMF
  - b) UNDP
  - c) UNEP
  - d) World Bank
67. Which of the following countries are included in ASEAN Plus Three ?
- a) China, India, Japan.
  - b) China, South Korea, Russia
  - c) China, Russia, Japan
  - d) China, Japan, South Korea
68. Din-i-Ilahi was primarily
- a) The official religion of state.
  - b) A synthesis of Hinduism and Islam.
  - c) The reiteration of the principle of universal harmony.
  - d) A superior religion for the masses.
69. Which one of the following dynasties is not mentioned in the Sangam Literature?
- a) Chola
  - b) Pallava
  - c) Chera
  - d) Pandya
70. The most gigantic rock-cut Bahubali image is located in
- a) Tamil Nadu
  - b) Andhra Pradesh
  - c) Karnataka
  - d) Kerala
71. The Ilbari ruler who introduced Sajida, Paibos and Nauroz to the Delhi Sultanate was
- a) Qutb-ud-din Aibek
  - b) Iltutmish
  - c) Balban
  - d) Bahram Shah
72. Given below are two statements, one labelled as Assertion (A) and the other

labelled as Reason (R):

**Assertion (A):** The Turks did not use Hindu style of representing human and animal figures on the buildings.

**Reason (R):** They used geometrical and floral designs and panels of inscriptions containing verses from Quran.

Read the above statements and select the correct answer from the codes given below

**Codes:**

- a) Both (A) and (R) are true and (R) is the correct explanation of (A).  
 b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).  
 c) (A) is true, but (R) is false.  
 d) (A) is false, but (R) is true.

73. Match the List – I with List – II and select the correct answer from the codes given below:

**List – I**

**List – II**

- |   |         |
|---|---------|
| A. Death of Sir Syed Ahmad Khan   | 1. 1897 |
| B. Madanlal Dhingra shot dead Curzon Wylie in London                            | 2. 1898 |
| C. Chapekar brothers murdered the cruel Plague Commissioner Rand and Lt. Ayerst | 3. 1909 |
| D. Coronation Durbar in honour of George V held at Delhi                        | 4. 1911 |

**Codes:**

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

74. Match the List – I with List – II and select the correct answer from the codes given below:

**List – I**

**List – II**

- |                            |                              |
|----------------------------|------------------------------|
| A. Behramji M. Malabari    | 1. Emancipation of women     |
| B. Dhondo Keshav Karve     | 2. Kanyasulkam               |
| C. Kandukuri Veeresalingam | 3. Parsi Social Reformer     |
| D. Gurazada Appa Rao       | 4. Widow Remarriage Movement |

**Codes:**

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

75. Match List – I with List – II and select the correct answer from the codes given below:

**List – I**

**List – II**

- |                    |                    |
|--------------------|--------------------|
| A. Clement Attlee  | 1. August Offer    |
| B. Mountbatten     | 2. Breakdown plan  |
| C. Lord Linlithgow | 3. Cabinet Mission |
| D. Wavell          | 4. Plan Balkan     |

**Codes:**

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

76. Increase in temperature with increase in height is known as

- a) Lapse rate  
 b) Adiabatic lapse rate  
 c) Inversion of temperature  
 d) Normal rate

77. Indian Meteorological Department (IMD) has divided India into how many seismic zones?

- a) 4      b) 5      c) 6      d) 7

78. Salinity in water bodies increases with

- a) Increase in evaporation and decrease in admixture of fresh water.  
 b) Decrease in evaporation and increase in admixture of fresh water.  
 c) Decrease in evaporation and no change in admixture of fresh water.  
 d) Increase in evaporation and increase in admixture of fresh water.

79. Which one of the following primary green house gases is not associated with global warming?

- a) Water vapour      b) Carbon dioxide  
 c) Methane      d) Hydrogen

80. Match List – I with the List – II and select the correct answer from the codes given below:

**List – I**  
(National Park)

- A. Eravikulam  
B. Bandipur  
C. Hemis  
D. Sirohi

**List – II**  
(State)

- i. Karnataka  
ii. Kerala  
iii. Manipur  
iv. Jammu & Kashmir

**Codes:**

- |    | A   | B  | C   | D   |
|----|-----|----|-----|-----|
| a) | ii  | i  | iv  | iii |
| b) | iii | iv | ii  | i   |
| c) | i   | ii | iv  | iii |
| d) | i   | iv | iii | ii  |

81. Name the State which employs the highest number of child labour in the country.

- a) Tamil Nadu                      b) UP  
c) Andhra Pradesh                d) Jharkhand

82. India's decadal population growth rate has been continuously declining since

- a) 1971-81                              b) 1981-91  
c) 1991-2001                         d) 2001-2011

83. Marquette range in U.S.A. is known for

- a) Uranium                              b) Copper  
c) Gold                                    d) Iron ore

84. Which one of the following is the largest volume of import commodities in India?

- a) Raw materials                      b) Iron and Steel  
c) Petroleum & Lubricants  
d) Pearls and Precious stones

85. Quasi Federal form of Government is in

- a) U.S.A.                                      b) Great Britain  
c) Russia                                      d) India

86. Which of the following was the earliest regional planning exercise in India?

- a) National Capital Region Plan  
b) Dandakaranya Area Plan  
c) Damodar Valley Project  
d) Bhakra-Nangal Project

87. While cooking, if the bottom of the vessel is blackened on the outside, it means that:

- a) The food is not cooked completely.  
b) The fuel is not burning completely.  
c) The fuel is wet.  
d) The fuel is burning completely

88. Radioactivity of a substance can be measured by

- a) TCD detector                      b) MCT detector  
c) EC detector  
d) Geiger Muller Counter

89. L.N.J.P. National Institute of Criminology & Forensic Science was established at New Delhi in the following year:

- a) 1968    b) 1970    c) 1972    d) 1974

90. Petroleum products include

- a) LPG and CNG                      b) Aviation spirit  
c) Kerosene                              d) All of the above

91. An Rh incompatibility between mother and foetus can occur if

- a) Only mother is Rh(–)  
b) Foetus is Rh(+)  
c) Pregnancy is second or later  
d) All of the above

92. Match the following:

- | <b>List – I</b> | <b>List - II</b>                    |
|-----------------|-------------------------------------|
| A. EDGN         | i. Pentaerythritol Tetranitrate     |
| B. NG           | ii. Ethylene glycol dinitrate       |
| C. PETN         | iii. Cyclotrimethylene trinitramine |
| D. RDX          | iv. Nitroglycerine                  |

**Codes:**

- |     | A   | B   | C   | D   |
|-----|-----|-----|-----|-----|
| (a) | ii  | iv  | i   | iii |
| (b) | ii  | iv  | iii | i   |
| (c) | ii  | iii | i   | iv  |
| (d) | iii | i   | ii  | iv  |

93. In window glass pane, the following components are not commonly present:

- (A) Aluminium oxide (B) Silicon oxide  
(C) Antimony oxide (D) Barium oxide

**Codes :**

- a) (C) and (D) are correct.  
b) (C) and (B) are correct.

- c) (A) and (B) are correct.  
d) (A) and (D) are correct.
94. Which type of the teeth are not present in human primary dentition?  
a) Premolar                      b) Incisor  
c) Canine                          d) Molar
95. Osmosis involves  
a) Diffusion of suspended particle from higher to lower concentration  
b) Diffusion of suspended particle from lower to higher concentration  
c) Diffusion of water from more to less concentration  
d) Diffusion of water from less to more concentration
96. Match the following:
- |                |  |
|----------------|--|
| List - I       | List - II  |
| A. Kleptomania | i. Irresistible desire to alcoholic drinks                 |
| B. Pyromania   | ii. Irresistible desire to mutilate animals                |
| C. Dispomania  | iii. Irresistible desire to steal articles of little value |
| D. Mutilomania | iv. Irresistible desire to set fire to things              |
- Codes:**
- |    |     |    |    |    |
|----|-----|----|----|----|
|    | A   | B  | C  | D  |
| a) | iii | ii | i  | iv |
| b) | iii | iv | ii | i  |
| c) | iii | i  | iv | ii |
| d) | iii | iv | i  | ii |
97. Magnetic powders contain which of the following as one of the constituents?  
a) Copper particles      b) Silver particles  
c) Gold particles        d) Iron particles
98. The tendency of a liquid drop to contract and occupy minimum area is due to:  
a) Density                      b) Viscosity  
c) Surface tension        d) Vapour pressure
99. Domestic electrical wiring is basically a:  
a) Series connection  
b) Series connection each room and parallel connection elsewhere  
c) Parallel connection  
d) None of these
100. When a compact disc is seen in sunlight, rainbow like colour is seen. This can be explained/based on the basis of phenomena of  
a) Diffraction and transmission.  
b) Reflection and transmission.  
c) All refraction, transmission and diffraction.  
d) None of these
101. In a quadrilateral ABCD,  $AB = 3$ ,  $BC = 4$ ,  $CD = 5$ ,  $\angle ABC = \angle BCD = 120^\circ$ , the area of the quadrilateral is  
a)  $\frac{11\sqrt{3}}{4}$     b)  $11\sqrt{3}$     c)  $\frac{47\sqrt{3}}{4}$     d)  $47\sqrt{3}$
102. In a triangle ABC, a, b, c denote the lengths of the sides BC, CA, AB respectively. If D is the midpoint of the side BC and AD is perpendicular to AC, then  
a)  $3b^2 = a^2 - c^2$                       b)  $3b^2 = b^2 - 3c^2$   
c)  $b^2 = a^2 - c^2$                         d)  $a^2 + c^2 = 5c^2$
103. The number of triangles having a fixed base of '12' units and area '12' units is  
a) More than 12                      b) Less than 12  
c) Exactly equal to 12                d) Only one
104. If  $\frac{a}{b} + \frac{b}{a} = 2$ , then the value of  $\left(\frac{a}{b}\right)^3 + \left(\frac{b}{a}\right)^3$  is  
a) 1                      b) 2                      c) 4                      d) 8
105. If  $x, y > 0$  and  $x^3 + y^3 + 3xy = 1$ , then which of the following is true  
a)  $x + y = -1$                       b)  $x + y = 0$   
c)  $x + y = 1$                         d)  $x - y = 0$
106. The length of the portion of the straight line  $4x + 3y = 24$  intercepted between the axes is  
a) 5 units                                      b) 12 units  
c) 20 units                                    d) 10 units

107. If  $0^\circ \leq \theta \leq 45^\circ$ , the minimum value of  $\sin \theta + \cos \theta$  is  
 a)  $-\sqrt{2}$     b)  $-1$     c)  $0$     d)  $1$
108. If  $\sin(2x + 45^\circ) \cdot \sec(2y - 45^\circ) = 1$ , then the value of  $\sin(x + y)$  is  
 a)  $1$     b)  $\frac{1}{\sqrt{2}}$     c)  $\frac{1}{2}$     d)  $0$
109. A wheel makes 90 revolutions per minute. The number of radians the wheel turn in 3 seconds is  
 a)  $3\pi$     b)  $6\pi$     c)  $9\pi$     d)  $12\pi$
110. The least value of  $9 \sec^2 \theta + 4 \operatorname{cosec}^2 \theta$  is  
 a)  $25$     b)  $13$     c)  $36$     d)  $12$
111. If  $(a^2 - b^2) \cos \theta + 2ab \sin \theta = a^2 + b^2$ . Then the value of  $\tan \theta$  is  
 a)  $\frac{2ab}{a^2 + b^2}$     b)  $\frac{a^2 + b^2}{2ab}$   
 c)  $\frac{2ab}{a^2 - b^2}$     d)  $\frac{a^2 - b^2}{2ab}$
112.  $\cos \theta + \frac{1}{2} \sin^2 \theta = 1$ , then the value of  $\cos^3 \theta + \sec^3 \theta$  is  
 a)  $2$     b)  $1$     c)  $0$     d)  $-1$
113. If  $\cot \theta - \operatorname{cosec} \theta = 2$ , then the value of  $\cot \theta$  is  
 a)  $\frac{3}{2}$     b)  $\frac{3}{4}$     c)  $\frac{5}{2}$     d)  $\frac{5}{4}$
114. The top of a hill observed from the top and bottom of a building of height  $h$  is at angles of elevation  $p$  and  $q$  respectively. The height of the hill is  
 a)  $\frac{h \cot q}{\cot q - \cot p}$     b)  $\frac{h \cot p}{\cot p - \cot q}$   
 c)  $\frac{h \tan p}{\tan p - \tan q}$     d) None of these
115. The angle of elevation of the top of a tower at a point on the ground is  $30^\circ$  and moving 20 metres towards the tower it becomes  $60^\circ$ . The height of the tower is  
 a)  $10\text{m}$     b)  $10\sqrt{3}\text{ m}$   
 c)  $\frac{10}{\sqrt{3}}\text{ m}$     d) None of these
116. PQ is a diameter of a circle AB is a chord equal to the radius of the circle. Then the measure of  $\angle AQB$  is  
 a)  $30^\circ$     b)  $45^\circ$     c)  $60^\circ$     d)  $90^\circ$
117. ABCD is a cyclic trapezium whose sides AD and BC are parallel to each other. If  $\angle ABC = 72^\circ$ , then the measure of the  $\angle BAD$  is  
 a)  $162^\circ$     b)  $18^\circ$     c)  $108^\circ$     d)  $72^\circ$
118. There are 4 semi-circular gardens on each side of a square-shaped pond with each side 21m. The cost of fencing the entire plot at the rate of Rs. 12.50 per metre is :  
 a) Rs. 1560    b) Rs. 1650  
 c) Rs. 3120    d) Rs. 3300
119. There is a rectangular tank of length 180 m and breadth 120 m in a circular field. If the area of the land portion of the field is  $40000\text{m}^2$ , what is the radius of the field?  
 a)  $130\text{m}$     b)  $135\text{m}$     c)  $140\text{m}$     d)  $145\text{m}$
120. If the height of a right circular cone is increased by 200% and the radius of the base is reduced by 50%, then the volume of the cone:  
 a) Remains unaltered    b) Decreases by 25%  
 c) Increases by 25%    d) Increases by 50%
121. The diameter of a sphere is 8 cm. It is melted and drawn into a wire of diameter 3 mm. The length of the wire is  
 a)  $36.9\text{ m}$     b)  $37.9\text{ m}$   
 c)  $38.9\text{m}$     d)  $39.9\text{m}$
122. After successive discounts of 12% and 5% an article was sold for Rs. 209. What was the original price of the article?

- a) Rs. 226                      b) Rs. 250  
c) Rs. 252                      d) Rs. 269
123. Three partners shared the profit in a business in the ratio 5:7:8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?  
a) 5:7:8                          b) 28:49:64  
c) 38:28:21                      d) None of these
124. A bag contains 600 coins of 25p denomination and 1200 coins of 50p denomination. If 12% of 25p coins and 24% of 50p coins are removed, the percentage of money removed from the bag is nearly:  
a) 15.6%                          b) 17.8%  
c) 21.6%                          d) 30%
125. A man spends 35% of his income on food, 25% on children's education and 80% of the remaining on house rent. What percent of his income he is left with?  
a) 8%      b) 10%      c) 12%      d) 14%
126. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, son's age will be:  
a) 12 years                      b) 14 years  
c) 18 years                      d) 20 years
127. A, B and C can do a piece of work in 36, 54 and 72 days respectively. They started the work but A left 8 days before the completion of the work, while B left 12 days before the completion. The number of days for which C worked is:  
a) 4      b) 8      c) 12      d) 24
128. X and Y can do a piece of work in 20 days and 12 days respectively. X started the work alone and then after 4 days Y joined him till the completion of the work. How long did the work last?  
a) 6 days                          b) 10 days  
c) 15 days                          d) 20 days
129. Two pipes A and B can fill a tank in 6 hours and 4 hours respectively. If they are opened on alternate hours and if pipe A is opened first, in how many hours, the tank shall be full?  
a) 4                      b)  $4\frac{1}{2}$                       c) 5                      d)  $5\frac{1}{2}$
130. Two guns were fired from the same place at an interval of 10 minutes and 30 seconds, but a person in the train approaching the place hears the second shot 10 minutes after the first. What is the speed of the train (in km/hr), if the sound travels at 330 metres per second:  
a) 19.8      b) 58.6      c) 59.4      d) 111.80
131. The distance between two cities A and B is 330 km. A train starts from A at 8 a.m. and travels towards B at 60 km/hr. Another train starts from B at 9 a.m. and travels towards A at 75 km/hr. At what time do they meet?  
a) 10 a.m.                          b) 10.30 a.m.  
c) 11 a.m.                          d) 11.30 a.m.
132. Two trains are running at 40 km/hr and 20 km/hr respectively in the same direction. Fast train completely passes a man sitting in the slower train in 5 seconds. What is the length of the fast train?  
a) 23m                                  b)  $23\frac{2}{9}$  m  
c) 27m                                  d)  $27\frac{7}{9}$  m
133. A person borrowed Rs. 500 @ 3% per annum S.I. and Rs. 600 @ % per annum on the agreement that the whole sum will be returned only when the total interest becomes Rs. 126. The number of years, after which the borrowed sum is to be returned is:  
a) 2                      b) 3                      c) 4                      d) 5
134. The difference between simple interest and compound interest on Rs.1200 for one year at 10% per annum reckoned half-yearly is:  
a) Rs. 2.50                          b) Rs. 3  
c) Rs. 3.75                          d) Rs. 4

135. There is a provision of food in the fort for 600 soldiers for 30 days. After 15 days 100 soldiers leave the fort. Remaining food will last for

- a) 9 days                      b) 18days  
c) 21days                      d) 24 days

136. The average marks of 28 students in Mathematics was 50. Eight left the school and thus the average increased by 5. What is the average marks obtained by the students who left the school?

- a) 50.5    b) 42.5    c) 45    d) 37.5

137. If the ratio of two numbers is 2:1 and their product is 1800, then the greater number is

- a) 120    b) 60    c) 90    d) 30

138. 90% of the students in a school passed in English, 85% passed in Mathematics and 150 students passed in both the subjects. If no student failed in both the subjects, find the total number of students.

- a) 120    b) 220    c) 200    d) 330

139. If  $a + b + c = 13$ ,  $a^2 + b^2 + c^2 = 69$  then  $ab + bc + ca$  is

- a) -50    b) 50    c) 69    d) 75

140. If  $a = 0.25$ , then the value of

$$\sqrt{a^2 - 2a + 1 + 4a}$$

- a) 0    b) 0.25    c) 1.25    d) 1.75

141. A number when divided by 296, the remainder is 75. When the same number is divided by 37, the remainder is

- a) 1    b) 2    c) 8    d) 11

142.  $2 + 2^2 + 2^3 + 2^4 + \dots + 2^8 =$

- a) 1020    b) 510    c) 1024    d) 512

143. L.C.M of two prime numbers  $x$  and  $y$  ( $x > y$ ) is 161. The value of  $3y - x$  is

- a) -2    b) -1    c) 1    d) 2

144. About the number of pairs which have 16 as their H.C.F and 136 as their L.C.M, we can definitely say that:

- a) No such pair exists

b) Only one such pair exists

c) Many such pairs exist

d) Only two such pairs exist

145. Seats for Mathematics, Physics and Biology in a school are in the ratio 5:7:8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?

a) 2:3:4

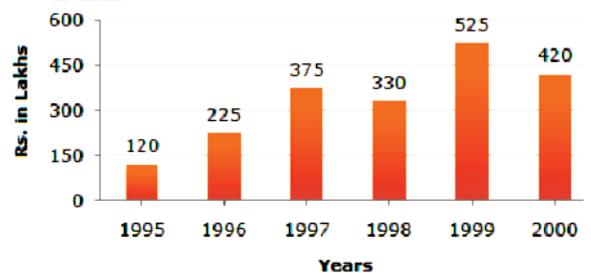
b) 6:7:8

c) 6:8:9

d) None of these

**Directions(Q 146-150):** Out of the two bar graphs provided below, one shows the amounts (in Lakh Rs.) invested by a Company in purchasing raw materials over the years and the other shows the values (in Lakh Rs.) of finished goods sold by the Company over the years.

Amount invested in raw Materials (Rs. in Lakhs)



Value of Sales of finished Goods (Rs. in Lakhs)



146. The maximum difference between the amount invested in raw materials and value of sales of finished goods was during the year?

- a) 1995    b) 1996    c) 1997    d) 1998

147. The value of sales of finished goods in 1999 was approximately what percent of the sum of amount invested in raw materials in the years 1997, 1998 and 1999?

- a) 33%    b) 37%    c) 45%    d) 49%

148. What was the difference between the average amount invested in raw materials during the given period and the average value of sales of finished goods during this period?

- a) Rs. 62.5 Lakhs      b) Rs. 68.5 Lakhs  
c) Rs. 71.5 Lakhs      d) Rs. 77.5 Lakhs

149. In which year, the percentage change (compared to the previous year) in the investment on raw materials is same as that in the value of sales of finished goods?

- a) 1996    b) 1997    c) 1998    d) 1999

150. In which year, there has been a maximum percentage increase in the amount invested in raw materials as compared to the previous year?

- a) 1996    b) 1997    c) 1998    d) 1999

**Directions (151-160):** In the following questions, some of the sentences have errors and some have none. Find out which part of a sentence has an error. The number of that part is the answer. If there is no error, your answer is (d). i.e., No error.

151. The chairman welcomed (a)/all the guests and (b)/ gave an outline of the activities performing by the Company.(c)/ No error (d)

152. Why did people get (a)/so much annoyed even at little provocation (b)/is a matter of investigation. (c)/ No error (d)

153. The success of our efforts depend upon the (a)/number of people who (b)/ actually use the new methods.(c)/ No error (d)

154. You should inform (a)/your superiors about all those events which is (b)/directly related to your work.(c)/No error (d)

155. From over last five years (a)/I have been trying (b)/ my best to convince him but without success.(c)/No error (d)

156. In spite of toiling very hardly he (a)/realized that he had (b)/not earned anything substantial.(c)/ No error (d)

157. We have observed that (a)/ many good programmes (b)/suffer of shortage of funds and other resources.(c)/ No error (d)

158. You deserve to be (a)/rewarded by your successful (b)/completion of the entire work in such a short time. (c)/ No error (d)

159. They could not understand (a)/why all of us (b)/started laughing as soon as their entry.(c)/ No error (d)

160. We were very much (a)/carefully in our approach (b)/and hence we, would complete the complicated task. (c)/ No error (d)

**Directions (161-165):** In the following questions, some idioms, phrases and sayings have been given in bold at the question places. Each of them is followed by four options of its meaning or sense. Choose the one from the four as the right meaning or sense of each idiom or phrase or saying.

161. **To suit one's book**

- a) To mix facts unduly  
b) To be under good condition  
c) To suspect one's own policy  
d) To suit one's plans

162. **To be cut-out for**

- a) To be again in better condition  
b) To have qualities fitting one for  
c) To be under acute supervision  
d) To be under impediment

163. **To be tarred with the same brush**

- a) To have the same faults as another  
b) To have the same knowledge as another  
c) To have been given a remarkable duty  
d) To have an easy life

164. **To take the floor**

- a) To have no idea of anything  
b) To be confused as to what to do  
c) To make a speech  
d) To render or become capable of

165. **To bring to nought**

- a) To punish one who rightly deserves  
b) To behave with utmost care



- c) Pacify                      d) Tranquillize

185. Animals living on land and in water

- a) Ambiguous                b) Amphibian  
c) Amorphous                d) Ambivalent

**Directions (186-190):** In the following questions, you have brief passage. In each of the following passage, some of the words have been left out. First read each passage over and try to understand what it is about. Then fill in the brackets with the help of the alternatives given.

Primitive man was (186) more concerned (187) fire as a source of warmth and as a means of cooking food than as a source of light. (188) he discovered less laborious ways of making fire, he had to (189) it, and (190) he went on a journey he carried a fire-brand with him.

186. a) perhaps                      b) probably  
c) presumably                d) supposedly
187. a) of            b) in            c) with            d) at
188. a) as                              b) no sooner  
c) as soon as                      d) before
189. a) keep                            b) retain  
c) preserve                        d) conserve
190. a) whenever                    b) wherever  
c) however                        d) some

**Directions (191-200):** In the following questions, you have brief passages. In passage, with 5 questions following each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives.

### PASSAGE-I

The originator of the theory of evolution Charles Darwin, an eminent scientist and writer of 'The Origin of Species' and 'The Descent of Man,' came from a distinguished family. His grand father Erasmus Darwin, was an eminent physician, an inventor and a competent author with liberal views. In one of his works, he had even suggested the idea

of evolution. Charles's grandfather on his mother's side was Josiah Wedgwood, the Industrialist who established the world famous pottery works, because his father wished him to follow the family profession of medicine, he sent Charles to a classical secondary school and then to medical school at Edinburgh University. Charles did poorly at both places, because he was less interested in these studies than in several hobbies that he had cultivated. He joined a club of young zoologists and made several expeditions along the shores of England to study marine life. He pursued books on travel, natural philosophy, geology, botany and zoology. The beginning of his thinking on evolution may possibly be traced to his reading of scientist Lamarck and to his grandfather's journal which suggested this idea.

As a last hope for a serious and respectable career, Charles's family thought he might become a clergyman, and was sent to Christ College. But he joined a group of young Sportsman and gave attention to the riches and marksmanship. At this point he had accepted the position as a naturalist on the ship Beagle which was to make an exploratory around the world trip under captain Fitzory.

191. Why did Charles accept the offer to work on ship 'Beagle'?
- a) To continue his hobby of marksmanship  
b) To be able to write a book  
c) His education at Christ College was over  
d) None of these
192. Charles may have derived the idea of evolution from
- a) Captain Fitzory  
b) Erasmus's writing  
c) His friends at Edinburgh  
d) His classmates at college
193. Which of the following is NOT TRUE about Erasmus?
- a) He was a well known medical doctor  
b) He encouraged Charles to formulate the idea of evolution  
c) He was credited with some inventions.

d) He was considerate and open minded.

194. Which of the following statements is TRUE in the context of the passage?

- a) Josiah wanted his grandson to join pottery business.
- b) Probably Charles's family could not read his mind
- c) Lamarck's writings did not impress Charles.
- d) Charles did well in classical secondary school.

195. It appears from the passage that Charles's interests were in all the fields given below except

- a) Family profession    b) Geology
- c) Travel                      d) Shooting

### PASSAGE-II

Fiction means literature consisting of invented or imaginary narrative. Fiction writing is a great art, by which the writer makes the story so spicy and mysterious looking that once a reader starts reading it, he cannot leave it until he has finished it. This is secured by introducing an element of suspense which compels the reader to hold his breath and go on reading uninterrupted. Compared to the fiction, the real everyday life looks like a dull, lifeless affair, but the truth is totally different. The truth is that our daily lives are so much full of suspense and mystery that literature simply cannot describe them. Fiction is but a spiced account of certain aspects of our real day-to-day lives. The novelist has to describe it within limited space. Therefore, he can describe only salient features of the whole story. He cannot describe the whole thing and all aspects of an episode, some of which are far more sensational than the spiced episodes depicted in the novel.

A novel is only an abridged version of events. It is not the whole of it. Imagine if we were able to write a complete faithful and unabridged account of certain phases of our real lives. The outcome would be really stranger than fiction. It could be outrageous. It is so because naked truth cannot be written

in its real naked form.

196. Which of the following should be the most appropriate title of the passage?

- a) Fiction is real literature
- b) Truth is stranger than fiction
- c) Literature is imbued with fiction
- d) Fiction is sensational

197. What has been said about the interest of the reader in reading fiction?

- a) He likes it very much
- b) He considers it mysterious and spicy
- c) He does not want to read it again and again
- d) He reads it until he has finished it

198. What does make the reader spellbound to read a fiction?

- a) An elements of suspense
- b) The art of the writer
- c) Imagination and narration
- d) The interpretation of the writer

199. What does a novelist describe in the novel?

- a) Spiced account of certain aspects
- b) The real everyday life
- c) Only the salient features of the whole story
- d) The story of daily life

200. Literature cannot simply describe our real lives because

- a) It has limited space
- b) Our life is full of mystery and suspense
- c) Our life is very vague
- d) It highlights certain aspects only

### Key

- |       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. A  | 2. B  | 3. C  | 4. B  | 5. D  |
| 6. D  | 7. B  | 8. B  | 9. D  | 10. C |
| 11. B | 12. C | 13. D | 14. C | 15. D |
| 16. A | 17. A | 18. C | 19. C | 20. C |
| 21. A | 22. D | 23. B | 24. C | 25. C |
| 26. B | 27. D | 28. A | 29. D | 30. D |
| 31. B | 32. B | 33. D | 34. A | 35. C |
| 36. D | 37. D | 38. A | 39. B | 40. B |
| 41. A | 42. C | 43. B | 44. B | 45. B |
| 46. B | 47. A | 48. A | 49. C | 50. D |
| 51. B | 52. A | 53. C | 54. A | 55. C |
| 56. C | 57. B | 58. A | 59. C | 60. A |

61. D	62. A	63. D	64. D	65. C	131. C	132. D	133. B	134. B	135. B
66. D	67. D	68. C	69. B	70. C	136. D	137. B	138. C	139. B	140. D
71. C	72. B	73. A	74. A	75. A	141. A	142. B	143. A	144. A	145. A
76. C	77. B	78. A	79. D	80. A	146. C	147. D	148. D	149. B	150. A
81. B	82. B	83. D	84. C	85. D	151. C	152. A	153. A	154. B	155. A
86. C	87. B	88. D	89. C	90. D	156. A	157. C	158. B	159. C	160. B
91. D	92. A	93. A	94. D	95. D	161. D	162. B	163. A	164. C	165. D
96. D	97. D	98. C	99. C	100. C	166. B	167. D	168. D	169. A	170. C
101. C	102. A	103. A	104. B	105. C	171. C	172. D	173. A	174. B	175. C
106. D	107. D	108. B	109. C	110. A	176. D	177. B	178. C	179. B	180. A
111. C	112. A	113. B	114. B	115. B	181. B	182. C	183. B	184. C	185. B
116. A	117. C	118. B	119. C	120. B	186. C	187. C	188. D	189. C	190. A
121. B	122. B	123. D	124. C	125. A	191. D	192. B	193. B	194. B	195. A
126. D	127. D	128. B	129. C	130. C	196. B	197. D	198. A	199. C	200. B

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