

# SSC CGL

## Tier-I Examination

# 25-SOLVED PAPERS

**(2016–2019)**

### SECTIONS COVERAGE

- |                                     |                          |
|-------------------------------------|--------------------------|
| 1. General Intelligence & Reasoning | 3. Quantitative Aptitude |
| 2. General Awareness                | 4. English Language      |

**2500 Questions with Answers  
and Detailed Explanations**

**Sanjeev Joon**

# **SSC CGL**

**Tier-I Examination**

**25-SOLVED  
PAPERS**

**(2016–2019)**

**Sanjeev Joon**




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**SSC CGL TIER-I EXAMINATION, 25 SOLVED PAPERS (2016–2019)**

*by Sanjeev Joon*

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# 1

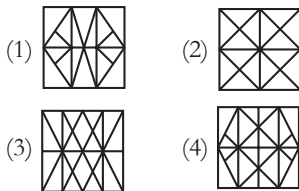
## SSC – CGL

### Combined Graduate Level (Tier-I) Examination Solved Paper – 06 June, 2019 (I)

#### PART-I

#### (GENERAL INTELLIGENCE & REASONING)

1. Select the option in which the given figure is embedded.



2. Arrange the following words in a logical and meaningful order:

1. Student
2. Job
3. Interview
4. Education
5. Retirement
6. Degree

- (1) 1, 5, 3, 6, 4, 2
- (2) 1, 4, 6, 3, 2, 5
- (3) 5, 3, 2, 1, 4, 6
- (4) 3, 5, 4, 6, 1, 2

3. From the given options, select the word pair whose two words are related to each other in the same way as the words of the word pair given below are related.

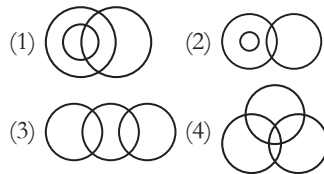
Sadness : Excitement

- (1) War : Attack
- (2) Treaty : Friendship
- (3) Enrollment : Employment
- (4) Condemnation : Respect

4. Two mixtures contain milk and juice in the ratio of 2 : 1 and 4 : 5. If equal volumes of the two mixtures are mixed together, what would be ratio of milk to juice in the resulting mixture?

- (1) 7 : 5
- (2) 1 : 1
- (3) 5 : 3
- (4) 5 : 4

5. Select the Venn diagram that best illustrates the relationship between the following classes.  
Snakes, Reptiles, Poisonous



6. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

- (1) 338
- (2) 217
- (3) 28
- (4) 65

7. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series.

bac\_cab\_cd\_a\_ac\_ca

- (1) bdabc
- (2) dcabc
- (3) cadbc
- (4) dacbd

8. Which two signs should be interchanged in the following equation to make it correct?

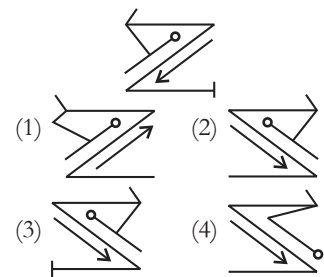
$$10 + 5 \div 10 \times 8 - 10 = 16$$

- (1) + and  $\div$
- (2) - and +
- (3)  $\div$  and  $\times$
- (4)  $\times$  and +

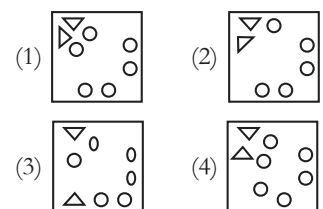
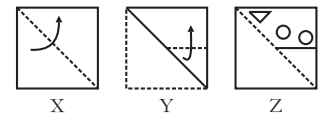
9. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- (1) Krishna
- (2) Mahanadi
- (3) Tapti
- (4) Godavari

10. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



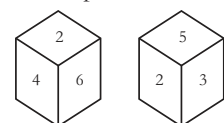
11. The sequence of folding a piece of square paper (figure X and Y) and the manner in which the folder paper has been cut (figure Z) as shown. How will the paper appear when unfolded?



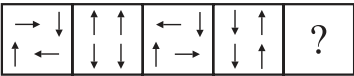




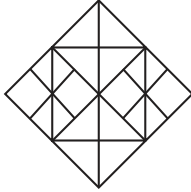
12. In a code language, COMPUTER is written as OCREPMTU. How will DAUGHTER be written in the same language?

- (1) READTHGU
- (2) ADTHREGU
- (3) ADREGUTH
- (4) ADERUGTH

13. Two different position of the same dice are shown. Which number will be at the top if 4 is at the bottom?



- (1) 3                      (2) 6  
(3) 5                      (4) 1
14. Raja's mother said to Raja, "My mother has a son whose son is Deepak. How is Deepak related to Raja?"  
(1) Uncle                (2) Cousin  
(3) Brother              (4) Nephew
15. Two statements are given followed by three conclusions numbered I, II and III. Assuming the statement to be true even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statement.
- Statements:**  
No crow is a bird.  
All bird are animals.
- Conclusions:**  
I. Some animals are crows.  
II. Some animals are birds.  
III. No animal is a crow.
- (1) Only conclusions I and III follow  
(2) None of the conclusions follows  
(3) Only conclusion III follows  
(4) Conclusion II and either conclusion I or III follows
16. If CAB is coded as 6 and BED is coded as 40, then how will HAD be coded as?  
(1) 16                      (2) 52  
(3) 32                      (4) 46
17. Select the set in which the number are related in the same way as are the numbers of the following set. (5, 13, 12)  
(1) (13, 17, 11)        (2) (11, 15, 9)  
(3) (15, 19, 13)        (4) (6, 10, 8)
18. Three of the following four letter-clusters are alike in a certain way and one different. Pick the odd one out.  
(1) RQST                (2) FGHI  
(3) MLNO                (4) CBDE
19. 'Cinema' is related to 'Audience' in the same way as 'Church' is related to '.....'.  
(1) Congregation  
(2) Meditation

- (3) Concentration  
(4) Prayer
20. Select the number-pair in which the two numbers are related in the same way as are the two numbers of the following number-pair.  
7 : 32  
(1) 3 : 11                (2) 13 : 98  
(3) 12 : 85              (4) 16 : 145
21. Select the figure that will come next in the following figure series.
- 
- (1)         (2) 
- (3)         (4) 
22. How many squares are there in the following figure?
- 
- (1) 12                      (2) 18  
(3) 16                      (4) 14

23. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.  
MNOP : LONQ :: FGHI : ?  
(1) GFIJ                (2) EGHJ  
(3) DHGK              (4) EHGJ
24. Select the set in which the numbers are related in the same way as are the numbers of the following set (8, 12, 24)  
(1) (6, 9, 18)            (2) (12, 20, 40)  
(3) (6, 10, 18)            (4) (9, 18, 27)
25. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.  
98, 95, 86, 82, 66, ?, 36  
(1) 58                      (2) 60  
(3) 61                      (4) 63

## PART-II (GENERAL AWARENESS)

26. Which Indian received the Nobel Peace Prize after Mother Teresa?  
(1) K Radhakrishnan  
(2) Fali Nariman  
(3) P Sathasivam  
(4) Kailash Satyarthi
27. Which of the following metals is the most reactive metal?  
(1) Copper              (2) Calcium  
(3) Iron                  (4) Zinc
28. International Day of Forests 2019 was observed on 21st March with the theme ..... to raise awareness on how sustainably managed forests provide a wide array of contributions.  
(1) Pollution-free Forests  
(2) Forests and Education  
(3) Forests and Environment  
(4) Forests Our savior
29. Which of the following metals is the most ductile metal?  
(1) Tin                    (2) Gold  
(3) Copper              (4) Aluminium
30. Right to move freely throughout the territory of India is a fundamental right under ..... of the Constitution of India.  
(1) Article 24            (2) Article 21  
(3) Article 14            (4) Article 19
31. Which of the following comes under the Quaternary sector?  
(1) Information Technology  
(2) Mining  
(3) Manufacturing  
(4) Fisheries
32. The colourful art named Nandna block print, which uses graceful yet aligned arrangements of motifs on fabric, is practiced in Tarapur Village of .....  
(1) Uttarakhand  
(2) Madhya Pradesh  
(3) Odisha  
(4) Maharashtra
33. Who was awarded the Rabindranath Tagore Literary Prize 2019 for the Novel 'Solo'?

- (1) Nayanjyot Mukherjee  
(2) Rana Dasgupta  
(3) Amitabh Ghosh  
(4) Jhumpa Lahiri
34. ...., which connects Sikkim with Tibet, was closed after the Chinese aggression on India in 1962 but was reopened in 2006 as the governments of the two countries decided to enhance their trade through land routes.  
(1) Imis La (2) Pensi La  
(3) Lanak La (4) Nathu La
35. Who among the following was a slave of Muhammad Ghori? He became the ruler after the death of his master and founded the Slave Dynasty.  
(1) Ghiyas-ud-din Balban  
(2) Iltutmish  
(3) Nasir-ud-din Mahmud  
(4) Qutab-ud-din Aibak
36. Name the Indian Space Research Organization (ISRO) chairman and Padma Bhushan Award who created and unleashed a historical moment when Mars Orbiter became the first Indian spacecraft to enter Martian orbit in a maiden attempt.  
(1) Sundar Pichai  
(2) K Radhakrishnan  
(3) Fali Nariman  
(4) Nandan Nilekani
37. Which is the longest national highway in India?  
(1) National Highway 48  
(2) National Highway 44  
(3) National Highway 53  
(4) National Highway 27
38. Lok Adalat have been created under .....  
(1) Legal Services Authority Act  
(2) Administration of Justice Act  
(3) Arbitration and Conciliation Act  
(4) Legal Conciliation Act
39. Which was the first Muslim dynasty that ruled India?  
(1) Slave dynasty  
(2) Tughlaq dynasty  
(3) Lodhi dynasty  
(4) Khilji dynasty
40. Which of the following ministries implemented the Midday Meal Scheme?  
(1) Ministry of Social Justice and Empowerment  
(2) Ministry of Home Affairs  
(3) Ministry of Human Resource Development  
(4) Ministry of Social Welfare
41. World ..... Day 2019 was observed on 22<sup>nd</sup> March with the theme 'Leaving no one behind' to focus on marginalized groups.  
(1) Environment  
(2) Forest  
(3) Water  
(4) Petroleum
42. In February 2019, ..... won a gold medal at the Makran Cup in Chabahar, Iran.  
(1) Manish Kaushik  
(2) Deepak Singh  
(3) Rohit Tokas  
(4) Satish Kumar
43. In February 2019, India won ..... gold medal/s and five silver medals at the Makran Cup Boxing in Chabahar, Iran.  
(1) Two (2) Three  
(3) Four (4) One
44. The Badami Chalukyas first had their capital at ..... before they moved it to Badami.  
(1) Pattadakal (2) Aihole  
(3) Hubli (4) Bijapur
45. What is deposited on iron in the process of galvanization?  
(1) Copper (2) Zinc  
(3) Tin (4) Aluminium
46. The popular Bagh cave paintings are found in .....  
(1) Madhya Pradesh  
(2) Himachal Pradesh  
(3) Sikkim  
(4) Odisha
47. Where is the Bandipur National Park located?  
(1) Karnataka (2) Kerala  
(3) Gujarat (4) Sikkim
48. .... was the first Muslim ruler whose empire covered almost the whole of India up to its extreme south.  
(1) Allaudin Khilji  
(2) Jalal-ud-din Khilji  
(3) Ghiyas-ud-din Balban  
(4) Firoz Shah Tughlaq
49. Who founded and named the science of electromagnetism?  
(1) Michael Faraday  
(2) James Clerk  
(3) Hanser Christian Oersted  
(4) Andre Marie Ampere
50. Which of the following destroys the ozone layer?  
(1) Sulphur (2) Carbon  
(3) Chlorine (4) Silicon

### PART-III (QUANTITATIVE APTITUDE)

51. The table shows the production of different types of cars by a company (in thousands) in 5 years.

Car Year	A	B	C	D	E
2014	52	54	48	46	64
2015	47	45	53	50	45
2016	48	47	56	54	65
2017	43	50	57	67	63
2018	38	40	54	68	70

What is the ratio of the total production of type C cars in 2015 and type D cars in 2017 taken together to the total production of type B cars in 2016 and type A cars in 2017 taken together?

- (1) 12 : 11 (2) 13 : 10  
(3) 11 : 9 (4) 4 : 3

52. A and B are travelling towards each other from the points P and Q respectively. After crossing each other, A and B take  $6\frac{1}{8}$  hours and 8 hours respectively to reach their destinations Q and P. If the speed



of B is 16.8 km/h, then the speed (in km/h) of A is:

- (1) 20.8 (2) 19.8  
(3) 19.2 (4) 20.4

53. If  $12 \cot^2 \theta - 31 \operatorname{cosec} \theta + 32 = 0$ ,  $0^\circ < \theta < 90^\circ$ , then values of  $\tan \theta$  will be:

(1)  $\frac{4}{3}, \frac{3\sqrt{7}}{7}$  (2)  $\frac{4}{5}, \frac{5\sqrt{7}}{7}$

(3)  $\frac{5}{4}, \frac{4}{3}$  (4)  $\frac{4}{5}, \frac{4}{3}$

54. ABCD is a trapezium in which AB || DC and its diagonals intersect at P. If AP = (3x - 1) cm, PC = (5x - 3) cm, BP = (2x + 1) cm and PD = (6x - 5) cm, then the length of DB is:

- (1) 14 cm (2) 12 cm  
(3) 10 cm (4) 16 cm

55. The value of  $\sqrt{\sec^2 \theta + \operatorname{cosec}^2 \theta} \times \sqrt{\tan^2 \theta + \sin^2 \theta}$  is equal to:

- (1)  $\operatorname{cosec} \theta \sec^2 \theta$   
(2)  $\sin \theta \sec^2 \theta$   
(3)  $\sin \theta \cos^2 \theta$   
(4)  $\operatorname{cosec} \theta \cos^2 \theta$

56. The volume of a metallic cylindrical pipe is  $7480 \text{ cm}^3$ . If its length is 1.4 m and its external radius is 9 cm, then its thickness (given  $\pi = \frac{22}{7}$ ) is:

- (1) 1 cm (2) 0.8 cm  
(3) 0.9 cm (4) 1.2 cm

57. If  $x = a + \frac{1}{a}$  and  $y = a - \frac{1}{a}$  then  $\sqrt{x^4 + y^4 - 2x^2y^2}$  is equal to:

- (1)  $16a^2$  (2) 8  
(3)  $\frac{8}{a^2}$  (4) 4

58. G is the centroid of the triangle ABC, where AB, BC and CA are 7 cm, 24 cm and 25 cm respectively, then BG is:

- (1)  $6\frac{1}{3}$  cm (2)  $8\frac{1}{3}$  cm  
(3)  $5\frac{1}{2}$  cm (4)  $4\frac{1}{6}$  cm

59. The table shows the production of different types of cars by a company (in thousand) in 5 years.

Car Year	A	B	C	D	E
2014	52	54	48	46	64
2015	47	45	53	50	45
2016	48	47	56	54	65
2017	43	50	57	67	63
2018	38	40	54	68	70

The total production of type B cars in all the five years is what percent more than the total production of type A, B and D cars in 2017?

- (1) 49.5 (2) 4.5  
(3) 57.3 (4) 32.2

60. The table shows the production of different types of cars by a company (in thousands) in 5 years.

Car Year	A	B	C	D	E
2014	52	54	48	46	64
2015	47	45	53	50	45
2016	48	47	56	54	65
2017	43	50	57	67	63
2018	38	40	54	68	70

The average production of type D cars in 5 years is what percent less than the production of type E cars in 2018? (Correct to one decimal place)

- (1) 18.6 (2) 16.8  
(3) 15.9 (4) 17.4

61. When  $x$  is subtracted from each of 21, 22, 60 and 64, the number so obtained in this order, are in proportion. What is the mean proportional between  $(x + 1)$  and  $(7x + 8)$ ?

- (1) 27 (2) 18  
(3) 24 (4) 21

62. The table shows the production of different types of cars by a company (in thousands) in 5 years.

Car Year	A	B	C	D	E
2014	52	54	48	46	64
2015	47	45	53	50	45
2016	48	47	56	54	65
2017	43	50	57	67	63
2018	38	40	54	68	70

If the data related to the production of cars in 2018 is represented by pie chart, then the central angle of the sector representing the production of type C cars will be:

- (1)  $72^\circ$  (2)  $59^\circ$   
(3)  $93^\circ$  (4)  $91^\circ$

63. ABCD is a cyclic quadrilateral whose diagonals intersect at P. If  $AB = BC$ ,  $\angle DBC = 70^\circ$  and  $\angle BAC = 30^\circ$ , then the measure of  $\angle PCD$  is:

- (1)  $35^\circ$  (2)  $50^\circ$   
(3)  $55^\circ$  (4)  $30^\circ$

64. Pipes A and B can fill a tank in one hour and two hours respectively while pipe C can empty the filled tank in one hour and fifteen minutes. A and C are turned on together at 9 a.m. After 2 hours, only A is closed and B is turned on. When will the tank be emptied?

- (1) 12 : 10 p.m. (2) 11 : 30 a.m.  
(3) 10 : 30 a.m. (4) 12 : 20 p.m.

65. If the 8-digit number  $2074 \times 4j2$  is divisible by 88, then the value of  $(4x + 3y)$  is:

- (1) 49 (2) 36  
(3) 42 (4) 45

66. If  $(8x^3 - 27y^3) \div (2x - 3y) = (Ax^2 + Bxy + Cy^2)$ , then the value of  $(2A + B - C)$  is:

- (1) 4 (2) 6  
(3) 5 (4) 3

67. A circle is inscribed in  $\triangle ABC$ , touching AB at P, BC at Q and AC at R. If  $AR = 5$  cm,  $RC = 6$  cm and  $AB = 12$  cm, then the perimeter of  $\triangle ABC$  is:

- (1) 40 cm (2) 32 cm  
(3) 37 cm (4) 36 cm

68. The income of A is 50% more than that of B. If the income of A is increased by 40% and the income of B is increased by 90%, then the percentage increase in their combined income will be

- (1) 64 (2) 55  
(3) 60 (4) 70

69.  $\frac{\sin \theta - \cos \theta + 1}{\sin \theta + \cos \theta - 1} = ?$   
 (1)  $\sec \theta \sin \theta$  (2)  $\sec \theta \tan \theta$   
 (3)  $\sec \theta + \tan \theta$  (4)  $\sec \theta - \tan \theta$
70. If  $ab + bc + ca = 8$  and  $a^2 + b^2 + c^2 = 20$ , then a possible value of  $\frac{1}{2}(a + b + c)[(a - b)^2 + (b - c)^2 + (c - a)^2]$  is:  
 (1) 72 (2) 56  
 (3) 84 (4) 80
71. A shopkeeper marks his goods at 40% more than its cost price and allows a discount of 25% on the marked price. His gain or loss percent is:  
 (1) 5% loss (2) 15% gain  
 (3) 10% loss (4) 5% gain
72. The average of thirteen number is 80. The average of the first five numbers is 74.5 and that of the next five numbers is 82.5. The 11<sup>th</sup> number is 6 more than the 12<sup>th</sup> number and the 12<sup>th</sup> number is 6 less than the 13<sup>th</sup> number. What is the average of the 11<sup>th</sup> and the 13<sup>th</sup> numbers?  
 (1) 87 (2) 86  
 (3) 86.5 (4) 87.5
73. The value of  $(5 + 3 \div 5 \times 5 \div (3 \div 3 \text{ of } 6))$  of  $(4 \times 4 \div 4 \text{ of } 4 + 4 \div 4 \times 4)$  is:  
 (1)  $8\frac{1}{5}$  (2)  $7\frac{1}{3}$   
 (3)  $9\frac{3}{5}$  (4)  $6\frac{2}{3}$
74. A sum of ₹ 15,000 is lent at 16% p.a. compound interest. What is the difference between the compound interest for the second year and the third year?  
 (1) ₹ 544 (2) ₹ 445.44  
 (3) ₹ 454.88 (4) ₹ 548
75. A person sold an article at a loss of 8%. Had he sold it at a gain of 10.5%, he would have received ₹ 92.50 more. To gain 12%, he should have sold it for :  
 (1) ₹ 540.50 (2) ₹ 560  
 (3) ₹ 580 (4) ₹ 537.40

### PART-IV (ENGLISH LANGUAGE)

76. Select the correct passive form of the given sentence.  
**At night, lock the outer gate.**  
 (1) The outer gate is requested to be locked at night  
 (2) The outer gate is locked at night  
 (3) The outer gate be locked at night  
 (4) Let the outer gate be locked at night
77. In the sentence, identify the segment which contains the grammatical error.  
**Every employee of the company were given a two bedroom flat as Diwali bonus.**  
 (1) a two bedroom flat  
 (2) as Diwali bonus  
 (3) Every employee  
 (4) were given
78. Select the synonym of the given word.  
**Indelible**  
 (1) Illegible (2) Inerasable  
 (3) Ineffective (4) Illegal
79. Select the wrongly spelt word.  
 (1) Controversial  
 (2) Conquer  
 (3) Contemporary  
 (4) Cooperation

**Directions (80–84):** In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

#### PASSAGE

Pigeon racing has become increasingly popular in parts of China ...**(80)**... the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association, ...**(81)**... that at least 1,00,000 pigeon breeders live in Beijing, and ...**(82)**... 90,000 of them are registered with Racing Pigeons Associations at ...**(83)**... levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for ...**(84)**... owners, with some

prizes amounting to tens of thousands of dollars. Liu said in recent years, pigeon racing has been surging in popularity across China.

80. (1) along (2) about  
 (3) among (4) against
81. (1) clarified (2) told  
 (3) advised (4) said
82. (1) almost (2) nearby  
 (3) utmost (4) exact
83. (1) differ (2) differed  
 (3) differential (4) different
84. (1) birds (2) pigeons  
 (3) animal (4) bird
85. Select the most appropriate option of substitute the underlined segment in the given sentence. If no substitution is required, select 'No improvement'.  
**I try to solve this problem at least for two hours.**  
 (1) have been trying to solve  
 (2) tried to be solving  
 (3) No improvement  
 (4) am try to solve
86. Select the most appropriate word to fill in the blank.  
**The burning of the effigy of Ravana on Dussehra ..... the burning of all evils.**  
 (1) epitomizes (2) symbolizes  
 (3) intensifies (4) personifies
87. Select the most appropriate meaning of the given idiom.  
**Give someone the cold shoulder**  
 (1) Pamper someone  
 (2) Do something pointless  
 (3) Ignore someone  
 (4) Give away a secret
88. Select the wrongly spelt word.  
 (1) Expire (2) Explain  
 (3) Experience (4) Except
89. Select the antonym of the given word.  
**Eminent**  
 (1) Exalted  
 (2) Impressive  
 (3) Inconspicuous  
 (4) Distinguished
90. Select the most appropriate word to fill in the blank.

**There is hope that better forestry management will help in the ..... of the wild life that is constantly facing threat because of increasing human activities.**

- (1) guarding (2) salvating  
(3) supervision (4) conservation

91. Given below are four jumbled sentences. Select the option that given their correct order.

- Mango, the so-called “king of fruits”, is something of a national obsession of India.
- There was a bumper crop of mangoes in different states.
- It resulted in prices coming down and sales going up much to the delight of buyers and sellers alike.
- 2017 proved to be a very good year for mango lovers.

- (1) CADB (2) CDAB  
(3) ADCB (4) ADBC

92. Select the word which means the same as the group of words given.

**An enclosure of keep the birds in**

- (1) Stable (2) Apiary  
(3) Sanctuary (4) Aviary

93. In the sentence identify the segment which contains the grammatical error.

**Cyclone idai is regarded as one of the worst tropical cyclone on record to affect Arfica and the Southern Hemisphere as a whole.**

- (1) Cyclone Idai is regarded  
(2) The worst tropical cyclone  
(3) To affect Africa  
(4) As a whole

94. Select the antonym of the given word.

**Agony**

- (1) Anxiety (2) Distress  
(3) Comfort (4) Misery

95. Select the synonym of the given word.

**Triumph**

- (1) Victory (2) Fight  
(3) Attack (4) Peace

96. Select the correct active form of the given sentence.

**Their children were brought up with great care.**

- They have been bringing up their children with great care
- They had brought up their children with great care
- They brought up their children with great care
- Their children brought them up with great care

97. Select the word which means the same as the group of words given.

**An inscription on a tombstone written in memory of the deceased.**

- (1) Slab (2) Basilica  
(3) Epitaph (4) Pillar

98. Given below are four jumbled sentences. Select the option that given their correct order.

A. Around 600 million of them live in areas of high to extreme water stress.

B. India is suffering from the worst water crisis, with one billion people living in water scarcity.

C. This is even more than that of China and US combined.

D. The reason is that at 24 per cent, India uses the most groundwater drawn out globally.

- (1) ACBD (2) ADCB  
(3) BADC (4) BDAC

99. Select the most appropriate option of substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

**If you listen to the English news, it improve your English.**

- It will improve
- No improvement
- It improved
- It is improving

100. Select the most appropriate meaning of the given idiom.

**Pull yourself together**

- Go to sleep
- Try to understand
- Calm down
- Do a good job

## Short Answers

- |         |         |         |         |         |         |         |         |         |          |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1. (4)  | 2. (2)  | 3. (4)  | 4. (4)  | 5. (1)  | 6. (1)  | 7. (4)  | 8. (2)  | 9. (3)  | 10. (3)  |
| 11. (1) | 12. (3) | 13. (1) | 14. (2) | 15. (4) | 16. (3) | 17. (4) | 18. (2) | 19. (1) | 20. (2)  |
| 21. (2) | 22. (4) | 23. (4) | 24. (1) | 25. (3) | 26. (4) | 27. (2) | 28. (2) | 29. (2) | 30. (4)  |
| 31. (1) | 32. (2) | 33. (2) | 34. (4) | 35. (4) | 36. (2) | 37. (2) | 38. (1) | 39. (1) | 40. (3)  |
| 41. (3) | 42. (2) | 43. (4) | 44. (2) | 45. (2) | 46. (1) | 47. (1) | 48. (1) | 49. (4) | 50. (3)  |
| 51. (4) | 52. (3) | 53. (1) | 54. (2) | 55. (2) | 56. (1) | 57. (4) | 58. (2) | 59. (4) | 60. (1)  |
| 61. (3) | 62. (1) | 63. (2) | 64. (4) | 65. (4) | 66. (3) | 67. (4) | 68. (3) | 69. (3) | 70. (1)  |
| 71. (4) | 72. (1) | 73. (3) | 74. (2) | 75. (2) | 76. (1) | 77. (4) | 78. (2) | 79. (3) | 80. (3)  |
| 81. (4) | 82. (1) | 83. (4) | 84. (4) | 85. (1) | 86. (2) | 87. (3) | 88. (3) | 89. (3) | 90. (4)  |
| 91. (4) | 92. (4) | 93. (2) | 94. (3) | 95. (1) | 96. (3) | 97. (3) | 98. (3) | 99. (1) | 100. (3) |

## Hints & Solutions

### PART-I

#### (GENERAL INTELLIGENCE & REASONING)

1. (4) On observing the options, the figure given under option (4) is indeed embedded in the original figure.



2. (2) Student (1) → Education (4) → Degree (6) → Interview (3) → Job (2) → Retirement (5)

3. (4) Sadness is the opposite of Excitement.

Similarly, Condemnation is the opposite of Respect.

4. (4) Quantity of the mixture = 9 litres each

Therefore, in

Mixture 1 →

Milk : Juice = 2 : 1 = 6 : 3; total = 9

In Mixture 2 →

Milk : Juice = 4 : 5; total = 9

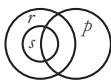
After mixing both the mixtures the ratio

Milk : Juice will be = 6 + 4 : 3 + 5 = 10 : 8 = 5 : 4

5. (1) All snakes are reptiles.

Some snakes and reptiles are poisonous.

So, the best venn diagram is



6. (1)  $(7)^3 - 5 = 343 - 5 = 338$

$(6)^3 + 1 = 216 + 1 = 217$

$(3)^3 + 1 = 27 + 1 = 28$

$(4)^3 + 1 = 64 + 1 = 65$

7. (4) The series will be:

bacdca/bacdca/bacdca

8. (4) According to the question,

Interchange the - and + sign the above equation become correct.

$10 - 5 \div 10 \times 8 + 10$  (Applying BODMAS)

or,  $10 - 0.5 \times 8 + 10$

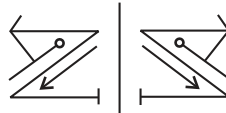
or,  $10 - 4 + 10$

or,  $20 - 4$

$\therefore 16$

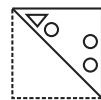
9. (3) Tapti river flows towards westwards while all the three rivers flows eastwards.

10. (3) In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.

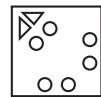


11. (1) The paper is unfolded in two steps :

Step-1



Step-1



12. (3) C O M P U T E R  
O C R E P M T U

Similarly,

D A U G H T E R  
A D R E G U T H

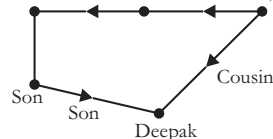
13. (1) Moving in the clockwise direction:

Cube 1 - 2 6 4

Cube 2 - 2 5 3

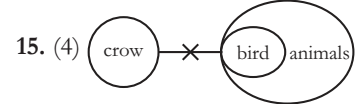
Clearly, 4 is opposite to 3.

14. (3) Mother Mother Raja



F is the wife of C's brother.

Hence, F is the sister-in-law of C.



Conclusions:

I. Some animals are crows. – (False) it may be possible.

II. Some animals are bird. – (True)

III. No animal is a crow. – (False) it may be possible.

The correct option is (4) conclusion II and either conclusion I or III follows.

16. (3) C A B

$\downarrow \quad \downarrow \quad \downarrow$   
 $3 \times 1 \times 2 = 6$

B E D  
 $\downarrow \quad \downarrow \quad \downarrow$   
 $2 \times 5 \times 4 = 40$

$\therefore$  H A D  
 $\downarrow \quad \downarrow \quad \downarrow$

$8 \times 1 \times 4 = 32$

17. (4) The sum of all the numbers in the given number set is even

$5 + 13 + 12 = 30$

The given options are:

$13 + 17 + 11 = 41$  (odd)

$11 + 15 + 9 = 35$  (odd)

$15 + 19 + 13 = 47$  (odd)

$6 + 10 + 8 = 24$  (even)

18. (2) Except FGHJ, all other options are having first two letters in reverse order.

Hence, option (2) is different from the rest.

19. (1) As 'Audience' is a group of people who come to the Cinema. Similarly, 'Congregation' is a group of people who assembled for religious worship in Church.

20. (2)  $7 \times 4 + 4 = 32$

Similarly,

$13 \times 7 + 7 = 98$

21. (2) In question figure, the 1st & 3rd figure contain similar objects and 2<sup>nd</sup> & 4<sup>th</sup> have same objects.

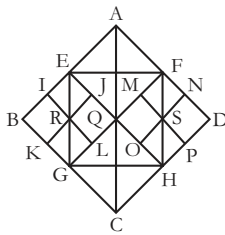
The 3<sup>rd</sup> figure formed after interchanging the two horizontal arrow lines.

Similarly, the 4<sup>th</sup> figure formed after interchanging left with its diagonal.

According to the pattern, the next figure in the series is:



22. (4)

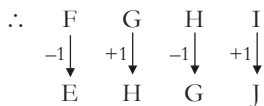
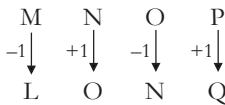


The following squares formed in the figure:

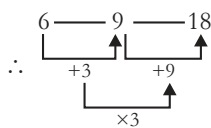
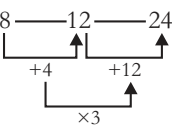
ABCD, EFGH, EBGQ, FDHQ, AEQF, QGCH, BIRK, EIRJ, JRLQ, RKGL, QMSO, FMSN, NDPS, SPHO

Total number of squares = 14

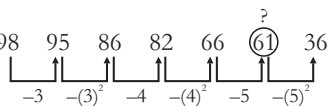
23. (4)



24. (1)



25. (3)



**PART-II**

**(GENERAL AWARENESS)**

26. (4) Kailash Satyarthi received the Nobel Peace Prize 2014 after Mother Teresa. He shared the prize with Malala Yusufzai of Pakistan. He is Children

Activist and founder of Bachpan Bachao Andolan.

27. (2) Calcium is the most reactive element. Calcium comes after Lithium, Potassium and Strontium in Activity series of metals.

28. (2) International Day of Forests 2019 was observed on 21<sup>st</sup> March with the theme of Forest and Education.

29. (2) Gold is the most ductile metal, one ounce of gold can be drawn into more than 80 km of thin gold wire.

30. (4) Article 19(1) says:

(a) to freedom of speech and expression

(b) to assemble peaceably and without arms

(c) to form associations or unions

(d) to move freely throughout the territory of India

(e) to reside and settle in any part of the territory of India

(f) to practice any profession, or to carry on any occupation, trade or business.

31. (1) Quaternary sector is a sector in the economy which include Knowledge – based economic sectors. Information Technology, Media Research and development, Software solution, Blogging, Designing etc., comes under this category.

32. (2) Nandna block print is colourful art printing or motifs on fabric practiced in Tarapur village of Madhya Pradesh. Nandna printed fabric was regularly worn by the ladies of Bhil tribe.

33. (2) Rana Dasgupta was awarded the Rabindranath Tagore Literary Prize 2019 for the novel 'SOLO'. He is the Literary Director of the JCB Prize for Literature.

34. (4) Nathu Lal Pass connects Sikkim to Tibet. Nathu La Pass was closed in 1962 after Chinese Aggression and reopened in 2006. Nathu La is one of the three open trading border posts between China and India, the others are Shipkila in Himachal Pradesh and Lipulekh at the trisection point of Uttarakhand-India, Nepal and China.

35. (4) Qutub-ud-din Aibak was slave of Muhammad Ghori and became ruler of Delhi in 1206 and his dynasty was recognized as Slave Dynasty. Aibek was succeeded by Aram Shah, and then by his former slave Iltutmish. He constructed Qutab Minar in Delhi and Adhai Din ka Jhopra in Ajmer.

36. (2) K Radhakrishnan was the chairman of Indian Space Research Organization during 2009-2014 and played vital role in making the Mars Orbital Mission a success. Mars orbital mission was planned and executed between 2010-2014 and India became the first country to make it a success in its maiden attempt.

37. (2) National Highway 44 is the longest highway in India. It begins from Srinagar and ends at Kanyakumari passing through Delhi and 10 States. Central Public Works Department (CPWD) is maintaining National Highway 44.

38. (1) Lok Adalat have been created under Legal Services Authority Act, 1987. Concept of Lok Adalat is mentioned under Article 39A and its objective is to provide free legal services for the citizens. Permanent and non permanent are the two types of Lok Adalat.

39. (1) Slave dynasty rule from 1206-90 and became the first Muslim dynasty ruled over India. Though India was invaded multiple times before this *i.e.*, Muhammad Qassim, Muhammad Gori etc. but Slave dynasty became the first dynasty to rule over India. Qutub-ud-din Aibak, Iltutmish, Razia Sultan, Balban were eminent kings of this dynasty.

40. (3) Ministry of Human Resources Development is implementing Mid-Day Meal Scheme. The scheme was launched as a Centrally Sponsored Scheme on 15<sup>th</sup> August, 1995. In 2001 MDMS became a cooked Mid Day Meal Scheme under which every child in every Government and Government aided primary school was to be served a prepared Mid Day Meal with a minimum content of 300 calories of energy and 8-12 gram protein per day for a minimum of 200 days.

41. (3) Water day is observed every year on 22<sup>nd</sup> March. The theme of 2019 Water day was 'Leaving no one behind' to focus on marginalized groups. The sustainable development goal 6 aims to ensure availability and sustainable management of water for all by 2030. Every year, UN-Water sets a theme for World Water Day corresponding to a current or future challenge.

42. (2) Makran Cup Boxing Championship was held in feb, 2019 at Chabahar, Iran. India won one gold medal in the cup which was snatched by Deepak Singh.

43. (4) India won one gold medal and five silver medals at Makran Cup Boxing in Iran, in feb, 19. Gold medal is snatched by Deepak Singh who defeated Jaafar Naseri in Finals.

44. (2) Aihole is the first capital of Badami Chalukyas before they moved to Badami which is located at 35 kms from it. Aihole is an important archaeological site and recognized as UNESCO World heritage site. It is situated near Malaprabha river valley, in Bagalakote district of Karnataka.

45. (2) Galvanization is a process of applying a protective Zinc layer on Iron to prevent from rusting. Iron is generally dipped in hot molten zinc in this process. Zinc layer on Iron eradicated direct contact of Iron to atmospheric moisture, thus protecting it from corrosion.

46. (1) Bagh caves are situated in state of Madhya Pradesh, Dhar District. Bagh caves are known for rock cut architecture. Mainly inspired from Buddhism. All of the 9 caves are viharas- the caves used for as residence by Buddhist Monks.

47. (1) The Bandipur National Park is situated in Karnataka and it is established in 1974. It is a tiger reserve National Park. Bandipur is located in Gundlupet taluq of Chamarajanagar district.

48. (1) Allaudin Khilji covered almost the whole of India up to its extreme south. He fought many battles, conquered Gujarat, Ranthambhore, Chittoor, Malwa and Deccan during his reign of 20 years. He died in 1316 AD and after his death, Khilji dynasty came to end.

49. (4) Andre Marie ampere founded the science of electromagnetism. Electro-magnetism is the science of charge and of the forces and fields associated with charge. Electricity and magnetism are two aspects of electromagnetism.

50. (3) Chlorine is responsible for destruction of ozone layer. Bromine also does the same effect. Chlorofluorocarbons, hydro chlorofluorocarbons, carbon tetra chloride etc., are some other ozone depletion compounds. Ozone layer absorbs harmful UV radiations of sun.

**PART-III**  
**(QUANTITATIVE APTITUDE)**

51. (4) Production of type C cars in 2015 = 53

Production of type D cars in 2017 = 67

Total production = 53 + 67 = 120

Production of type B cars in 2016 = 47

Production of type A cars in 2017 = 43

Total production = 47 + 43 = 90

∴ Ratio = 120 : 90  
= 4 : 3

52. (3)  $\frac{\text{speed of A}}{\text{speed of B}}$

$$= \sqrt{\frac{\text{time taken by B to complete the remaining distance}}{\text{time taken by A to complete the remaining distance}}}$$

$$\frac{\text{speed of A}}{\text{speed of B}} = \sqrt{\frac{8}{6\frac{1}{8}}}$$

$$= \frac{8}{7}$$

Speed of A =  $\left(\frac{8}{7}\right) \times$  speed of B

Speed of A = 19.2 km/hr

53. (1)  $12 \cot^2 \theta - 31 \operatorname{cosec} \theta + 32 = 0$   
 $12 (\operatorname{cosec}^2 \theta - 1) - 31 \operatorname{cosec} \theta + 32 = 0$

$$12 \operatorname{cosec}^2 \theta - 31 \operatorname{cosec} \theta + 20 = 0$$

$$(4 \operatorname{cosec} \theta - 5) (3 \operatorname{cosec} \theta - 4) = 0$$

$$\operatorname{cosec} \theta = \frac{5}{4} \text{ and } \frac{4}{3}$$

$$\text{When } \operatorname{cosec} \theta = \frac{5}{4}$$

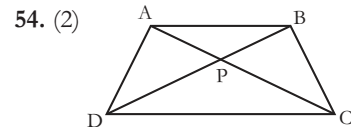
$$\text{Then } \tan \theta = \frac{4}{\sqrt{(5)^2 - (4)^2}}$$

$$= \frac{4}{3}$$

$$\text{when } \operatorname{cosec} \theta = \frac{4}{3},$$

$$\text{then } \tan \theta = \frac{3}{\sqrt{(4)^2 - 3^2}}$$

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



Given,  $AB \parallel DC$ ,  $AP = (3x - 1)$  cm,  $PC = (5x - 3)$  cm,  $BP = (2x + 1)$  cm,  $PD = (6x - 5)$  cm

$$\triangle APB \sim \triangle CPD$$

$$\frac{AP}{PC} = \frac{BP}{PD}$$

$$\frac{3x - 1}{5x - 3} = \frac{2x + 1}{6x - 5}$$

$$18x^2 - 21x + 5 = 10x^2 - x - 3$$

$$8x^2 - 20x + 8 = 0$$

$$2x^2 - 5x + 2 = 0$$

On solving further,

$$2x^2 - 4x - x + 2 = 0$$

$$(x - 2) (2x - 1) = 0$$

$$\therefore x = 2, \frac{1}{2}$$

But  $x$  cannot be equal to  $\frac{1}{2}$  as on

putting  $x = \frac{1}{2}$  we will get negative values for PD and PC, which is not possible.

Putting  $x = 2$

$$BD = BP + PD$$

$$= 2x + 1 + 6x - 5 = 5 + 7 = 12 \text{ cm}$$

55. (2)  $\sqrt{\sec^2 \theta + \operatorname{cosec}^2 \theta} \times \sqrt{\tan^2 \theta - \sin^2 \theta}$   
 $= \sec \theta \cdot \operatorname{cosec} \theta \times \sin^2 \theta \cdot \sec \theta$   
 $= \sin \theta \sec^2 \theta$

56. (1) Given is  $r_1 = 9$  cm,

$$h = 1.4 \text{ m} = 140 \text{ cm}$$

$$\text{Volume of cylinder} = 7480 \text{ cm}^3$$

$$\text{Volume of cylinder} = \frac{22}{7} [9^2 - r_2^2] \times 140 = 7480$$

$$= 81 - r_2^2 = 17$$

$$R_2 = \sqrt{64} = 8 \text{ cm}$$

Required thickness of cylinder

$$= r_1 - r_2 = 9 - 8$$

$$= 1 \text{ cm}$$

57. (4)  $\sqrt{x^4 + y^4 - 2x^2y^2}$   
 $\sqrt{(x^2 - y^2)^2} = x^2 - y^2$   
 $(a + \frac{1}{a})^2 - (a - \frac{1}{a})^2 = 4$

58. (2) Triangle ABC is a right-angle triangle.

So, in  $\Delta ABC$ , median BP will be half of hypotenuse.

So,  $BP = \frac{25}{2} = 12.5$  cm

Centroid divides the median in the ratio of 2 : 1.

$\therefore BG = \frac{2}{3} \times 12.5 = \frac{50}{6} = 8\frac{1}{3}$

59. (4) Total production of type B cars = 54 + 45 + 47 + 50 + 40 = 236

Total production of type A, B and D cars in 2017 = 43 + 50 + 67 = 160

% increase =  $236 - \frac{160}{236}$   
 = 32.2%

60. (1) Total production of type D cars in 5 years

= 46 + 50 + 54 + 67 + 68 = 285

Average production of type D cars

=  $\frac{285}{5} = 57$

Production of type E cars in 2018 = 70

% Less =  $\frac{(70 - 57)}{70} \times 100 \approx 18.6$ .

61. (3) Given numbers = 21, 22, 60 and 64

Now, x is subtracted from the number

So,  $(21 - x) : (22 - x) : : (60 - x) : (64 - x)$

$(22 - x)(60 - x) = (21 - x)(64 - x)$   
 $x = 8$

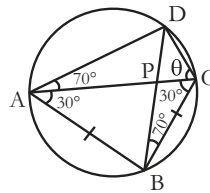
Mean proportion of  $(x + 1)$  &  $(7x + 8)$   
 =  $\sqrt{9 \times 64} = 24$

62. (1) Total production of cars in 2018 = 38 + 40 + 54 + 68 + 70 = 270

Production of type C car in 2018 = 54

Central angle =  $\frac{54}{270} \times 360^\circ$   
 =  $72^\circ$

63. (2)



Given, AB = BC

So,  $\angle BAC = \angle BCA = 30^\circ$

and

$\angle DBC = \angle DAC = 70^\circ$  (Angle made by cord CD)

In cyclic quadrilateral, opposite angles are supplementary angle

So,  $\angle BAD + \angle BCD = 180^\circ$

$100^\circ + \angle BCD = 180^\circ$

$\angle BCD = 80^\circ$

So, angle  $\angle PCD = 80 - 30 = 50^\circ$

64. (4) Total work = LCM of  $(1, 2, \frac{5}{4})$  = 10 units

Efficiency of A =  $\frac{10}{1} = 10$  units per hour

Efficiency of B =  $\frac{10}{2} = 5$  units per hour

Efficiency of C =  $10 \div \frac{5}{4} = -8$  units per hour

Work done by A + C in 2 hours =  $(10 - 8) \times 2 = 4$  units

Efficiency of B and C = -3

Therefore, time taken by B + C to empty the tank =  $\frac{4}{3}$  hours = 80 minutes

Now the time = 11:00 + 1 hr 20 minutes = 12:20 p.m.

65. (4) For a number to be divisible by 88, the number should be divisible by both 11 and 8.

A number is divisible by 8 if the number formed by the last three digits is divisible by 8.

4y2 should be divisible by 8.

So,  $y = 3$  or  $y = 7$

A number is divisible by 11 if the difference of the sum of its digits at odd places and the sum of its digits at even places, is divisible by 11.

$(2 + 4 + 4 + 0) - (y + x + 7 + 2)$   
 = 0 or 11

Now,  $x + y - 1 = 0$  (for  $y = 3$ )

$x + 3 - 1 = 0$

$x = -2$  ..... digit cannot be negative.

And,  $x + y - 1 = 0$  (for  $y = 7$ )

$x = -6$  ..... digit cannot be negative

So,  $x + y - 1 = 11$

$x = 5$  for  $y = 7$

$4x + 3y = 4 \times 5 + 3 \times 7$

= 41 (not in options)

$x = 9$  for  $y = 3$

We have  $x = 9$  and  $y = 3$

$4x + 3y = 4 \times 9 + 3 \times 3$   
 = 45

66. (3)  $\therefore \frac{8x^3 - 27y^3}{2x - 3y} = Ax^2 + Bxy + Cy^2$

or,  $\frac{(2x)^3 - (3y)^3}{2x - 3y} = Ax^2 + Bxy + Cy^2$

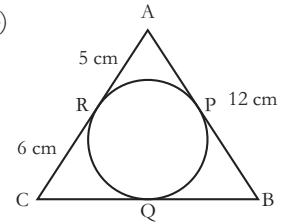
or,  $\frac{(2x - 3y)(4x^2 + 6xy + 9y^2)}{2x - 3y}$

Comparing the above equation with  $Ax^2 + Bxy + Cy^2$

We have  $A = 4, B = 6, C = 9$

Then  $(2A + B - C) = 8 + 6 - 9 = 5$

67. (4)



In the above figure,

We know that  $CR = CQ, AR = AP, BP = BQ$  (tangents on a circle from an external point are equal)

Therefore,

$AR = AP = 5$  cm

$CR = CQ = 6$  cm

$PB = AB - AP = 12 - 5 = 7$  cm

$BP = BQ = 7$  cm

Perimeter of the triangle =  $AR + AP + BP + BQ + CQ + CR = 36$  cm

68. (3) Starting income of B = 100

Then, starting Income of A = 150

Income of A is increased by 40%, so

New income of A =  $150 \times \frac{140}{100} = 210$

Income of B is increased by 90%,

So, New income of B

=  $100 \times \frac{190}{100} = 190$

Total starting income

=  $100 + 150 = 250$

$$\begin{aligned} \text{Total new income} &= 210 + 190 = 400 \\ \% \text{ increase} &= \frac{400 - 250}{250} \times 100 \\ &= 60\% \end{aligned}$$

$$\begin{aligned} 69. (3) \frac{\sin \theta - \cos \theta + 1}{\sin \theta + \cos \theta - 1} &= \\ \frac{\sin \theta - (\cos \theta - 1)}{\sin \theta + (\cos \theta - 1)} \times \frac{\sin \theta - (\cos \theta - 1)}{\sin \theta - (\cos \theta - 1)} &= \\ = \frac{\sin^2 \theta + (\cos \theta - 1)^2 - 2 \sin \theta (\cos \theta - 1)}{\sin^2 \theta - (\cos \theta - 1)^2} &= \\ \text{On simplifying the equation, we get,} & \\ \frac{2 - 2 \cos \theta + 2 \sin \theta - 2 \sin \theta \cos \theta}{2 \cos \theta (1 - \cos \theta)} &= \\ = \frac{(1 - \cos \theta)(1 + \sin \theta)}{\cos \theta (1 - \cos \theta)} &= \\ = \frac{1 + \sin \theta}{\cos \theta} = \sec \theta + \tan \theta & \end{aligned}$$

$$\begin{aligned} 70. (1) (a + b + c)^2 &= a^2 + b^2 + c^2 + 2(ab \\ + bc + ca) & \\ &= 20 + 2 \times 8 = 36 \\ a + b + c &= 6 \end{aligned}$$

Therefore,

$$\begin{aligned} \frac{1}{2} (a + b + c) [(a - b)^2 + (b - c)^2 + (c \\ - a)^2] &= \frac{1}{2} (a + b + c) [2(a^2 + b^2 + c^2) - 2 \\ (ab + bc + ca)] & \\ &= \frac{1}{2} \times 6 [2(20 - 8)] \\ &= 72 \end{aligned}$$

$$\begin{aligned} 71. (4) \text{Cost price (CP)} &= ₹ 100 \\ \text{Now, Marked price (MP)} &= ₹ 100 \\ \text{At 25\% discount,} & \\ \text{Selling price (SP)} &= 100 \times \frac{75}{100} \\ &= ₹ 105 \end{aligned}$$

$$\% \text{ Profit} = \frac{105 - 100}{100} \times 100 = 5\%$$

$$\begin{aligned} 72. (1) \text{Sum of 13 number} &= 13 \times 80 = 1040 \\ \text{Sum of first five number} &= 5 \times 74.5 = 372.5 \\ \text{Sum of next five number} &= 5 \times 82.5 = 412.5 \\ \text{Sum of first 10 number} &= 372.5 + 412.5 = 785 \\ \text{Now, sum of last three number} &= 1040 - 785 = 255 \end{aligned}$$

$$\begin{aligned} \text{According to question,} & \\ x + 6 + x + x + 6 &= 255 \\ x &= 81 \end{aligned}$$

$$\begin{aligned} 11^{\text{th}} \text{ number} &= 87 \\ 13^{\text{th}} \text{ number} &= 87 \end{aligned}$$

$$\text{Average} = \frac{87 + 87}{2} = 87$$

$$73. (3) (5 + 3 \div 5 \times 5 \div (3 \div 3 \text{ of } 6) \text{ of } (4 \times 4 \div 4 \text{ of } 4 + 4 \div 4 \times 4))$$

$$= (5 + \frac{3}{5} \times 5) \div (3 \div 3 \times 6) \text{ of } (4 \times 4 \div 16 + 4 \div 4 \times 4)$$

$$= 8 \div (\frac{1}{6}) \text{ of } (4 \times \frac{4}{16} + 1 \times 4)$$

$$= 8 \div \frac{1}{6} \text{ of } 5$$

$$= 8 \div \frac{5}{6}$$

$$= 8 \times \frac{6}{5} = \frac{48}{5} = 9\frac{3}{5}$$

$$74. (2) \text{Amount after 1}^{\text{st}} \text{ year}$$

$$= 15000 (1 + \frac{16}{100}) = ₹ 17400$$

$$\text{Amount after 2}^{\text{nd}} \text{ year}$$

$$= 17400 (1 + \frac{16}{100}) = ₹ 20184$$

$$\text{Amount after 3}^{\text{rd}} \text{ year}$$

$$= 20184 (1 + \frac{16}{100}) = ₹ 23413.44$$

$$\begin{aligned} \text{Interest for 2}^{\text{nd}} \text{ year} &= \text{amount after} \\ 2 \text{ years} - \text{amount after 1 year} & \\ &= 20184 - 17400 = ₹ 2784 \end{aligned}$$

$$\begin{aligned} \text{Interest for 3}^{\text{rd}} \text{ year} &= \text{amount after} \\ y \text{ years} - \text{amount after 2 year} & \\ &= 23413.44 - 20184 = ₹ 3229.44 \end{aligned}$$

$$\begin{aligned} \text{Difference in interest} &= \\ &= 3229.44 - 2784 = ₹ 445.44 \end{aligned}$$

$$75. (2) \text{Cost price} = 100 \text{ units and is sold at 8\% loss,}$$

$$\begin{aligned} \text{Selling Price (SP)} &= \\ &= 100 \times \frac{92}{100} = ₹ 92 \end{aligned}$$

$$\text{Further 10.5\% gain,}$$

$$\begin{aligned} \text{Selling Price} &= 100 \times \frac{110.5}{100} \\ &= ₹ 110.5 \end{aligned}$$

$$\begin{aligned} \text{According to the question,} & \\ \text{difference in selling prices is } & ₹ 92.5 \end{aligned}$$

$$\text{So, } 110.5 - 92 = 18.5$$

$$18.5 \text{ unit} = 92.5$$

$$1 \text{ unit} = ₹ 5$$

$$\begin{aligned} \text{Therefore, cost price will be} & \\ &= 100 \times 5 = ₹ 500 \end{aligned}$$

$$\begin{aligned} \text{At 12\% gain, selling price will be} & \\ &= 500 \times \frac{112}{100} = ₹ 560 \end{aligned}$$

## PART-IV (ENGLISH LANGUAGE)

76. (1) Active form to Passive Voice:
- The places of subject and object will be interchanged in the sentence.
  - Only 3<sup>rd</sup> form of verb or past participle will be used as a main verb in the passive voice.

The outer gate is requested to be locked at night.

77. (4) 'Were' must be replaced with 'was' to form a grammatically correct answer.

78. (2) **Indelible/Inerasable:** Marks making by ink or a pen that cannot be removed; incapable of being erased.

79. (3) Wrongly spelt word is contemporary and the correct spelling is 'Contemporary'.

80. (3) 'Among' means the same. The blank needs a preposition which implies 'occurring in or shared by (some members of a group or community)'.

81. (4) 'Said' meaning 'utter words so as to convey information' an opinion, a feeling or intention is the appropriate word to fill in the blank.

82. (1) 'Almost' meaning 'not more than' is the appropriate word to fill in the blank.

83. (4) 'Different' meaning 'not the same as another or each other; unlike in nature, form, or quality' is the appropriate word to fill in the blank.

84. (4) Appropriate word to fill in the blank → bird.

85. (1) The tense of the underlined segment is incorrect. Present perfect continuous tense should be used.

For improvement of sentence use 'have been trying to solve' in place of 'try to solve'.



86. (2) 'Symbolize' means 'be a symbol of' and it is the appropriate word to fill in the blank.

87. (3) If someone gives you the cold shoulder, they deliberately stop being friendly to you and ignore you.

88. (3) 'Experience' is the incorrectly spelt word. The correct spelling is 'experience' which means 'practical contact with and observation of facts or events'.

89. (3) Opposite of the Eminent is :

**Inconspicuous:** not clearly visible or attracting attention.

90. (4) 'Conservation' meaning 'preservation, protection, or restoration of the natural environment and of wildlife' is the appropriate word to fill in the blank.

91. (4) Logical order of the four jumbled sentences is → ADBC

92. (4) **Aviary:** A large cage, building or enclosure for keeping birds in.

93. (2) 'The worst tropical cyclone' is erroneous. The noun following the phrase 'one of the' is always a plural noun.

Delete 'one of' before 'the worst tropical' in the sentence.

94. (3) Opposite of Agony is:

**Comfort:** a state of physical ease and freedom from pain or constraint.

95. (1) **Triumph/Victory:** A great victory or achievement; an act of defeating an enemy or opponent in a battle, game, or other competition.

96. (3) Changing passive form to Active form.

• They brought up their children with great care.

97. (3) **Epitaph:** a phrase or form of words written in memory of a person who has died, especially as an inscription on a tombstone.

98. (3) Logical order of the four jumbled sentences → BADC

99. (1) For improvement of sentence, use 'it will improve' in place of 'it improve'.

100. (3) The phrase 'pull yourself together' means 'to recover control of one's emotions'.

You've got to pull yourself together and find a job.

□□□

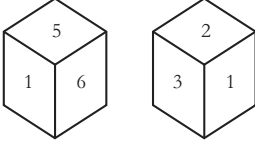
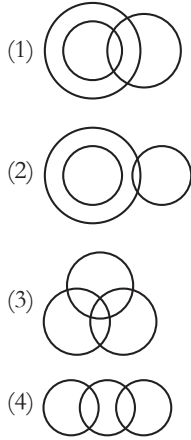
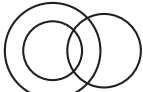
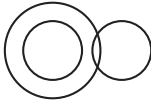
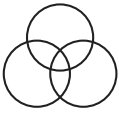

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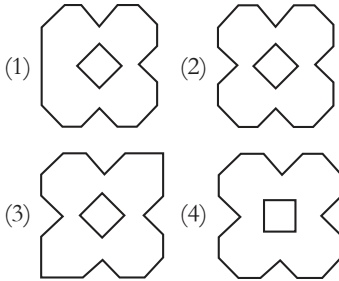
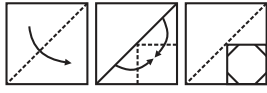
## SSC – CGL

### Combined Graduate Level (Tier-I) Examination Solved Paper – 04 June, 2019 (I)

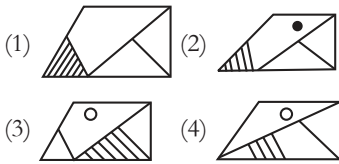
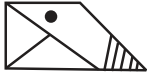
#### PART-I

#### (GENERAL INTELLIGENCE & REASONING)

- Select the set in which the numbers are related in the same way as the numbers are related in the set below.  
(3, 24, 4)  
(1) (2, 30, 8)      (2) (12, 84, 4)  
(3) (6, 35, 11)      (4) (4, 72, 9)
- To correct the equation given below, which two symbols should be mutated?  
 $12 - 8 + 12 \times 9 \div 3 = 9$   
(1) - and  $\div$       (2) + and  $\div$   
(3) + and  $\times$       (4) + and -
- A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.  
3, 7, 16, 35, ?, 153  
(1) 74      (2) 78  
(3) 63      (4) 84
- Two different situations of the same dice are shown. If number 6 is on the lower board then what number will be on the upper board?  

  
(1) 3      (2) 4  
(3) 2      (4) 5
- As 'Advocate' is related to 'Justice' in the same way 'mediator' is related to .....  
(1) Agreement  
(2) Communications  
(3) Decision  
(4) Injustice
- Two statements are given below and then conclusions I, II and III are given. Assuming the statement to be true, even if it seems to be at variance from commonly known facts, you have to decide which of the given conclusions logically follows the given statements.  
**Statement:**  
All rulers are machines.  
Some machines are expensive items.  
**Conclusions:**  
**I.** Some rulers are expensive items.  
**II.** Some expensive items are machines.  
**III.** All expensive items are machines.  
(1) Both conclusions I and II follow.  
(2) Both the conclusions II and III follow.  
(3) Only conclusion II follows.  
(4) Only conclusions I follows.
- Arrange the following words in a logical and meaningful order.  
A. Buying  
B. Food  
C. Market  
D. Vegetables  
E. Cook  
(1) A, D, E, C, B  
(2) D, E, C, A, B  
(3) C, E, D, A, B  
(4) C, D, A, E, B
- ₹ 1875 are divided into A, B and C in such a way that A's share is half of the combined share of B and C and B's share is one-fourth of the combined share of A and C. How much is C's share more than A's share?  
(1) ₹ 200      (2) ₹ 250  
(3) ₹ 225      (4) ₹ 500
- Three numbers from the following four numbers are somehow identical and one number is uneven. Select that uneven number.  
(1) 254      (2) 217  
(3) 126      (4) 730
- Select the letter combination that is placed sequentially on the blank spaces of the letter series below to complete the given series.  
b\_bab\_bc\_abb\_ba\_b  
(1) cbabc      (2) bcbab  
(3) cbbcb      (4) cbbac
- Select the diagram that shows the best relationship between the given categories.  
Uncle, Relative, Rich  

  
(1)   
(2)   
(3)   
(4) 
- Three letter groups from the following four-letter groups are similar in some way and one is unequal. Select the odd alphabets.  
(1) CFIL      (2) GHIJ  
(3) PSUX      (4) MOQS
- A paper is folded and cut as shown below. What will it look like when open it?



14. If the mirror is placed on the right side of the diagram given below, then select the right mirror image to be made.



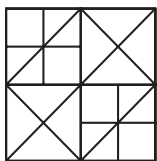
15. Select the set in which the numbers are related in the same way as the numbers are related in the set given below.

- (9, 35, 16)
- (1) (36, 55, 25)    (2) (25, 30, 4)
- (3) (81, 65, 36)    (4) (16, 50, 64)

16. In a family of eight people, there are two couples, both couples have two children each. B and D are brothers and they each have two children. E is aunt of A, A is cousin of C. C is sister of H, H is cousin of G. F is the wife of B. How is H related to F?

- (1) Nephew
- (2) Son-in-law
- (3) Brother-in-law
- (4) Son

17. How many squares are there in the figure given below?

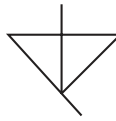


- (1) 13                    (2) 14
- (3) 12                    (4) 16

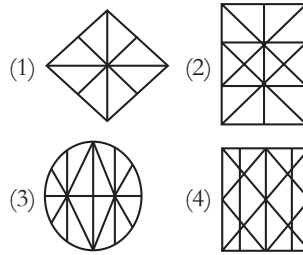
18. In a code language, VICTORY is written as CIVSYRO. What will the TRAITOR be written in the same code language?

- (1) ARTHROT    (2) RTHORT
- (3) RTAJORT    (4) ARTJOTR

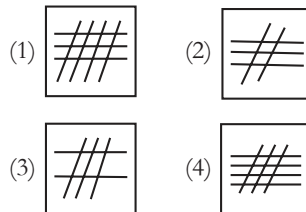
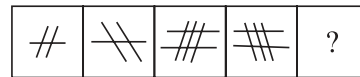
19. Select the option in which the given figure is implicit



Rotation is not allowed



20. Select the next figure in the following figure series.



21. From the given options, select the word pair whose two words are related to each other in the same way as the words of the word pair given below are related.

- Book : Encyclopedia
- (1) Reptile : Python
- (2) Furniture : Wood
- (3) Tennis : Ball
- (4) Tree : Forest

22. Select the number pair in which the two numbers are related in the same way as the two numbers are related in the number pair given below.

36 : 84 :: ? : ?

- (1) 57 : 135            (2) 27 : 63
- (3) 21 : 51            (4) 45 : 95

23. Select the option that is related to the third letter group in the same way as the second letter group is related to the first letter group.

- CEGI : AGEK :: DFHJ : ?
- (1) CHFI                (2) CGIK
- (3) BDJK                (4) BHFL

24. If DIG is coded as 25 and CUT as 49, then how will be KICK coded?

- (1) 43                    (2) 34
- (3) 41                    (4) 39

25. Three words from the following four words are somehow similar and one word is uneven. Choose the odd word.

- (1) Peanut              (2) Fennel
- (3) Cumin                (4) Mustard

**PART-II**  
**(GENERAL AWARENESS)**

26. Which country first introduced the Goods and Services Tax?

- (1) Canada              (2) France
- (3) Germany            (4) USA

27. The famous species of tree 'Sundari' is found in .....

- (1) Mangrove forest
- (2) Tropical deciduous forest
- (3) Himalaya Mountains
- (4) Tropical Rainforest

28. The virtue of catenation prevails in .....

- (1) Sulfur                (2) Nitrogen
- (3) Silicon                (4) Carbon

29. Who won the only gold medal for India in the 38th Gee Bee boxing tournament held in Helsinki, Finland?

- (1) Naveen Kumar
- (2) Kavinder Singh Bisht
- (3) Mohammed Hussamuddin
- (4) Shiv Thapa

30. After the Olympic Council of Asia (OCA) has discarded ..... in 2018, it has decided to resume in Asian Games, organised in Hangzhou, China, 2022.

- (1) Football (2) Fencing  
(3) Cricket (4) Volleyball
31. In which of the following places was the rule of the Wadiyar dynasty?  
(1) Patna (2) Mysore  
(3) Jabalpur (4) Guwahati
32. The report of Malimath Committee is related to which of the following?  
(1) Criminal Justice System Reform  
(2) Textile Sector Reforms  
(3) Stock Market Reform  
(4) Judicial Latency
33. Which queen died in 1564 during the defending of the Garh Kantaga while fighting with Mughal forces?  
(1) Rani Avantibai  
(2) Rani Durgavati  
(3) Rani Rudrabara  
(4) Rani Ahilyabai
34. Methyl propane is an isomer of which of the following?  
(1) N-Butene (2) N-Pentane  
(3) N-Hexane (4) N-Propane
35. In which year did Dorabji Tata set up the Tata Iron and Steel Company (TISCO)?  
(1) 1913 (2) 1919  
(3) 1911 (4) 1907
36. According to the Economist Intelligence Unit 'Worldwide Cost of Living Survey, 2019', which of the following cities is not one of the three cheapest cities in India?  
(1) New Delhi (2) Mumbai  
(3) Bengaluru (4) Chennai
37. The ..... edition of the Indo-Indonesia Coordinated Patrol (Indo-Indo Coperte) held from 19 March to 4 April, 2019 was inaugurated in Port Blair, Andaman and Nicobar Islands.  
(1) 33 (2) 23  
(3) 45 (4) 42
38. The ..... dance performed by the Buddhists to take away the evil spirits is a form of dance in Himachal Pradesh.  
(1) Gogra (2) Chham  
(3) Dhaam (4) Natya
39. Name the first judge of the Supreme Court, against which the proposal of impeachment was presented in the Parliament of independent India.  
(1) Justice Ramaswami  
(2) Justice Mahajan  
(3) Justice Veerswamy  
(4) Justice Subba Rao
40. Which one of the following elements is a metalloid?  
(1) Tin (2) Silicon  
(3) Phosphorus (4) Bismuth
41. Which gas in its solid state is also called dry ice?  
(1) Carbon dioxide  
(2) Oxygen  
(3) Nitrogen  
(4) Hydrogen
42. In 1026 AD, who attacked and looted the famous Somnath temple?  
(1) Muhammad Ghauri  
(2) Mahmood Ghazni  
(3) Genghis Khan  
(4) Nadir Shah
43. Who was the first woman Director General of Police in Puducherry?  
(1) Kiran Bedi  
(2) Ashthi Tang  
(3) Sundari Nanda  
(4) Kanchan Choudhary
44. Which of the following substances is mined in Odisha's Badamphad mines?  
(1) Hematite (2) Aurite  
(3) Dolomite (4) Bauxite
45. .... is the founder of Facebook.  
(1) Jimmy Wales  
(2) Brian Acton  
(3) Larry Page  
(4) Mark Zuckerberg
46. In 1876, the Indian National Association was established by ..... in Calcutta.  
(1) V.K. Chiplunkar  
(2) Anand Mohan Bose  
(3) Shishir Kumar Ghosh  
(4) Badruddin Tyabji
47. The game dance from 'Thoda' is associated with which state?  
(1) Andhra Pradesh  
(2) Sikkim  
(3) Himachal Pradesh  
(4) Haryana
48. Musi and Bhima are tributaries of ..... river.  
(1) Brahmaputra  
(2) Mahanadi  
(3) Kaveri  
(4) Krishna
49. J.J. Thomson received the Nobel Prize in Physics for his discovery of .....  
(1) Electron (2) Positron  
(3) Proton (4) Neutron
50. Who was sworn in as the new Chief Minister of Goa after the death of Manohar Parrikar in March 2019?  
(1) H.D. Kumaraswamy  
(2) Ashok Gehlot  
(3) Vasundhara Raje  
(4) Pramod Sawant

### PART-III (QUANTITATIVE APTITUDE)

51. The value of  $2 \times 3 \div 2$  of  $3 \times 2 \div (4 + 4 \times 4 \div 4$  of  $4 - 4 \div 4 \times 4)$  is:  
(1) 8 (2) 2  
(3) 1 (4) 4
52. In triangle ABC, the points F and E respectively on AB and AC sides are as follows :  $FE \parallel BC$  and FE divide the triangle into two parts with equal area. If  $AD \perp BC$  and AD intersect at FE at point G, then  $GD : AG = ?$   
(1)  $(\sqrt{2} + 1) : 1$   
(2)  $(\sqrt{2} - 1) : 1$   
(3)  $2\sqrt{2} : 1$   
(4)  $\sqrt{2} : 1$
53. A truck covers a distance of 384 km at a certain speed. If the speed is reduced by 16 km/h, it will take two hours more to cover the same distance. What is the 75% of the original speed (in km/h)?  
(1) 54 (2) 42  
(3) 45 (4) 48
54. The table shows the production (in thousands) of different types of cars.

Year/ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

The total production of B type cars in the year 2012, 2014 and 2015 has been approximately what percentage more than the total production of A type cars in the year 2013 and 2016?

- (1) 34.4 (2) 33.2  
(3) 31.9 (4) 36.3

55. The average of twelve numbers is 42. The last five numbers have an average of 40 and the first four numbers have an average of 44. The sixth number is 6 less than the fifth number and 5 less than the seventh number. What will be the average of the 5th and 7th numbers?

- (1) 44 (2) 44.5  
(3) 43 (4) 43.5

56. The table shows the production (in thousands) of different types of cars.

Year/ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

If the data related to the production of E type cars is represented by pie-chart, then the data representing the production of cars in 2013 will be the central angle of the radius (sector):

- (1)  $102^\circ$  (2)  $84^\circ$   
(3)  $70^\circ$  (4)  $80^\circ$

57.  $\frac{2 + \tan^2 \theta + \cot^2 \theta}{\sec \theta \operatorname{cosec} \theta}$  is equal to:

- (1)  $\sec \theta \operatorname{cosec} \theta$  (2)  $\cot \theta$   
(3)  $\tan \theta$  (4)  $\cos \theta \sin \theta$

58. Four years ago, the ratio of the ages of A and B was 4 : 5. Eight years from now, the ratio of the ages of

A and B will be 11 : 13. What is the sum of the present age of both of them?

- (1) 76 years (2) 72 years  
(3) 80 years (4) 96 years

59. If  $4 - 2 \sin^2 \theta - 5 \cos \theta = 0$ ,  $0^\circ < \theta < 90^\circ$ , then the value of  $\sin \theta + \tan \theta$  is:

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

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

60. If the number of 9 digits is  $985x3678y$ , the number is divisible by 72, then the value of  $(4x - 3y)$  will be:

- (1) 4 (2) 6  
(3) 5 (4) 3

61. If  $x + y + z = 19$ ,  $x^2 + y^2 + z^2 = 133$  and  $xz = y^2$ , then the difference between  $z$  and  $x$  is:

- (1) 3 (2) 4  
(3) 6 (4) 5

62. Someone sold an item at a loss of 15%. If he sold it for ₹ 30.60 more then he would get 9% profit. In order to get 10% profit, he has to sell the item in what amount?

- (1) ₹ 128.40 (2) ₹ 130  
(3) ₹ 140.25 (4) ₹ 132

63. An amount becomes 8,028 in 3 years at a fixed percentage interest rate and 12,042 in 6 years, when the interest is compounded annually. What is the actual amount?

- (1) ₹ 5,352 (2) ₹ 5,235  
(3) ₹ 5,253 (4) ₹ 5,325

64. The table shows the production (in thousands) of different types of cars.

Year/ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

What is the ratio of total production of C type cars in year 2013 & A in year 2014 and the total production of B in year 2016 & E type cars in 2015?

- (1) 11 : 12 (2) 12 : 11  
(3) 10 : 11 (4) 12 : 13

65. A solid cube with a volume of  $13824 \text{ cm}^3$  is cut into eight cubes of the same volume. The ratio of the surface area of the original cube and the total sum of the surface area of three smaller cubes will be:

- (1) 2 : 3 (2) 2 : 1  
(3) 4 : 3 (4) 8 : 3

66. If  $x^4 + x^{-4} = 194$ ,  $x > 0$ , then what would be the value of  $(x - 2)^2$ ?

- (1) 6 (2) 2  
(3) 1 (4) 3

67. If  $\sin \theta \frac{p^2 - 1}{p^2 + 1}$ , then  $\cos \theta$  is equal to:

(1)  $\frac{2P}{p^2 - 1}$  (2)  $\frac{2P}{1 + p^2}$

(3)  $\frac{P}{1 + p^2}$  (4)  $\frac{P}{p^2 - 1}$

68. If  $(5\sqrt{5}x^3 - 81\sqrt{3}y^3) \div (\sqrt{5}x - 3\sqrt{3}y)$ ,  $= (Ax^2 + By^2 + Cxy)$ , then the value of  $(6A + B - \sqrt{15}C)$  will be?

- (1) 12 (2) 15  
(3) 10 (4) 9

69. The ratio of efficiencies of A, B and C is 2 : 5 : 3. On working together, all three of them can complete work in 27 days. In how many days will both B and C together complete the  $\frac{4}{9}$ th part of that work?

- (1) 15 days (2)  $17\frac{1}{7}$  days

- (3) 27 days (4) 24 days

70. In  $\Delta ABC$ , the bisectors of  $\angle B$  and  $\angle C$  meet at point O inside the triangle.

If  $\angle BOC = 122^\circ$ , what will be the measure of  $\angle A$ ?

- (1)  $62^\circ$  (2)  $64^\circ$   
(3)  $72^\circ$  (4)  $68^\circ$

71. A circle is drawn under a triangle ABC. The circle touches the sides AB, BC and AC at the points R, P and Q respectively. If  $AQ = 4.5 \text{ cm}$ ,  $PC = 5.5 \text{ cm}$  and  $BR = 6 \text{ cm}$ , then the perimeter of triangle ABC is:

- (1) 32 cm (2) 28 cm  
(3) 30.5 cm (4) 26.5 cm

72. The radius of a circle with O center is 10 cm, PQ and PR are the chords of 12 cm. PO, cuts the chord QR at point S. What is the length of OS?  
 (1) 3.2 cm (2) 2.8 cm  
 (3) 3 cm (4) 2.5 cm
73. The table shows the production (in thousands) of different types of cars.

Year/ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

The number of years in which the production of B type cars occurred in all the years is less than the average production of D type cars is as follows:

- (1) 2 (2) 3  
 (3) 1 (4) 4
74. If 120 is reduced by  $x\%$ , the same result will be obtained if 40 is increased by  $x\%$ . Then  $x\%$  of 210 will be what percentage less than  $(x + 20)\%$  of 180?  
 (1) 18 (2)  $16\frac{2}{3}$   
 (3) 20 (4)  $33\frac{1}{3}$
75. After giving two successive discounts each of  $x\%$  on the marked price of an item, total discount is ₹ 259.20. If the face value of the object is ₹ 720, what will be the value of  $x$ ?  
 (1) 25 (2) 24  
 (3) 18 (4) 20

**PART-IV**  
**(ENGLISH LANGUAGE)**

76. Given below are four jumbled sentences. Select the option that gives their correct order.  
 A. The cafe's owner says he's interested in conservation and hopes customers will realise the

animals are worth saving, even though they often have a bad reputation.

- B. None of them are venomous, meaning customers can get up close and personal with the reptiles.  
 C. Here you sip your drink in the company of 35 snakes.  
 D. This cafe, which has just opened in Tokyo, is not for the faint-hearted.  
 (1) DCBA (2) ABCD  
 (3) DBCA (4) ABDC

77. In the sentence, identify the segment which contains the grammatical error. We had to decline several orders in case that the production was held up due to labour strike.  
 (1) in case that  
 (2) due to labour strike  
 (3) the production was held up  
 (4) We had to decline

78. Select the wrongly spelt word—  
 (1) Callous (2) Career  
 (3) Calander (4) Carriage
79. Select the most appropriate meaning of the given idiom.

**At daggers drawn**

- (1) Deceiving somebody  
 (2) Bitterly hostile  
 (3) Friendly with each other  
 (4) Without hope

80. Select the word which means the same as the group of words given.

**A person, animal or plant much below the usual height**

- (1) Creature (2) Witch  
 (3) Wizard (4) Dwarf

81. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select 'No improvement'.  
**If you park your car here, the traffic police has fined you.**

**If you park your car here, the traffic police has fined you.**

- (1) fine you  
 (2) will fine you  
 (3) fined you  
 (4) No improvement

82. Select the most appropriate word to fill in the blank.

**His company has the ..... of producing the best cricket balls in the country.**

- (1) brand (2) opinion  
 (3) position (4) reputation

83. Select the antonym of the given word.

**Scarce**

- (1) Seldom (2) Scanty  
 (3) Few (4) Plentiful

**Directions (84–88):** In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

**PASSAGE**

Seoul's city government is asking people for help to correct poorly translated street signs with prizes on offer for ...(84)... who spot the most errors. It's running ...(85)... two-week campaign calling on Koreans and foreigners ...(86)... to keep their eyes peeled for ...(87)... in English, Japanese and Chinese text, the Korea Times reports. There's a ...(88)... focus on public transport signs, maps and information signs at historic sites, as part of a drive to improve the experience of foreign tourists in the South Korean capital.

84. (1) that (2) those  
 (3) these (4) this
85. (1) a (2) one  
 (3) an (4) the
86. (1) alike (2) similarly  
 (3) likely (4) same
87. (1) blunder (2) mistakes  
 (3) guffaws (4) oversight
88. (1) particular (2) important  
 (3) signifying (4) meticulous
89. Select the synonym of the given word.  
**Chronic**  
 (1) Persistent (2) Common  
 (3) Ordinary (4) Temporary
90. Select the most appropriate word to fill in the blank.

**Around sixty bands in colourful ..... took part in the Notting Hill Carnival.**

- (1) clothings (2) costumes  
(3) apparels (4) dressing

91. Given below are four jumbled sentences. Select the option that gives their correct order.

A. An environmental group performed a necropsy on the animal and found about 40 kilograms of plastic, including grocery bags and rice sacks.

B. A 4.7-metre long whale died on Saturday in Philippines where it was stranded a day earlier.

C. "It's very disgusting and heartbreaking," he said. "We've done necropsies on 61 dolphins and whales in the last 10 years and this is one of the biggest amounts of plastic we've seen."

D. "The animal died from starvation and was unable to eat because of the trash filling its stomach," said Darrell Blatchley, Director of D' Bone Collector Museum Inc.

- (1) BACD (2) BADC  
(3) ABCD (4) DABC

92. Select the wrongly spelt word—

- (1) Exploite (2) Explode  
(3) Explicit (4) Expire

93. Select the antonym of the given word.

**Expansion**

- (1) Extension (2) Inflation  
(3) Compression (4) Augmentation

94. Select the word which means the same as the group of words given.

**A student who idly or without excuse absents himself/herself from school.**

- (1) Vagrant (2) Itinerant  
(3) Migrant (4) Truant

95. Select the correct active form of the given sentence.

**Every passing vehicle was being thoroughly checked by the guards.**

- (1) The guards have been thoroughly checking every passing vehicle.  
(2) Every passing vehicle were thoroughly checking the guards.  
(3) The guards have thoroughly checked every passing vehicle.  
(4) The guards were thoroughly checking every passing vehicle.

96. Select the correct passive form of the given sentence.

**Do not buy medicines without the doctor's prescription.**

- (1) Medicines could not be bought without the doctor's prescription.  
(2) Medicines need not be bought without the doctor's prescription.  
(3) Medicines should not be bought without the doctor's prescription.  
(4) Medicines might not be bought without the doctor's prescription.

97. Select the most appropriate meaning of the given idiom.

**To play ducks and drakes**

- (1) To use recklessly  
(2) To change places  
(3) To act cleverly  
(4) To be friendly

98. In the sentence, identify the segment which contains the grammatical error.

**Cyclone Idai killed at least 157 people in Zimbabwe and Mozambique, although it tore across Southern Africa.**

- (1) Although  
(2) It tore across  
(3) At least 157 people  
(4) Cyclone Idai killed

99. Select the antonym of the given word.

**Coerce**

- (1) Pressurise (2) Cajole  
(2) Leave (3) Enchant

100. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select 'No improvement'.

**The workers of this textile factory demand higher wages for a long time.**

- (1) has demanded higher wages  
(2) No improvement  
(3) demanded higher wages  
(4) have been demanding higher wages

## Short Answers

- |         |         |         |         |         |         |         |         |         |          |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1. (4)  | 2. (2)  | 3. (1)  | 4. (3)  | 5. (1)  | 6. (3)  | 7. (4)  | 8. (2)  | 9. (1)  | 10. (3)  |
| 11. (1) | 12. (3) | 13. (2) | 14. (2) | 15. (1) | 16. (1) | 17. (2) | 18. (1) | 19. (2) | 20. (1)  |
| 21. (1) | 22. (2) | 23. (4) | 24. (4) | 25. (1) | 26. (2) | 27. (1) | 28. (4) | 29. (2) | 30. (3)  |
| 31. (2) | 32. (1) | 33. (2) | 34. (1) | 35. (4) | 36. (2) | 37. (1) | 38. (2) | 39. (1) | 40. (2)  |
| 41. (1) | 42. (2) | 43. (3) | 44. (1) | 45. (4) | 46. (2) | 47. (3) | 48. (4) | 49. (1) | 50. (4)  |
| 51. (2) | 52. (2) | 53. (4) | 54. (3) | 55. (2) | 56. (2) | 57. (1) | 58. (3) | 59. (1) | 60. (1)  |
| 61. (4) | 62. (3) | 63. (1) | 64. (4) | 65. (3) | 66. (4) | 67. (2) | 68. (1) | 69. (1) | 70. (2)  |
| 71. (1) | 72. (2) | 73. (1) | 74. (2) | 75. (4) | 76. (1) | 77. (1) | 78. (3) | 79. (2) | 80. (4)  |
| 81. (2) | 82. (4) | 83. (4) | 84. (2) | 85. (1) | 86. (1) | 87. (2) | 88. (1) | 89. (1) | 90. (2)  |
| 91. (2) | 92. (1) | 93. (3) | 94. (4) | 95. (1) | 96. (3) | 97. (1) | 98. (1) | 99. (1) | 100. (4) |

## Hints & Solutions

### PART-I

#### (GENERAL INTELLIGENCE & REASONING)

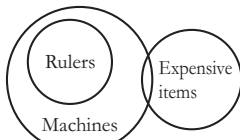
1. (4)  $3 \times 4 = 12 \times 2 = 24$   
Similarly,  
 $4 \times 9 = 36 \times 2 = 72$
2. (2) Interchange the (+) and (÷) sign  
 $12 - 8 \div 12 \times 9 + 3$  (applying BODMAS)  
or,  $12 - 2 \times 3 + 3$   
or,  $12 - 6 + 3$   
or,  $15 - 6$   
or, 9

3. (1) The series will be,  
 $3 \times 2 = 6, \quad 6 + 1 = 7$   
 $7 \times 2 = 14, \quad 14 + 2 = 16$   
 $16 \times 2 = 32, \quad 32 + 3 = 35$   
 $35 \times 2 = 70, \quad 70 + 4 = 74$   
 $74 \times 2 = 148, \quad 148 + 5 = 153$

4. (3) Moving in clockwise direction  
Cube 1- 1 5 6  
Cube 2- 1 3 2  
Clearly, 6 is opposite to 2.

5. (1) Advocate helps in provide justice.  
Similarly, mediator helps in agreement.

6. (3)



Only conclusion II follows.

7. (4) The logical order of the words:  
Market (C) → Vegetables (D) →  
Buying (A) → Cook (E) → Food (B)

8. (2)  $2A = B + C$ , After adding A on both sides,

$$\begin{aligned} 2A + A &= A + B + C \\ 3A &= A + B + C \\ 3A &= ₹ 1875 \\ A &= ₹ 625 \\ 4B &= A + C \end{aligned}$$

After adding B on both sides

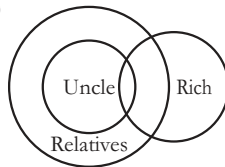
$$\begin{aligned} 4B + B &= A + B + C \\ 5B &= ₹ 1875 \\ B &= ₹ 375 \end{aligned}$$

$$\begin{aligned} C &= ₹ 1875 - (₹ 625 + ₹ 375) \\ C &= ₹ 1875 - ₹ 1000 \\ C &= ₹ 875 \\ C - A &= ₹ 875 - ₹ 625 \\ &= ₹ 250 \end{aligned}$$

9. (1)  $6^3 + 1 = 216 + 1 = 217$   
 $5^3 + 1 = 125 + 1 = 126$   
 $9^3 + 1 = 729 + 1 = 730$   
254 doesn't follow the pattern.

10. (3) bcbabb/bcbabb/bcbabb

11. (1)



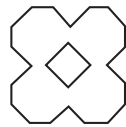
12. (3)  $C \xrightarrow{+3} F \xrightarrow{+3} I \xrightarrow{+3} L$   
 $G \xrightarrow{+1} H \xrightarrow{+1} J \xrightarrow{+1} K$   
 $P \xrightarrow{+3} S \xrightarrow{+2} U \xrightarrow{+4} X$   
 $M \xrightarrow{+2} O \xrightarrow{+2} Q \xrightarrow{+2} S$

13. (2) The paper is unfolded in 2 steps,

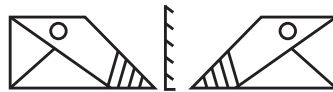
First Step



Second Step

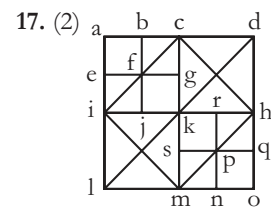
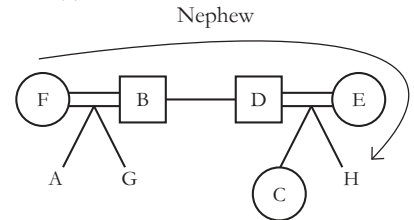


14. (2) In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.



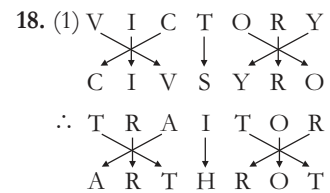
15. (1)  $16 - 9 = 7 \times 5 = 35$   
Similarly,  $36 - 25 = 11 \times 5 = 55$

16. (1)

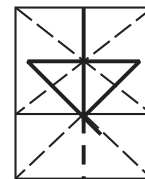


The numbers of squares are :  
adol, chmi, abef, bcfg, efij, fgik,  
acik, iklm, khmo, pqno, krsp, rhpq, spmn,  
cdkh.

Total number of squares = 14



19. (2) After observing the options we can see that the figure given under option (2) is indeed embedded in the original figure. It has been represented below,



20. (1) In the above series, the first figure has one horizontal line intersecting 2 vertical lines and the next figure showing its mirror image.

In the 3rd figure, there is two horizontal lines intersecting 3 vertical lines.

So, according to the above sequence, the next figure is:





21. (1) As, encyclopedia is a type of book. Similarly, Python is a type of reptile.

22. (2)  $36 = 3 \times 12$

$84 = 7 \times 12$

Similarly,

$27 = 3 \times 9$

$63 = 7 \times 9$

23. (4)  $\begin{matrix} C & E & G & I \\ -2\downarrow & +2\downarrow & -2\downarrow & +2\downarrow \\ A & G & E & K \end{matrix}$

Similarly,

$\begin{matrix} D & F & H & J \\ -2\downarrow & +2\downarrow & -2\downarrow & +2\downarrow \\ B & H & F & L \end{matrix}$

24. (4)  $DIG = 4 + 9 + 7$

$= 20 + 5 = 25$

$CUT = 3 + 21 + 20$

$= 44 + 5 = 49$

$\therefore KICK = 11 + 9 + 3 + 11$

$= 34 + 5 = 39$

25. (1) Except *peanut*, all the three are the types of ingredients used in making vegetables.

Hence, the odd word is option (1).

## PART-II (GENERAL AWARENESS)

26. (2) France is the first country to implement GST in 1954. Most European countries introduced GST back in the 1970s-80s. China implemented GST in 1994 while Russia did it in 1991. The only major economy that does not have GST is USA.

27. (1) Sundari is a small or medium-sized evergreen tree which is found in the inland zone of mangrove forests in India. The Botanical name of Sundari is *Heritiera littoralis* ait. In India, the tree is found in the inland zone of mangrove forests along the coasts of peninsular India, the Sundarbans in the West Bengal state and the Andaman Islands it is often planted in gardens.

28. (4) In chemistry, catenation is the bonding of atoms of the same element into a series called a chain. Catenation occurs most readily with carbon, which forms covalent bonds with other

carbon atoms to form longer chains and structures.

29. (2) The 38th Gee Bee Boxing Tournament was held at Helsinki, Finland. The only gold medal for India was won by Kavinder Singh Bisht. He won against Indian counterpart Mohammed Hussamuddin in summit clash in the 56kg category.

30. (3) The Olympic Council of Asia (OCA) has decided to reintroduce Cricket in the 2022 Asian Games to be held at Hangzhou, China. Earlier, Cricket had featured in 2010 and 2014 Asian Games but was dropped from the 2018 Asian Games.

31. (2) The Wadiyar dynasty is an Indian Hindu dynasty that ruled the Kingdom of Mysore from 1399 to 1947. The dynasty was established in 1399 by Yaduraya Wodeyar. He ruled Mysore under the Vijayanagara Empire until 1423. After Yaduraya Wodeyar, the Mysore kingdom was succeeded by the Wadiyar rulers. The kingdom remained fairly small during this early period and was a part of the Vijayanagara Empire.

32. (1) The Malimath Committee gave 158 recommendations, but these were not implemented by the successive government recommendations of the committee.

It is the duty of the state to protect the fundamental rights of all citizens.

The Committee recommended for the review and re-enactment of the IPC, CrPC (Criminal Procedure Code) and Evidence Act and these laws should take a holistic view in respect to punishment, assestability and bailability.

33. (2) Rani Durgavati died fighting against Mughals while defending Garha Katanga in 1564.

Rani Durgavati Madavi was a ruling Queen of Gondwana from 1550 until 1564. She was born in the family of Chandel King Keerat Rai. She was born at the fort of Kalinjar.

34. (1) Butane or  $C_4H_{10}$  has two structural isomers called normal butane and isobutane, or i-butane.

According to IUPAC nomenclature, these isomers are called butane and 2-methylpropane.

35. (4) TISCO was started in 1907.

In 1907, Tata Team finally chooses Sakchi village in present-day Jharkhand, which has since grown into the steel town of Jamshedpur.

36. (2) According to economist intelligence unit report 2019, the most cheap cities in India are Bengaluru, Delhi and Chennai.

37. (1) The 33<sup>rd</sup> edition of India-Indonesia coordinated patrol (IND-INDO CORPAT) was inaugurated at Port Blair, Andaman & Nicobar Islands.

The IND-INDO CORPAT, 2019 was held from 19 March to 04 April, 2019.

Navies of both the countries have been carrying out coordinated patrolling twice a year since 2002 in an effort to keep the Indian Ocean Region (IOR) safe and secure for commercial shipping and international trade.

38. (2) The Chham Dance is a vibrant masked and costumed ritual with roots in Buddhism. The ritual is performed for the greater good of humanity, destruction of bad spirits and for moral instruction to viewers.

39. (1) Veeraswami Ramaswami was a judge of the Supreme Court of India and the first judge against whom removal proceedings were initiated in independent India.

40. (2) A metalloid is a chemical element that exhibits some properties of metals and some of non-metals. Boron, Silicon, Germanium, Arsenic, Antimony, Tellurium and Polonium are Metalloids.

41. (1) Dry ice is the common name for solid carbon dioxide ( $CO_2$ ). It gets this name because it does not melt into a liquid when heated; instead, it changes directly into a gas (This process is known as sublimation).

42. (2) In 1025 AD, Somnath Temple was destroyed and plundered by the Afghan ruler, Mahmud of Ghazni. The

temple was dedicated to Lord Shiva, was rebuilt by the Paramara king Bhoja of Malwa and the Solanki king Bhimdev I of Anhilwara between 1026 and 1042 AD.

43. (3) Puducherry will have its first woman Director General of Police (DGP) with S. Sundari Nanda being appointed to the top post in 2019. She is a 1988 batch police officer belonging to the AGMU cadre, has been transferred from National Capital Territory of Delhi (NCTD) and posted as Director General of Police (DGP) of Union Territory of Puducherry.

44. (1) The iron ore deposits are found in Badampahar mines of Odisha and Kudremukh deposits of Karnataka. In Badampahar, high-grade hematite ores are found.

45. (4) Facebook, Inc. is an American online social media and social networking service company based in California. It was founded by Mark Zuckerberg. It acquired Instagram, WhatsApp, Oculus and GrokStyle and independently developed Facebook Messenger, Facebook Watch and Facebook Portal.

46. (2) Indian National Association was the first declared Nationalist Organisation founded in British India by Surendranath Banerjee and Anand Mohan Bose in 1876. It was originally established as Bharat Sabha and held its first annual conference in Calcutta. It merged in INC in 1885.

47. (3) Thoda is a sports dance belonging to Sikkim. It is a game of archery where the target is a dancing human, is played between two teams called pasha and saatha who identify themselves as descendants of Pandavas and Kauravas.

48. (4) **Major Tributaries of Krishna are:** Bhima River, Tungabhadra River, Koyna River, Musi River, Malaprabha River, Kundali River, Ghataprabha River, Yerla River and Warna River. Krishna River originates in the Western Ghats and conjoins the sea in the Bay of Bengal at Hamasaledevi in Andhra Pradesh. It flows through the states of Maharashtra, Karnataka and Andhra Pradesh.

49. (1) J.J. Thomson, an English physicist who helped revolutionise the knowledge of atomic structure by his discovery of the electron (1897). He received the Nobel Prize for Physics in 1906 and was knighted in 1908.

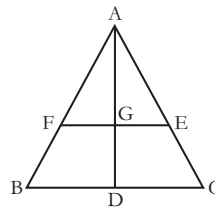
50. (4) Pramod Pandurang Sawant is an Indian politician who is the 13th and current Chief Minister of Goa.

**PART-III**  
**(QUANTITATIVE APTITUDE)**

51. (2)  $2 \times 3 \div 2$  of  $3 \times 2 \div (4 + 4 \times 4) \div 4$  of  $4 - 4 \div 4 \times 4$   
 $= 2 \times 3 \div 6 \times 2 \div (4 + 4 \times 4 \div 16 - 1 \times 4)$

$= 2 \times \frac{3}{6} \times 2 \div (4 + 4 \times \frac{4}{16} - 4)$   
 $= 2 \div (4 + 1 - 4)$   
 $= 2 \div 1$   
 $= 2$

52. (2)



Since,  $EF \parallel BC$

$\frac{AF}{FB} = \frac{AG}{GD} = \frac{AE}{EC}$

$\Rightarrow \frac{AF}{AB} = \frac{AG}{AD} = \frac{AE}{AC}$

Also,  $\triangle ABC \sim \triangle AFE$

$\frac{\text{Area}(\triangle ABC)}{\text{Area}(\triangle AFE)} = \frac{AD^2}{AG^2}$

$\frac{AD^2}{AG^2} = \frac{2 \times \text{Area}(\triangle AFE)}{\text{Area}(\triangle AFE)}$

$\frac{AD}{AG} = \frac{\sqrt{2}}{1}$

$\frac{AD}{AG} - 1 = \frac{\sqrt{2}}{1} - 1$

$\frac{DG}{AG} = \frac{(\sqrt{2} - 1)}{1}$

53. (4) The truck at speed =  $v$  km/h takes  $t$  hrs and at speed  $(v - 16)$  km/h it takes  $(t + 2)$  hrs.

Then,

$384\left(\frac{1}{t} - \frac{1}{t+2}\right) = v - (v - 16)$

$384\left(\frac{t+2-t}{t(t+2)}\right) = 16$

$24 \times \frac{2}{t(t+2)} = 0$

$t^2 + 2t - 48 = 0$

$(t + 8)(t - 6) = 0$

$t = 6$

Original Speed =  $\frac{384}{6}$

= 64 km/h

75% of Original Speed

=  $64 \times \frac{75}{100}$

= 48 km/h

54. (3) Production of B type car in 2012, 2014 and 2015

=  $42 + 40 + 38 = 120$  thousand

Production of A type car in 2013 and 2016 =  $35 + 56 = 91$  thousand

Required % =  $\frac{120 - 91}{91} \times 100$

=  $31.86 \approx 31.9\%$

55. (2) Sum of twelve

numbers =  $12 \times 42 = 504$

Sum of last five numbers

=  $5 \times 40 = 200$

Sum of first four numbers

=  $4 \times 44 = 176$

Sum of 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> numbers

=  $504 - (200 + 176)$

=  $504 - 376$

= 128

5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> numbers are  $(x + 6)$ ,  $x$  and  $(x + 5)$ . Then,

$x + 6 + x + x + 5 = 128$

$3x = 128 - 11$

$x = \frac{117}{3} = 39$

Average of 5<sup>th</sup> and 7<sup>th</sup> number

=  $\frac{x + 6 + x + 5}{2}$

=  $\frac{39 + 39 + 11}{2}$

=  $\frac{89}{2} = 44.5$

56. (2) Total production of E type cars throughout the given years

=  $20 + 42 + 40 + 35 + 43$

= 180 thousand

Required angle

$$= \frac{42}{180} \times 360^\circ$$

$$= 42 \times 2^\circ$$

$$= 84^\circ$$

57. (1)  $\frac{2 + \tan^2 \theta + \cot^2 \theta}{\sec \theta \operatorname{cosec} \theta}$

$$= \frac{1 + \tan^2 \theta + 1 + \cot^2 \theta}{\sec \theta \operatorname{cosec} \theta}$$

$$= \frac{\sec^2 \theta + \operatorname{cosec}^2 \theta}{\sec \theta \operatorname{cosec} \theta}$$

$$= \sec \theta \sin \theta + \operatorname{cosec} \theta \cos \theta$$

$$= \frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{\sin \theta}$$

$$= \frac{\sin^2 \theta + \cos^2 \theta}{\sin \theta \cos \theta}$$

$$= \frac{1}{\sin \theta \cos \theta}$$

$$= \sec \theta \operatorname{cosec} \theta$$

58. (3) Ages of A and B four years ago  
=  $4x$  and  $5x$

$$\frac{4x + 4 + 8}{5x + 4 + 8} = \frac{11}{13}$$

$$55x - 52x = 156 - 132$$

$$3x = 24$$

$$x = 8$$

Sum of the present ages of A and B

$$= 4x + 4 + 5x + 4$$

$$= 9x + 8$$

$$= 72 + 8$$

$$= 80$$

59. (1)  $4 - 2 \sin^2 \theta - 5 \cos \theta = 0$

$$4 - 2(1 - \cos^2 \theta) - 5 \cos \theta = 0$$

$$2 \cos^2 \theta - 5 \cos \theta + 2 = 0$$

$$2 \cos^2 \theta - 4 \cos \theta - \cos \theta + 2 = 0$$

$$(2 \cos \theta - 1)(\cos \theta - 2) = 0$$

$$\therefore -1 \leq \cos \theta \leq 1$$

or,  $\cos \theta \neq 2$

or,  $\cos \theta = \frac{1}{2} = \cos 60^\circ$

or,  $\theta = 60^\circ$

$$\therefore \sin \theta + \tan \theta = \frac{\sqrt{3}}{2} + \sqrt{3}$$

$$= \frac{3\sqrt{3}}{2}$$

60. (1) Since the given number is divisible by 72, it must be divisible by 4, 8 and 9. Since, it is divisible by 4, last two

digit must be divisible by 4. So, possible values of  $y$  are 0, 4, 8. Since it is divisible by 8, last three digits must be divisible by 8. As 780 and 788 are not divisible by 8, the only possible value of  $y$  is 4. Now, since the number is divisible by 9, its sum of digits will be divisible by 9.

$$9 + 8 + 5 + x + 3 + 6 + 7 + 8 + y$$

$$= 46 + x + y$$

$$= 46 + x + 4$$

$$= 50 + x$$

For  $x = 4$ , 54 is divisible by 9.

$$4x - 3y = 4 \times 4 - 3 \times 4 = 4$$

61. (4)  $(x + y + z)^2 = x^2 + y^2 + z^2 + 2(xy + yz + xz)$

$$19^2 = 133 + 2(xy + yz + xz)$$

$$2y(x + y + z) = 361 - 133$$

$$2y \times 19 = 228$$

$$y = \frac{228}{38} = 6$$

Now,

$$x + z = 19 - y$$

$$x + z = 19 - 6 = 13$$

$$x - z = \sqrt{(x + z)^2 - 4xz}$$

$$= \sqrt{13^2 - 4y^2}$$

$$= \sqrt{169 - 4 \times 36}$$

$$= \sqrt{169 - 144} = 5$$

62. (3) CP = ₹ 100, then SP = ₹ 85

SP for 9% profit = ₹ 109

Difference in SP =  $109 - 85 = 24$

When difference = ₹ 24,

then CP = ₹ 100

Difference = ₹ 30.6,

then CP =  $100 \times \frac{30.6}{24}$

$$= \frac{3060}{24} = 127.5$$

To get 10% profit,

$$SP = 127.5 \times \frac{110}{100} = ₹ 140.25$$

63. (1)  $12042 = P \left(1 + \frac{r}{100}\right)^6 \dots (i)$

$$8028 = P \left(1 + \frac{r}{100}\right)^3$$

$$(8028)^2 = P^2 \left(1 + \frac{r}{100}\right)^6 \dots (ii)$$

Dividing (ii) by (i) we get

$$P = \frac{8028 \times 8028}{12042}$$

$$= 5352$$

64. (4) Total production of C type cars in year 2013 & A in year 2014

$$= 36 + 48 = 84 \text{ thousand}$$

Total production of B in year 2016 & E type cars in 2015

$$= 56 + 35 = 91$$

$$\text{Required ratio} = 84 : 91$$

$$= 12 : 13$$

65. (3) Edge of the original cube

$$= (13824)^{\frac{1}{3}} = 24$$

Surface area of the original cube

$$= 6(24)^2$$

$$= 6 \times 576$$

$$= 3456$$

Volume of one smaller cube

edge of one smaller cube

$$= (1728)^{\frac{1}{3}} = 12$$

Total surface area of three smaller cubes

$$= 3 \times 6 \times (12)^2$$

$$= 18 \times 144$$

$$= 2592$$

Required ratio =  $3456 : 2592 = 4 : 3$

66. (4)  $x^4 + x^{-4} = 194$

$$x^4 + \frac{1}{x^4} = 194$$

$$x^2 + \frac{1}{x^2} = \sqrt{194 + 2} = 14$$

$$x + \frac{1}{x} = \sqrt{x^2 + \frac{1}{x^2} + 2}$$

$$x + \frac{1}{x} = \sqrt{14 + 2} = 4$$

$$x^2 - 4x + 1 = 0$$

$$x = \frac{4 \pm \sqrt{16 - 4}}{2}$$

$$= 2 \pm \sqrt{3}$$

$$(x - 2)^2 = 3$$

67. (2)  $\sin \theta = \frac{P^2 - 1}{P^2 + 1}$

$$\cos^2 \theta = 1 - \sin^2 \theta$$

$$\cos^2 \theta = 1 - \frac{(P^2 - 1)^2}{(P^2 + 1)^2}$$

$$\cos^2 \theta = 1 - \frac{P^4 - 2P^2 + 1}{P^4 + 2P^2 + 1}$$

$$\cos^2 \theta = \frac{4P^2}{(P^2 + 1)^2}$$

$$\cos \theta = \frac{2P}{P^2 + 1}$$

68. (1)  $\frac{(5\sqrt{5}x^3 - 81\sqrt{3}y^3)}{(\sqrt{5}x - 3\sqrt{3}y)}$   
 $= Ax^2 + By^2 + Cxy$   
 $\frac{(\sqrt{5}x - 3\sqrt{3}y)(5x^2 + 3\sqrt{15}xy + 27y^2)}{\sqrt{5}x - 3\sqrt{3}y}$   
 $= Ax^2 + 5x^2 + 3\sqrt{15}xy + 27y^2$   
 $= Ax^2 + By^2 + Cxy$   
 $A = 5, B = 27, C = 3\sqrt{15}$   
 $6A + B - \sqrt{15}C = 30 + 27 - 45 = 12$

69. (1) Ratio of efficiencies, A:B:C = 2:5:3

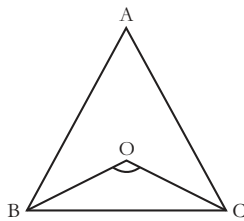
$$(A + B + C) : (B + C) = 10 : 8 = 5 : 4$$

$$\frac{M_1 \times D_1}{W_1} = \frac{M_2 \times D_2}{W_2}$$

$$\frac{5 \times 27}{1} = \frac{4 \times D_2}{9}$$

$$D_2 = \frac{5 \times 27 \times 4}{4 \times 9} = 15$$

70. (2)



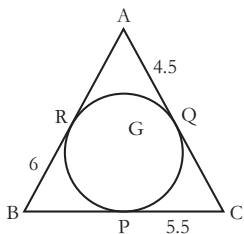
$$\angle BOC = 122^\circ$$

$$\angle BOC = 90^\circ + \frac{1}{2} \angle A$$

$$122^\circ - 90^\circ = \frac{1}{2} \angle A$$

$$\angle A = 2 \times 32^\circ = 64^\circ$$

71. (1)

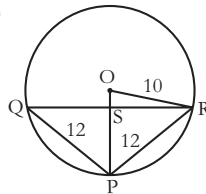


AQ = AR = 4.5 cm, PC = CQ = 5.5 cm, BR = BP = 6 cm

$$\begin{aligned} \text{Perimeter} &= AB + BC + AC \\ &= 6 + 6 + 4.5 + 5.5 + 4.5 + 5.5 \end{aligned}$$

$$\begin{aligned} &= AR + BR + BP + PC + AQ + QC \\ &= 4.5 + 6 + 6 + 5.5 + 5.5 + 4.5 \\ &= 32 \text{ cm} \end{aligned}$$

72. (2)



Let OS = x, then  
 $OR^2 - OS^2 = PR^2 - PS^2$   
 $10^2 - x^2 = 12^2 - (10 - x)^2$   
 $100 - x^2 = 144 - 100 - x^2 + 20x$   
 $20x = 56$   
 $x = 2.8 \text{ cm}$

73. (1) Average production of D type cars during the years 2012 to 2016

$$= \frac{51 + 24 + 30 + 46 + 54}{5}$$

$$= \frac{205}{5} = 41$$

In 2014 and 2015 production of B type cars are less than the average.

74. (2)  $120\left(1 - \frac{x}{100}\right) = 40\left(1 + \frac{x}{100}\right)$

$$3 - \frac{3x}{100} = 1 + \frac{x}{100}$$

$$\frac{4x}{100} = 2$$

$$x = 50$$

$$x\% \text{ of } 210 = 210 \times \frac{50}{100}$$

$$= 105$$

$$(x + 20)\% \text{ of } 180 = 180 \times \frac{70}{100}$$

$$= 126$$

Required Percentage

$$= \frac{126 - 105}{126} \times 100$$

$$= 16\frac{2}{3}\%$$

75. (4) Two successive discount equivalents to

$$= -x - x + \frac{x^2}{100}$$

$$= -2x + \frac{x^2}{100}$$

Total rate of discount

$$= 259.20 \times \frac{100}{720}$$

$$= 36\%$$

Now,

$$-2x + \frac{x^2}{100} = -36$$

$$x^2 - 200x + 3600 = 0$$

$$\therefore x = 20$$

### PART-IV (ENGLISH LANGUAGE)

76. (1) Correct order of the sentences → DCBA

77. (1) Replace 'because' in place of 'in case that' for correct meaning to the sentence.

78. (3) The correct spelling → Calendar.

79. (2) The idiom 'at daggers drawn' means '(of two people) be bitterly hostile towards each other'.

• They have been **at daggers drawn** for weeks over tactics.

80. (4) Meaning of the word 'Dwarf' → A person who is of unusually or abnormally small stature because of a medical condition; a person affected by dwarfism.

81. (2) For the improvement of a sentence, use 'will fine you' in place of 'has fined you'.

82. (4) Correct filler for the blank → Reputation means 'the beliefs or opinions that are generally held about someone or something'.

83. (4) Opposite of Scarce is:

Plentiful: existing in or yielding great quantities; abundant.

84. (2) Appropriate option for the blank → those.

85. (1) A determiner is required to fill in the blank.

An indefinite article 'a' is required because it precedes a word that begins with a consonant sound.

86. (1) The blank needs an adverb, not an adjective. Between 'alike' and 'similarly', 'alike' is the correct choice.

87. (2) 'Mistakes' is the appropriate word to fill in the blank.

**88.** (1) 'Particular' meaning 'especially great or intense' is the appropriate word for the blank.

**89.** (1) Chronic/Persistent: (of an illness) persisting for a long time or constantly recurring, continuing to exist or occur over a prolonged period.

**90.** (2) 'Costumes' meaning 'a set of clothes worn by an actor or performer for a particular role' is the appropriate word for the blank.

**91.** (2) Correct order of the four jumbled sentences is → BADC.

**92.** (1) Correct spelling of 'Exploite' is 'Exploit' and it means 'make full use of and derive benefit from a resource'.

**93.** (3) Antonym of Expansion is:

Compression: the reduction in volume.

**94.** (4) Truant: a pupil who stays away from school without leave or explanation.

**95.** (1) Correct active form of the given sentence → The guards were thoroughly checking every passing vehicle.

**96.** (3) Correct passive form of the given sentence is →

Medicines should not be bought without the doctor's prescription.

**97.** (1) The idiom 'to play ducks and drakes' means 'to behave recklessly; to idly squander one's wealth'.

Sentence → She played ducks and drakes with her property.

**98.** (1) The use of conjunction 'although' is incorrect in the sentence. To correct the sentence use 'as' in place of 'although'.

**99.** (1) Coerce/Pressurise: persuade (an unwilling person) to do something by using force or threats; attempt to persuade (someone) into doing something.

**100.** (4) The phrase 'for a long time' indicates the duration of some activity which started in past and still continues. Use present/past perfect continuous tense to represent such actions.

□□□

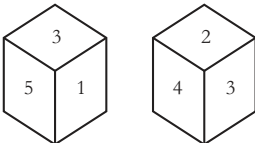
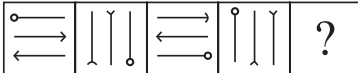
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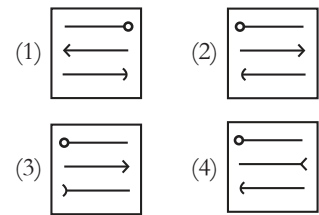
## SSC – CGL

### Combined Graduate Level (Tier-I) Examination Solved Paper – 04 June, 2019 (II)

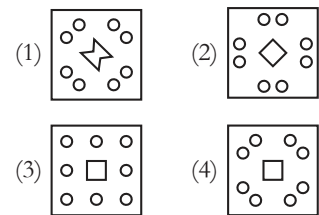
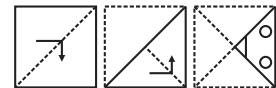
#### PART-I

#### (GENERAL INTELLIGENCE & REASONING)

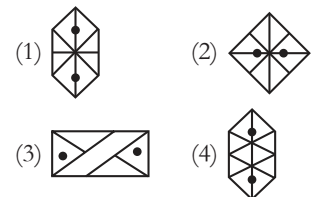
- 10 years ago, the age of a father was more than  $3\frac{1}{2}$  the age of his son and after 10 years from now, the age of the father will be more than  $2\frac{1}{4}$  the age of his son. Now, how much is the total sum of the age of father and son?  
(1) 120 years (2) 115 years  
(3) 110 years (4) 100 years
- Two different situations of the same dice are shown. If the number 6 is on the lower board, then what will be the number on the upper board?  

  
(1) 4 (2) 1  
(3) 2 (4) 3
- Select the set in which the numbers are related in the same way as the numbers are related in the set below. (10, 18, 38)  
(1) (4, 12, 22) (2) (14, 12, 8)  
(3) (12, 22, 46) (4) (18, 6, 14)
- Three from the following four numbers are somehow identical and one number is uneven. Select that uneven number.  
(1) 12 (2) 14  
(3) 30 (4) 56
- The way, in which the verb 'deed' is related to 'reaction', ..... is related to 'inciting'.  
(1) Foresight (2) Feedback  
(3) Response (4) Welcome
- Select the option that is related to the third letter group in the same way as the second letter group is related to the first letter group.  
BECD : YUXW : DGEF : ?  
(1) WUTV (2) WTVU  
(3) VRTS (4) XUVV
- From the given options, select the word pair whose two words are related to each other in the same way as the words of the word pair below are related.  
Heat : Sun  
(1) House : Terrace  
(2) Vitamin : Fruit  
(3) Environment : Humidity  
(4) Ride : Car
- If BACK is coded as 11312 and CAKE as 51113. So how will MADE be coded?  
(1) 13145 (2) 54113  
(3) 51413 (4) 31145
- To correct the equation given below, which two symbols, should be mutated?  
 $18 + 6 - 6 \div 3 \times 6 = 6$   
(1) + and  $\div$  (2) + and  $\times$   
(3) - and  $\div$  (4) + and -
- Three words out of the following four words are somehow similar and one word is uneven. Choose the odd word.  
(1) Tendency (2) Endurance  
(3) Stability (4) Persistence
- Select the next figure in the following figure sequence.  




- In the series given below, what number will replace the question mark (?)?  
2, 5, 11, 23, 44, ?  
(1) 77 (2) 63  
(3) 51 (4) 66
- A paper is folded and cut as shown below. What will it look like when open it?



- Select the option in which the given figure is hidden.



- Arrange the following words in a logical and meaningful sequence.