21/05/2023

Time : 60 min.

# Memory Based Paper Answers \& Solutions 

## (General Test)

## IMPORTANT INSTRUCTIONS:

1. The test is of 60 Minutes duration.
2. The test contains 75 Questions out of which 60 questions need to be attempted.
3. Marking Scheme of the test:
a. Correct answer or the most appropriate answer: Five marks (+5)
b. Any incorrect option marked will be given minus one mark ( -1 ).
c. Unanswered/Marked for Review will be given no mark (0).
4. Which Indian won the Nobel Prize in Literature?
a) Rabindranath Tagore
b) Har Gobind Khorana
c) Chandrasekhara Venkata Raman
d) Amartya Kumar Sen
5. Match the following pairs of states and capitals.

| State | Capital |
| :--- | :--- |
| A. Bihar | i. Shillong |
| B. Goa | ii. Hyderabad |
| C. Telangana | iii. Patna |
| D. Meghalaya | iv. Panaji |

a) A (iii), B (ii), C (iv), D (i)
b) A (ii), B (iv), C (iii), D (i)
c) $A$ (iii), $B$ (i), C (ii), D (iv)
d) $A$ (iii), $B$ (iv), C (ii), D (i)
3. What is the name of Premchand's autobiography?
a) Nawab Rai
b) Premchand Ghar Mein
c) Premchand Ek Kahani
d) None of these
4.The disease caused due to the deficiency of vitamin $C$ is $\qquad$ .
a) Beri-Beri
b) Rickets
c) Infertility
d) Scurvy
5. What is the formula for baking soda?
a) $\mathrm{Na}_{2} \mathrm{CO}$
b) $\mathrm{NaHCO}_{3}$
c) $\mathrm{Ca}(\mathrm{OH})_{2}$
d) NaOH
6. What is the formula for washing soda?
a) $\mathrm{Na}_{2} \mathrm{CO}$
b) $\mathrm{NaHCO}_{3}$
c) $\mathrm{Ca}(\mathrm{OH})_{2}$
d) NaOH
7. Match the following pairs of cities and nicknames.

| City | Nickname |
| :--- | :--- |
| A. Jaipur | i. Sun City |
| B. Dhanbad | ii. Silk City |
| C. Bhagalpur | iii. Pink City |


| D. Jodhpur | iv. Coal Capital of India |
| :--- | :--- |

a) $A$ (iii), $B$ (ii), $C$ (iv), $D$ (i)
b) $A$ (ii), $B$ (iv), $C$ (iii), $D$ (i)
c) $A$ (iii), $B$ (i), $C$ (ii), $D$ (iv)
d) $A$ (iii), $B$ (iv), C (ii), D (i)
8. Which Indian player won the gold medal in the Olympic games Beijing 2022?
a) Abhinav Bindra
b) Saikhom Mirabai Chanu
c) Neeraj Chopra
d) Jaipal Singh
9. Round Revolution is related to $\qquad$
a) Egg
b) Potato
c) Milk
d) Oilseed
10. Match the following pairs of rivers and Place of origin.

| Rivers | Place of origin |
| :--- | :--- |
| A. Ganga | i. Nasik |
| B. Yamuna | ii. Gangotri |
| C. Indus | iii. Mansarovar |
| D. Godavari | iv. Yamunotri |

a) $A$ (ii), $B$ (iii), C (iv), D (i)
b) A (ii), B (iv), C (iii), D (i)
c) A (iii), B (i), C (ii), D (iv)
d) $A$ (iii), $B$ (iv), C (ii), D (i)
11. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?
a) $144^{\circ}$
b) $150^{\circ}$
c) $190^{\circ}$
d) $180^{\circ}$
12. The clock starts at noon. By 10 minutes past 5 , the hour hand has turned through:
a) $145^{\circ}$
b) $150^{\circ}$
c) $155^{\circ}$
d) $180^{\circ}$
13. The angle between the minute hand and the hour hand of a clock when the time is 4.20 , is:
a) $0^{\circ}$
b) $5^{\circ}$
c) $10^{\circ}$
d) $20^{\circ}$
14. It was Sunday on Jan 1,2006 . What was the day of the week Jan 1,2010 ?
a) Sunday
b) Saturday
c) Friday
d) Wednesday
15. Today is Monday. After 61 days, it will be:
a) Wednesday
b) Saturday
c) Tuesday
d) Thursday
16. On 8th Feb, 2005 it was Tuesday. What was the day of the week on 8th Feb, 2004?
a) Sunday
b) Saturday
c) Friday
d) Wednesday
17. Complete the Series: FAG, GAF, HAI, IAH,
a) JAK
b) HAL
c) HAK
d) JAI
18. Look at this series: $7,10,8,11,9,12, \ldots$ What number should come next?
a) 7
b) 10
c) 12
d) 13
19. In these series, you will be looking at both the letter pattern and the number pattern. Fill the blank in the middle of the series or end of the series.

ELFA, GLHA, ILJA, $\qquad$ MLNA
a) OLPA
b) KLMA
c) LLMA
d) KLLA
20. If ' *' means subtraction , ' - ' means division, ' \$ ' means addition and '\% ' means multiplication then find the value of 22 \$ 13 * 16 \% 28-14 \$ 24 = ?
a) 27
b) 28
c) 38
d) 42
21. In a certain code language. 'SERVANT' is coded as '195182211420'. How will 'MAGNIFY' be coded as in that language?
a) 1426693625
b) 1316143522
c) 1317149625
d) 1417139625
22. In a certain code language, 'RACE' is written as 'WFHJ' and 'TRAP' is written as 'YWFU'. How will 'FROM' be written in that language?
a) LXUS
b) KXTS
c) KWTR
d) LWUR
23. In a certain code language, "NOPE" is coded as " 100 " and "EGG" is coded as " 38 ". How will "LAP" be coded in that language?
a) 27
b) 29
c) 31
d) 51
24. Which of the following diagrams indicates the best relation between Author, Lawyer and Singer ?

(B) $\bigcirc \bigcirc$
(C)

(D)

25. Select the combination of letters which when sequentially placed at the blank spaces in the given letter series will complete the series.
bac_cab_cd_a_ac_ca
a) dacbd
b) dcbac
c) cadbc
d) bdabc

Directions for Questions $\mathbf{2 6}$ to 30: Read the given information carefully and answer the questions that follow.

- Eleven friends $M, N, O, P, Q, R, S, T, U, V$ and $W$ are sitting in the first row of the stadium watching a cricket match.
- $\quad$ is to the immediate left of $P$ and third to the right of $U$.
- $V$ is the immediate neighbour of $M$ and $N$ and third to the left of $S$.
- $M$ is the second to the right of $Q$, who is at one of the ends.
- $R$ is sitting next to the right of $P$ and $P$ is second to the right of 0 .

26. Who is sitting in the center of the row?
a) N
b) 0
c) S
d) $U$
27. Which of the following people are sitting to the right of S ?
a) OTPQ
b) OTPR
c) UNVM
d) UOTPR
28. Which of the following statements is true with respect to the above arrangement?
a) There are three persons sitting between P and S
b) $W$ is between $M$ and $V$.
c) $N$ is sitting between $V$ and $U$
d) S and O are neighbours sitting to the immediate right of T
29. Who are the immediate neighbours of $T$ ?
a) $0, P$
b) $0, R$
c) $\mathrm{N}, \mathrm{U}$
d) $\mathrm{V}, \mathrm{U}$
30. If $Q$ and $P, O$ and $N, M$ and $T$, and $W$ and $R$ interchange their positions then which of the following pairs of friends is sitting at the ends?
a) $P$ and $Q$
b) Q and $R$
c) P and W
d) W and R

## 31. Which one will replace the question mark ?



a) 18
b) 12
c) 9
d) 6
32. Which one will replace the question mark ?

a) 45
b) 41
c) 32
d) 40
33. Which one will replace the question mark ?

| $A_{2}$ | $C_{4}$ | $E_{6}$ |
| :---: | :---: | :---: |
| $G_{3}$ | $I_{5}$ | $?$ |
| $M_{5}$ | $O_{9}$ | $Q_{14}$ |

a) L 10
b) K15
c) 115
d) K8
34. If $A+B$ means $A$ is the mother of $B ; A-B$ means $A$ is the brother $B ; A \% B$ means $A$ is the father of $B$ and $A \times B$ means $A$ is the sister of $B$, which of the following shows that $P$ is the maternal uncle of $Q$ ?
a) $Q-N+M \times P$
b) $P+S \times N-Q$
c) $P-M+N \times Q$
d) $Q-S \% P$
35. One morning after sunrise, Ajay met Deepu at a tiraha/crossroads while going to a shop. Deepu's shadow was on the immediate right of Ajay. If they were facing each other, then which direction was Ajay facing?
a) East
b) West
c) North
d) South

Direction (Q36-38)The bar graph given below shows the sales of books (in thousand numbers) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.

36. What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?
a) $2: 3$
b) $3: 5$
c) $4: 5$
d) $7: 9$
37. Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?
a) $68.54 \%$
b) $71.11 \%$
c) $73.17 \%$
d) $75.55 \%$
38. What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?
a) $75 \%$
b) $77.5 \%$
c) $82.5 \%$
d) $87.5 \%$
39. Chemical composition of cement is $\qquad$ .
a) Limestone and Clay
b) Limestone, Clay and Gypsum
c) Limestone and Gypsum
d) Clay and Gypsum
40. NCERT has notified India's first National Assessment Regulator 'PARAKH' recently. What is the meaning of the second ' $A$ ' in 'PARAKH'?
a) Appraisal
b) Analysis
c) Achievement
d) Assessment
41. In a certain code language, 'BELL' is coded as '111141' and 'HEAR' is coded as '172647'. How will 'MIKE' be coded in that language?
a) 410813
b) 410811
c) 410812
d) 410612
42. Statements: Some actors are singers. All the singers are dancers.

Conclusions: i) Some actors are dancers. ii) No singer is an actor.
a) Only (1) conclusion follows
b) Only (2) conclusion follows
c) Either (1) or (2) follows
d) Neither (1) nor (2) follows
43. Statements: No door is a dog. All the dogs are cats.

Conclusions:

1. No door is cat.
2. No cat is door.
3. Some cats are dogs.
4. All the cats are dogs.
a) Only (2) and (4)
b) Only (1) and (3)
c) Only (3) and (4)
d) Only (3)
5. Choose the correct mirror image of the given figure $(X)$ from amongst the four alternatives.

Question
1
23
4

a) 1
b) 2
c) 3
d) 4
45. Statement: Should India encourage exports, when most things are insufficient for internal use itself? Arguments:
I. Yes. We have to earn foreign exchange to pay for our imports.
II. No. Even selective encouragement would lead to shortages.
a) Only argument I is strong
b) Only argument II is strong
c) Either I or II is strong
d) Both I and II are strong
46. If a person walks at $14 \mathrm{~km} / \mathrm{hr}$ instead of $10 \mathrm{~km} / \mathrm{hr}$, he would have walked 20 km more. The actual distance travelled by him is:
a) 50 km
b) 60 km
c) 70 km
d) 80 km
47. Find the odd man out.
$8,27,64,100,125,216,343$
a) 27
b) 100
c) 125
d) 343
48. Find the odd man out.

396, 462, 572, 427, 671, 264
a) 396
b) 427
c) 671
d) 264
49. A right triangle with sides $3 \mathrm{~cm}, 4 \mathrm{~cm}$ and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is:
a) $12 \pi \mathrm{~cm}^{3}$
b) $15 \pi \mathrm{~cm}^{3}$
c) $16 \pi \mathrm{~cm}^{3}$
d) $20 \pi \mathrm{~cm}^{3}$
50. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:
a) 700
b) 900
c) 1200
d) 1800
51. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was $56 \%$ of the sum of their marks. The marks obtained by them are:
a) 39,30
b) 41,32
c) 42,33
d) 43,34
52. A fruit seller had some apples. He sells $40 \%$ apples and still has 420 apples. Originally, he had:
a) 588 apples
b) 600 apples
c) 672 apples
d) 700 apples
53. If $A=x \%$ of $y$ and $B=y \%$ of $x$, then which of the following is true?
a) $A$ is smaller than $B$.
b) $A$ is greater than $B$
c) Relationship between $A$ and $B$ cannot be determined.
d) None of these
54. In an election between two candidates, one got $55 \%$ of the total valid votes, $\mathbf{2 0 \%}$ of the votes were invalid. If the total number of votes was 7500 , the number of valid votes that the other candidate got, was:
a) 2700
b) 2900
c) 3000
d) 3100
55. A sum of money is to be distributed among $A, B, C, D$ in the proportion of $5: 2: 4: 3$. If $C$ gets Rs. 1000 more than $D$, what is B 's share?
a) Rs. 500
b) Rs. 1000
c) Rs. 1500
d) Rs. 2000
56. The ratio of the number of boys and girls in a college is $7: 8$. If the percentage increase in the number of boys and girls be $20 \%$ and $10 \%$ respectively, what will be the new ratio?
a) $8: 9$
b) $17: 18$
c) $21: 22$
d) Cannot be determined
57. Salaries of Ravi and Sumit are in the ratio $2: 3$. If the salary of each is increased by Rs. 4000 , the new ratio becomes 40 :
57. What is Sumit's salary?
a) Rs. 17,000
b) Rs. 20,000
c) Rs. 25,500
d) Rs. 38,000
58. If $0.75: \mathrm{x}:: 5: 8$, then x is equal to:
a) 1.12
b) 1.2
c) 1.25
d) 1.30
59. Two numbers are in the ratio $3: 5$. If 9 is subtracted from each, the new numbers are in the ratio $12: 23$. The smaller number is:
a) 27
b) 33
c) 49
d) 55
60. The cost price of $\mathbf{2 0}$ articles is the same as the selling price of x articles. If the profit is $25 \%$, then the value of x is:
a) 15
b) 16
c) 18
d) 25
61. What is the capacity of a cylindrical tank?
I. Radius of the base is half of its height which is 28 metres
II. Area of the base is 616 sq. metres and its height is 28 metres.
a) I alone sufficient while II alone not sufficient to answer
b) II alone sufficient while I alone not sufficient to answer
c) Either I or II alone sufficient to answer
d) Both I and II are necessary to answer
62. In a certain store, the profit is $320 \%$ of the cost. If the cost increases by $25 \%$ but the selling price remains constant, approximately what percentage of the selling price is the profit?
a) $30 \%$
b) $70 \%$
c) $100 \%$
d) $210 \%$
63. A shopkeeper sells some articles at a $25 \%$ profit on the original price. What is the exact amount of profit? To find the answer, which of the following information given in Statements I and II is/are necessary?
I. Sale price of the article
II. Number of articles sold
a) Only $I$ is necessary
b) Only II is necessary
c) Either I or II is necessary
d) Both I and II are necessary
64. A shopkeeper sells some toys at Rs. 250 each. What percent profit does he make? To find the answer, which of the following information given in Statements I and II is/are necessary?
Number of toys sold
Cost price of each toy
a) Only $I$ is necessary
b) Only II is necessary
c) Either I or II is necessary
d) Both I and II are necessary
65. By selling an article what is the profit percent gained?
I. a $5 \%$ discount is given on the list price.
II. If a discount is not given, $20 \%$ profit is gained.
III. The cost price of the articles is Rs. 5000 .
a) Only I and II
b) Only II and III
c) Only I and III
d) None of these
66. Mr. Thomas invested an amount of Rs. 13,900 divided in two different schemes $A$ and $B$ at the simple interest rate of $14 \%$ p.a. and $11 \%$ p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508 , what was the amount invested in Scheme B?
a) Rs. 6400
b) Rs. 6500
c) Rs. 7200
d) Rs. 7500
67. Reena took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?
a) 3.6
b) 6
c) 18
d) Cannot be determined
68. A bank offers $5 \%$ compound interest calculated on a half-yearly basis. A customer deposits Rs. 1600 each on 1 st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:
a) Rs. 120
b) Rs. 121
c) Rs. 122
d) Rs. 123
69. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4\% per annum is Re. 1. The sum (in Rs.) is:
a) 625
b) 630
c) 640
d) 650
70. An amount of money was lent for 3 years. What will be the difference between the simple and the compound interest earned on it at the same rate?
I. The rate of interest was 8 p.c.p.a.
II. The total amount of simple interest was Rs. 1200.
a) I alone sufficient while II alone not sufficient to answer
b) II alone sufficient while I alone not sufficient to answer
c) Either I or II alone sufficient to answer
d) Both I and II are necessary to answer
71. What is the principal sum?
I. The sum amounts to Rs. 690 in 3 years at S.I.
II. The sum amounts to Rs. 750 in 5 years at S.I.
III. The rate of interest is $5 \%$ p.a.
a) I and III only
b) I and III only, or II and III only
c) I and II only
d) Any two of the three
72. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?
a) $10 / 21$
b) $11 / 21$
c) $2 / 7$
d) $5 / 7$
73. Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio $1: \mathbf{1 : 2}$. If the mixture is worth Rs. 153 per kg , the price of the third variety per kg will be:
a) Rs. 169.50
b) Rs. 170
c) Rs. 175.50
d) Rs. 180
74. How many times in a day, the hands of a clock are straight?
a) 22
b) 24
c) 44
d) 48
75. A watch which gains uniformly is 2 minutes low at noon on Monday and is $4 \mathbf{~ m i n . ~} \mathbf{4 8} \mathbf{~ s e c}$ fast at $\mathbf{2 p . m}$. on the following Monday. When was it correct?
a) 2 p.m. on Tuesday
b) 2 p.m. on Wednesday
c) 3 p.m. on Thursday
d) 1 p.m. on Friday

## Answer Key

| $1-\mathrm{a}$ | $2-\mathrm{d}$ | $3-\mathrm{b}$ | $4-\mathrm{d}$ | $5-\mathrm{b}$ | $6-\mathrm{a}$ | $7-\mathrm{a}$ | $8-\mathrm{c}$ | $9-\mathrm{b}$ | $10-\mathrm{b}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $11-\mathrm{d}$ | $12-\mathrm{c}$ | $13-\mathrm{c}$ | $14-\mathrm{c}$ | $15-\mathrm{b}$ | $16-\mathrm{a}$ | $17-\mathrm{a}$ | $18-\mathrm{b}$ | $19-\mathrm{d}$ | $20-\mathrm{a}$ |
| $21-\mathrm{c}$ | $22-\mathrm{c}$ | $23-\mathrm{d}$ | $24-\mathrm{b}$ | $25-\mathrm{b}$ | $26-\mathrm{d}$ | $27-\mathrm{b}$ | $28-\mathrm{c}$ | $29-\mathrm{a}$ | $30-\mathrm{c}$ |
| $31-\mathrm{c}$ | $32-\mathrm{a}$ | $33-\mathrm{d}$ | $34-\mathrm{c}$ | $35-\mathrm{d}$ | $36-\mathrm{d}$ | $37-\mathrm{c}$ | $38-\mathrm{d}$ | $39-\mathrm{b}$ | $40-\mathrm{b}$ |
| $41-\mathrm{b}$ | $42-\mathrm{a}$ | $43-\mathrm{d}$ | $44-\mathrm{d}$ | $45-\mathrm{a}$ | $46-\mathrm{a}$ | $47-\mathrm{b}$ | $48-\mathrm{b}$ | $49-\mathrm{a}$ | $50-\mathrm{c}$ |
| $51-\mathrm{c}$ | $52-\mathrm{d}$ | $53-\mathrm{d}$ | $54-\mathrm{a}$ | $55-\mathrm{d}$ | $56-\mathrm{c}$ | $57-\mathrm{d}$ | $58-\mathrm{b}$ | $59-\mathrm{b}$ | $60-\mathrm{b}$ |
| $61-\mathrm{c}$ | $62-\mathrm{b}$ | $63-\mathrm{d}$ | $64-\mathrm{b}$ | $65-\mathrm{a}$ | $66-\mathrm{a}$ | $67-\mathrm{b}$ | $68-\mathrm{b}$ | $69-\mathrm{a}$ | $70-\mathrm{d}$ |
| $71-\mathrm{d}$ | $72-\mathrm{a}$ | $73-\mathrm{c}$ | $74-\mathrm{c}$ | $75-\mathrm{b}$ |  |  |  |  |  |

