



**PARVATHANENI BRAHMAYYA  
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**

*Autonomous*

Siddhartha Nagar, Vijayawada-520010

*Re-accredited at 'A+' by the NAAC*

<b>Course Code</b>				<b>23MASDL202</b>			
<b>Title of the Course</b>				<b>REASONING</b>			
<b>Offered to:</b>				<b>ALL UG PROGRAMS</b>			
<b>L</b>	<b>1</b>	<b>T</b>	<b>1</b>	<b>P</b>	<b>0</b>	<b>C</b>	<b>2</b>
<b>Year of Introduction:</b>		<b>2024-25</b>		<b>Semester:</b>			<b>3</b>
<b>Course Category:</b>				<b>Course Relates to:</b>			
<b>Year of Introduction:</b>				<b>Percentage:</b>		<b>NA</b>	
<b>Type of the Course:</b>				<b>SKILL DEVELOPMENT</b>			
<b>Crosscutting Issues of the Course :</b>							
<b>Pre-requisites, if any</b>							

**Course Description:**

This course aims to improve learners' mathematical and analytical abilities, particularly in the context of competitive exams, aptitude tests, and data-driven decision making. The foundational topics cover essential mathematical concepts, problem-solving techniques, and quantitative reasoning skills. The advanced topics delve into higher-level mathematics, statistical analysis, and data interpretation. Participants develop critical thinking, numerical reasoning, and logical problem-solving skills required for various professions, such as finance, consulting, and data analysis.

**Course Aims and Objectives:**

<b>S. No</b>	<b>COURSE OBJECTIVES</b>
<b>1</b>	Introduce learners to the fundamental concepts of aptitude required for recruitment processes.
<b>2</b>	Develop learners' problem-solving skills and critical thinking abilities in the context of recruitment aptitude tests.
<b>3</b>	Enhance learners' quantitative reasoning and numerical ability for solving recruitment-based problems.
<b>4</b>	Provide learners with strategies and techniques to improve their performance in recruitment aptitude tests.

## Course Outcomes

At the end of the course, the student will / will be...

NO	COURSE OUTCOME	BTL	PO	PSO
CO1	Develop the Analytical skills to understand alphabet test, alpha numeric sequence and logical sequence test.	K1	6	1
CO2	Analyze the given number or letter to find out hidden analogy and apply that analogy to find solutions .finding odd man out by observing the principle which makes the other similar.	K2	6	2
CO3	Construct mind maps of coding and decoding of various mathematical elements	K3	6	1
CO4	Apply the basic functionality of clocks and calendar to find the solution for the problem	K4	6	2
CO5	Facilitating analytical reasoning and logical reasoning skills	K5	6	1

For BTL: K1: Remember; K2: Understand; K3: Apply; K4: Analyze; K5: Evaluate; K6: Create

CO-PO-PSO MATRIX									
CO NO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1						1		1	
CO2						1			2
CO3						2		1	
CO4						2			2
CO5						3		1	

Use the codes 3, 2, 1 for High, Moderate and Low correlation Between CO-PO-PSO respectively

### Course Structure:

#### UNIT – 1:

(10Periods)

- Number Series
- Letter series
- Odd man out
- Analogy
- Alpha-numeric series.

#### UNIT – 2:

(10Periods)

- Coding &Decoding
  - Blood relationship
  - Clocks
  - Calendars.
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**UNIT – 3:****(10Periods)**

- Directions
- Seating arrangements
- Puzzles
- Ranking test.

**Text Books:**

1. Verbal Reasoning for Competitive Examination by R.S. Agarwal, S.Chand publications.

**Reference Books:**

1. Arihant's A New Approach to Reasoning by BS Sijwali, InduSijwali.
2. Quantitative Aptitude and Reasoning by R V Praveen, PHIpublishers.
3. Arihant's How to crack test of Reasoning by Jaikishan, Premkishan.

**Links:**

1. <https://www.indiabix.com/>
2. <https://www.adda247.com/>
3. [https://www.smartkeeda.com/test/Quantitative\\_Aptitude/R\\_Updated/all/](https://www.smartkeeda.com/test/Quantitative_Aptitude/R_Updated/all/)

- ❖ 15 marks for surprise tests/online tests
- ❖ 35 marks for semester end examination (objective type).Each question carries half mark only.

**PSO1:** The skills and knowledge gained has intrinsic beauty, which may leads to proficiency in analytical reasoning. This can be utilized in modelling and solving real life problems

**PSO2:** Handle campus placement test involving Quantitative aptitude and reasoning.

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**P.B SIDDHARTHA COLLEGE OF ARTS & SCIENCE**

**REASONING**

**MODEL PAPER**

**TIME: 2 HRS**

**MAX MARKS: 35M**

**COURSE CODE: 23MASDL202**

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Choose the correct answer from the following.. (70questions\* ½ =35M)

**Directions (Q.No-1to5):**Study the following information and answer the question:

Eight friends, A, B, C, D, J, K, L and M are seated in a straight line, facing North, but not necessarily in the same order.

\* Only three people sit between C and L. L sits at one of the extreme ends of the line.

\* D sit second to left of M. M is not an immediate neighbour of C. Only three people sit between M and K. A is one of the immediate neighbours of K. B is neither an immediate neighbour of L nor M.

1. Who amongst the following sit exactly between K and J?L5,CO1

- a) B, D                      b) A, B                      c) A, C                      d) A, L                      e) C, D

2. Based on the given arrangement, which of the following is true with respect to J? L4,CO2

- a) Only three persons sit between J and D    b) Both A and K are immediate neighbours of J  
c) M sits to immediate left of J              d) J sits at one of the extreme ends of the line e) None of the given options is true

3. How many persons are seated between B and M?L3,CO2

- a) Two                      b) Three                      c) Four                      d) Five                      e) None

4. What is the position of M with respect to C?

- a) Fourth to the right                      b) Second to the left                      c) Fourth to the left  
d) Third to the right                      e) Second to the right

5Who amongst the following persons are at extreme ends of the line?

- a) B, L                      b) A, B                      c) A, C                      d) A, L                      e) C, D

**Directions (Q.NO- 6to10):**Complete the Series.L3,CO2

6. 4, 8, 11, 22, 25, 50, 53,\_\_\_.

- a)104                      b)103                      c)104                      d)106                      e)NoneOfThese.

7. 15, 17, 20, 24, 29,\_\_\_.

- a)38                      b)40                      c)50                      d)52                      e)NoneOfThese.

8. 200, 100, 50, 25, \_\_.  
 a)10.5                      b)12.5                      c)21                      d)25                      e)NoneOfThese.
9. 11, 28, 327, 464, \_\_.  
 a)2348                      b)5245                      c)5125                      d)1050                      e)NoneOfThese.
10. 14, 25, 15, 23, 16, 21, 17, \_\_.  
 a)17                      b)15                      c)14                      d)19                      e)NoneOfThese.

**Directions (Q.No 11to15):**

In each of the following questions given below, a group of digits/letters is given followed by four combinations of symbols numbered A, B, C and D. you have to find out which of the following four combinations correctly represents the group of digits/letters based on the symbol codes and the conditions given below.

<b>Letter</b>	A	F	I	W	S	E	M	R	C	U	H	P	X	Y	J	G	O
<b>Code</b>	9	!	5	2	1	#	6	\$	%	7	&	3	4	?	0	8	@

11. What would be the code of the word 'XUAFM'? L4,CO2  
 a)9@0?3                      b)&9?25                      c)469!7                      d)479!6                      e)None of these
12. What would be the code of the word 'YEGIM'?L3,CO2  
 a)85@#&                      b)?#856                      c)8&#56                      d)8@#&@                      e)None of these
13. What would be the code of the word 'SFWJC'?  
 a)1!20%                      b)08%1@                      c)03%1%                      d)301@%                      e)None of these
14. What would be the code of the word 'IUEAH'? L3,CO2  
 a)#9?4\$                      b)?659#                      c)\$954?                      d)57#9&                      e)None of these
- 15.What would be the code of the word 'HCYUX'? L4,CO2  
 a)6%792                      b)#6%92                      c)6#%&2                      d)2%769                      e)None of these

**Directions (Q.No-16to20):** complete the series L4,CO2

16. BR, DT, HV, NX, \_\_.  
 a)UY                      b)UZ                      c)VZ                      d)VY                      e)NoneOfThese.
17. G, L, Q, V, \_\_.  
 a)A                      b)B                      c)C                      d)D                      e)NoneOfThese.
18. C, E, H, J, M, O, \_\_.  
 a)V                      b)U                      c)S                      d)Y                      e)NoneOfThese.
19. M, N, O, L, Q, J, \_\_.  
 a)H                      b)S                      c)Z                      d)E                      e)NoneOfThese.
20. J, L, O, S, \_\_.

- a)W                      b)T                      c)X                      d)J                      e)NoneOfThese.

**Directions (Q.No-21to22)::** Study the information given below carefully and accordingly answer the following questions:

Akash is going shopping at a mall nearby with his friends. They start from point X and move 15 km to the north. They then take a right turn and move 20 km, followed by a left turn. After moving for another 40 km, they turn left and walk 20 km.

21. In which direction is Akash along with his friends with reference to point X?L3,CO2

- a) North                  b) South                  c) East                  d) West                  e) North- East

22. What is the distance between point X and the final destination?

- a) 45 km                  b) 35 km                  c) 65 km                  d) 55 km                  e)75 km

**Directions (Q.No-23to25):**Read the following information carefully and answer the questions given below.

<b>Letter</b>	Q	W	E	R	T	Y	U	I	O	P
<b>Code</b>	1	@	3	\$	%	5	&	8	*	9

23. What would be the code of the word 'UEIW'?L3,CO2

- a)&39\$                  b) &38@                  c) %581                  d) 35@\*                  e)NoneOfThese.

24. What would be the code of the word '1358'?

- a)YUIO                  b) WRUI                  c) QEYI                  d) TRSL                  e)NoneOfThese.

25. What would be the code of the word 'OPTY'?

- a) 3\$56                  b)5%6&                  c) 1@3\$                  d) \*9%5                  e)NoneOfThese.

**Directions (Q.No-26to30):**Analyze the elements. L5,CO1

26. N/O: 41/51:: X/V: \_\_  
a)40/22                  b)41/22                  c)42/22                  d)43/22                  e)NoneOfThese.

27. 8:64::10: \_\_  
a)100                  b)121                  c)144                  d)169                  e)NoneOfThese.

28. RIN:41::VIM: \_\_  
a)64                  b)44                  c)23                  d)31                  e)NoneOfThese.

29. Quarrel :War :: Unhappy: \_\_  
a)Happy                  b) Sad                  c) Refuse                  d)Deny                  e)NoneOfThese.

30. 245:40::243: \_\_  
a)19                  b)24                  c)21                  d)17                  e)NoneOfThese.

**Directions (Q.No-31to35):**Study the following sequence of numbers and alphabets and answer the given questions-

**Q 2 M © W N 9 E B @ R 5 V T \$ C 3 Y & A S 7 % P Z F 8 K U \* O 6 G £ H**

31. How many such letters are there in the given series which are immediately preceded by a symbol and immediately followed by a number? L3,CO2

- a) Two            b) Four            c) One            d) Three            e) None

32. If all the symbols are dropped in the given series, which element will be eleventh from the left end?

- a) V            b) 5            c) T            d) 7            e) C

33. Which of the following element is fourth to the left of the ninth element from the right end of the given arrangement?

- a) %            b) S            c) P            d) K            e) &

34. If all the digits are deleted from the given arrangement, which of the following will be eighth from the left end of the arrangement? L3,CO2

- a) W            b) E            c) \*            d) @            e) R

35. Which of the following is third to the right of the fourteenth digit from the right end of the given arrangement?

- a) %            b) Z            c) 3            d) 7            e) K

**Directions (Q.No-36 to 40):** Find the odd thing in. L5,CO1

36. a)13            b)23            c)33            d)43            e)53  
37. a)25            b)36            c)49            d)64            e)81  
38. a)C            b)F            c)I            d)L            e)O  
39. a)Desk            b)Blackboard            c)Classroom            d)Bench            e)Chalk  
40. a)248            b)326            c)414            d)392            e)428

41. Find the mirror image of 3:20 am.

- a)9:40 pm            b)8:40 pm            c)7:40 pm            d)6:40 pm            e)None Of These

42. Find the mirror image of 9:30. L3,CO2

- a)9:40            b)2:30            c)7:40            d)3:30            e)None Of These

43. How many times the hands of a clock are right angles in 24 hours?

- a)44            b)11            c)24            d)12            e)None Of These

44. Find the angle between minute hand and hour hand, when the time is 3:22? L3,CO2

- a)81°            b)61°            c)31°            d)71°            e)None Of These

45. At what point of time after 3 O'clock, will the hands of a clock be in the right angles for the first time? L5,CO1

- a)30 2/11 min            b) 31 3/11min            c)322/11min            d)333/11min            e)None Of These
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46. March 7<sup>th</sup> 2023 was Tuesday. What day of the week will it be on November 15<sup>th</sup> 2023?

a) Wednesday    b) Tuesday    c) Sunday    d) Saturday    e) None of these.

47. The year next to 2046 having same calendar as that of 2046 is. L3, CO2

a) 2057    b) 2056    c) 2061    d) 2058    e) None of these.

48. Find the number of odd days in 65 days. L3, CO2

a) 1    b) 6    c) 2    d) 5    e) None of these.

49. If today is Thursday after 71 days it will be.

a) Sunday    b) Saturday    c) Monday    d) Tuesday    e) None of these.

50. What will be the day of the week on 26<sup>th</sup> January, 2024? L5, CO1

a) Sunday    b) Thursday    c) Friday    d) Tuesday    e) None of these.

**Directions (Q.No-51 to 55):** complete the series. L5, CO1

51. Z-25, X-23, V-21, T-19, \_\_\_.

a) R-17    b) F-14    c) N-14    d) M-14    e) None of these.

52. 5A, 8B, 11C, 14D, \_\_\_.

a) 15F    b) 17E    c) 18F    d) 20L    e) None of these.

53. C4Z, F8X, I12V, \_\_\_\_, O20R.

a) L13S    b) L15S    c) I19S    d) L12T    e) None of these.

54. X-144, \_\_\_\_, T-100, R-81, P-64.

a) T-121    b) U-122    c) T-123    d) V-124    e) None of these.

55. J6R, H8Q, \_\_\_\_, D15O, B20N.

a) I9L    b) L9S    c) I9S    d) F10P    e) None of these.

**Directions (Q.No-56 to 60):** Study the following information and answer the given Question:

K is father of Y. Y is brother of G. L is married to G. L is daughter of X. B is Wife of X. P is son of B. Z is daughter of P. C is daughter in law of X. B has only one son.

56. How is G related to K? L3, CO2

a) Niece    b) Son    c) Nephew    d) None    e) Cannot be determined

57. How is G related to B?

a) Son-in-law    b) Son    c) Uncle    d) Nephew    e) Brother

58. If S is married to Z, then how is C related to S? L3, CO2

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a) Mother-in-law   b) Son   c) Daughter   d) Father-in-law   e) Cannot be determined

59. How is L related to K?

a) Niece   b) Daughter-in-law   c) Mother-in-law   d) Sister   e) None.

60. How is Z related to L? L3, CO2

a) Niece   b) Daughter   c) Nephew   d) None   e) Cannot be determined

**Directions (Q.No-61 to 65):** Study the following information carefully and answer the given question.

Eight people- A, B, C, D, E, F, G and H are sitting around a circular table (facing the centre) with equal distances between each other, but not necessarily in the same order.

C sits third to the right of G. Only one person sits between G and F. A sits to the immediate left of F. B is neither an immediate neighbour of G nor C. H sits second to the left of B. D is one of the immediate neighbours of H.

61. Which of the following statements is **NOT TRUE** with respect to the given arrangement? L3, CO2

a) B is an immediate neighbour of both E and D   b) C sits second to the left of D  
c) C sits to the immediate right of F   d) Only three people sit between A and E  
e) All the given options are true

62. Who amongst the following sit/s exactly between F and D. when counted from the left of D?

a) Both C and H   b) Only E   c) Only C   d) Both H and A   e) Both A and G

63. If all the people are made to sit in alphabetical order in anti-clockwise direction starting from A, the positions of how many people (excluding A) will remain unchanged? L3, CO2

a) Three   b) One   c) None   d) Two   e) More than three

64. Who amongst the following sits to the immediate right of E?

a) H   b) C   c) B   d) A   e) G

65. Who amongst the following sits second to the right of H? L3, CO2

a) D   b) C   c) B   d) A   e) G

**Directions (Q.No-66 to 68):** Study the following information carefully and answer the questions given below.

Colony U, V, W, X, Y and Z has different number of houses. Only Colony Z has more number of houses than Colony X. Colony V has more number of houses than Colony Y but

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less than Colony U. Colony W has more number of houses than both Colony Y and Colony U. The colony having the third highest number of houses is 39. Colony Y has 24 houses.

66. If the sum of the number of houses in colony W + Z is Sixty six more than the number of houses in Colony Y, how many of houses are there in Colony Z?

- a) 31                      b) 46                      c) 51                      d) 55                      e) 45

67. How many houses do Colony V probably have? L3, CO2

- a) 39                      b) 43                      c) 55                      d) 31                      e) 14

68. Which of the following is true regarding the number of houses in colony 'U'? L3, CO2

- a) No other colony has less houses than U.                      b) X has more number of houses than U.  
c) U possibly has 45 houses.                      d) U has more number of houses than only three colonies.  
e) None of the given options is true

69. Lalit along with his family decided to take a road trip to a nearby resort and spend the weekend there. He started from his home and from there drove 70 km to the south, he then took a right turn and drove 30 km. Next, he took a right turn and drove 30 km and stopped at a restaurant. What is the shortest distance between his house and the restaurant? L5, CO1

- a) 75 km                      b) 35 km                      c) 95 km                      d) 25 km                      e) None of these.

70. A man is facing west. He turns  $45^\circ$  in the clockwise direction and then another  $180^\circ$  in the same direction and then  $270^\circ$  in the anti-clockwise direction. Which direction is he facing now? L3, CO2

- a) North                      b) South – West                      c) South                      d) East                      e) None of these.
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