

IPM (IIM Rohtak) Solved Paper-2023

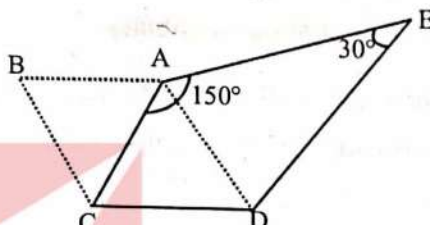
(MEMORY BASED)

Important Instructions to the Candidates:

1. Total Number of Questions 120.
2. There are three sections in this test paper. *Section-I* contains 40 questions from *Quantitative Ability*. *Section II* contains 40 questions from *Logical Reasoning* and *Section III* contains 40 questions from *Verbal Ability*.
4. Each question will carry 4 marks. There will be *negative marking of 1 mark* for each wrong answer. All the questions will be multiple choice questions.
5. There is NO Sectional Time Limit.

Quantitative Ability

1. A divisor is $\frac{2}{3}$ of the dividend and 2 times the remainder. If the remainder is 75, then find the dividend.
 (a) 85 (b) 145
 (c) 225 (d) 65
2. The L.C.M. of two number is 630 and their H.C.F. is 9. If the sum of numbers is 153, their difference is
 (a) 17 (b) 23
 (c) 27 (d) 33
3. In a coconut grove, $(x + 2)$ trees yield 60 nuts per year, x trees yield 120 nuts per year and $(x - 2)$ trees yield 180 nuts per year. If the average yield per year per tree be 100, then x is
 (a) 3 (b) 4
 (c) 5 (d) 6
4. If $x + \frac{1}{x} = 5$, then the value of $x^3 + \frac{1}{x^3}$ is :
 (a) 125 (b) 110
 (c) 45 (d) 75
5. The digit at unit place of a two-digit number is increased by 100% and the digit at ten places of the same number is increased by 50%. The new number thus formed is 19 less than the original number. What is the original number?
 (a) 22 (b) 63
 (c) 24 (d) None of these
6. A shopkeeper marks up his goods to gain 35%. But he allows 10% discount for cash payment. His profit on the cash transaction therefore, in percentage, is
 (a) $13\frac{1}{2}$ (b) 25
 (c) $21\frac{1}{2}$ (d) $31\frac{1}{2}$
7. In an express train, the passengers travelling in A.C. sleeper class, First class and Sleeper class are in the ratio 1:2:7, and rate for each class is in the ratio 5 : 4 : 2. If the total income from this train is ₹ 54, 000, find the income of Indian Railways from A.C. sleeper class.
 (a) ₹ 12,000 (b) ₹ 20,000
 (c) ₹ 22,000 (d) ₹ 10,000
8. The simple interest on a sum of money is $\frac{1}{9}$ of the principal and the number of years is equal to the rate % p.a. The rate % p.a. is
 (a) 3% (b) $3\frac{1}{3}$ %
 (c) 10% (d) $\frac{1}{3}$ %
9. A and B can do a job in 16 days and 12 days respectively. 4 days before finishing the job, A joins B. B has started the work alone. Find how many days B has worked alone?
 (a) 6 days (b) 4 days
 (c) 5 days (d) 7 days
10. A man rows to a place 48 km distant and back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. Find the rate of stream.
 (a) 1 km/h (b) 1.5 km/h
 (c) 2 km/h (d) None of these
11. Instead of walking along two adjacent sides of a rectangular field, a boy took a short cut along the diagonal and saved a distance equal to half the longer side. Then the ratio of the shorter side to the longer side is
 (a) $\frac{1}{2}$ (b) $\frac{2}{3}$
 (c) $\frac{1}{4}$ (d) $\frac{3}{4}$
12. An observer 1.6 m tall is $20\sqrt{3}$ m away from a tower. The angle of elevation from his eye to the top of the tower is 30° . The height of the tower is:
 (a) 21.6 m (b) 23.2 m
 (c) 24.72 m (d) None of these
13. A student is studying for a test from 11 : 00 a.m. to 08 : 00 p.m. on weekdays and one-third of that time on Saturdays. On Sundays he takes a break from school and goes fishing. For what fractional part of the entire week is the student studying ?
 (a) $\frac{2}{5}$ (b) $\frac{3}{7}$ (c) $\frac{2}{7}$ (d) $\frac{3}{8}$

14. There are 6 tasks and 6 persons. Task 1 cannot be assigned either to person 1 or to person 2; task 2 must be assigned to either person 3 or person 4. Every person is to be assigned one task. In how many ways can the assignment be done?
(a) 144 (b) 180 (c) 192 (d) 360
15. In a single throw with four dice, the probability of throwing seven is
(a) $\frac{4}{6^4}$ (b) $\frac{8}{6^4}$
(c) $\frac{16}{6^4}$ (d) $\frac{20}{6^4}$
16. The digit in the unit's place of the number represented by $(7^{95} - 3^{58})$ is:
(a) 0 (b) 4
(c) 6 (d) 7
17. If $3^{x+y} = 81$ and $81^{x-y} = 3$, then what is the value of x ?
(a) $\frac{17}{16}$ (b) $\frac{17}{8}$ (c) $\frac{17}{4}$ (d) $\frac{15}{4}$
18. Nine persons went to a hotel for taking their meals. Eight of them spent ₹ 12 each on their meals and the ninth spend ₹ 8 more than the average expenditure of all the nine. What was the total money spent by them?
(a) ₹ 115 (b) ₹ 117
(c) ₹ 119 (d) ₹ 122
19. If $(x + 1)$ is a factor of $2x^3 - ax^2 - (2a - 3)x + 2$, then the value of 'a' is
(a) 3 (b) 2
(c) $\frac{3}{2}$ (d) $\frac{1}{2}$
20. When the price of sugar was increased by 32%, a family reduced its consumption in such a way that the expenditure on sugar was only 10% more than before. If 30 kg were consumed per month before, find the new monthly consumption.
(a) 20 kg (b) 25 kg
(c) 30 kg (d) None of these
21. A man bought a horse and a carriage for ₹ 3000. He sold the horse at a gain of 20% and the carriage at a loss 10%, thereby gaining 2% on the whole. Find the cost of the horse.
(a) ₹ 1000 (b) ₹ 1200
(c) ₹ 1500 (d) ₹ 1700
22. The monthly income of two persons are in the ratio of 4 : 5 and their monthly expenditures are in the ratio of 7 : 9. If each saves ₹ 50 a month, then what are their monthly incomes?
(a) ₹ 100, ₹ 125 (b) ₹ 200, ₹ 250
(c) ₹ 300, ₹ 375 (d) ₹ 400, ₹ 500
23. Difference between the compound interest and simple interest for 2 years on a sum of money is ₹ 160. If the total simple interest is ₹ 2880. Find rate percent.
(a) 11% (b) 12%
(c) $11\frac{1}{9}\%$ (d) $11\frac{2}{9}\%$
24. 10 men can complete a piece of work in 15 days and 15 women can complete the same work in 12 days. If all the 10 men and 15 women work together, in how many days will the work get completed?
(a) 6 (b) $6\frac{1}{3}$
(c) $6\frac{2}{3}$ (d) $7\frac{2}{3}$
25. A train leaves station X at 5 a.m. and reaches station Y at 9 a.m. Another train leaves station Y at 7 a.m. and reaches station X at 10:30 a.m. At what time do the two trains cross each other?
(a) 7:36 am (b) 7:56 am
(c) 8:36 am (d) 8:56 am
26. In $\triangle ACD$, $AD = AC$ and $\angle C = 2\angle E$. The distance between parallel lines AB and CD is h.

- Then
I. Area of parallelogram ABCD
II. Area of $\triangle ADE$
(a) $I > II$ (b) $I < II$
(c) $I = II$ (d) Nothing can be said
27. If $5 \tan \theta - 4 = 0$, then the value of $\frac{5 \sin \theta - 4 \cos \theta}{5 \sin \theta + 4 \cos \theta} = ?$
(a) $\frac{5}{3}$ (b) $\frac{5}{6}$
(c) 0 (d) $\frac{1}{6}$
28. A watch which gains 5 seconds in 3 minutes was set right at 7 a.m. In the afternoon of the same day, when the watch indicated quarter past 4 O'clock, the true time is -
(a) 4 p.m.
(b) $59\frac{7}{12}$ minutes past 3
(c) $58\frac{7}{11}$ minutes past 3
(d) $2\frac{3}{11}$ minutes past 4
29. A lady gives a dinner party to 5 guests to be selected from nine friends. The number of ways of forming the party of 5, given that two of the friends will not attend the party together is
(a) 56 (b) 126
(c) 91 (d) None

30. The probability that A can solve a problem is $\frac{2}{3}$ and B can solve it is $\frac{3}{4}$. If both attempt the problem, what is the probability that the problem gets solved?
- (a) $\frac{11}{12}$ (b) $\frac{7}{12}$ (c) $\frac{5}{12}$ (d) $\frac{9}{12}$
31. 3 years ago the average age of a family of 5 members was 17 years. With the birth of a new baby, the average age of six members remains the same even today. Find the age of the new baby.
- (a) 1 year (b) 2 years
(c) $1\frac{1}{2}$ years (d) cannot be determined
32. In an election between two candidates, 75% of the voters cast their votes, out of which 2% of the votes were declared invalid. A candidate got 9261 votes which were 75% of total valid votes. Find the total number of votes enrolled in that election.
- (a) 16080 (b) 16800
(c) 18600 (d) 16008
33. A discount of 16% on the marked price of a book enables a man to buy a pen which costs ₹ 80. How much did he pay for the book?
- (a) ₹ 420 (b) ₹ 450
(c) ₹ 480 (d) ₹ 495
34. Zovo got a loan of ₹ 8,000 against his fixed deposits to purchase a scooter. If the rate of interest is 10% p.a. compounded half yearly, find the amount that he pays after one and half year.
- (a) ₹ 9000 (b) ₹ 9261
(c) ₹ 9350 (d) ₹ 9500
35. After working for 8 days, Anil finds that only $\frac{1}{3}$ of the work has been done. He employs Rakesh who is 60% efficient as Anil. How many more days will Anil take to complete the job?
- (a) 15 days (b) 12 days
(c) 10 days (d) 8 days
36. Two pipes can fill a cistern in 14 and 16 hours respectively. The pipes are opened simultaneously and it is found that due to leakage in the bottom, 32 minutes extra are taken for the cistern to be filled up. If the cistern is full, in what time would the leak empty it?
- (a) 110 hr (b) 112 hr
(c) 115 hr (d) 100 hr
37. A train running between two stations A and B arrives at its destination 10 minutes late when its speed is 50 km/h and 50 minutes late when its speed is 30km/h. What is the distance between the stations A and B?
- (a) 40 km (b) 50 km
(c) 60 km (d) 70 km
38. Mary jogs 9 km at a speed of 6 km per hour. At what speed would she need to jog during the next 1.5 hours to have an average of 9 km per hour for the entire jogging session?
- (a) 9 kmph (b) 10 kmph
(c) 12 kmph (d) 14 kmph

39. The ratio of height of a room to its semi-perimeter is 2 : 5. It costs Rs. 260 to paper the walls of the room with paper 50 cm wide at Rs. 2 per metre allowing an area of 15 sq. m for doors and windows. The height of the room is:
- (a) 2.6 m (b) 3.9 m
(c) 4 m (d) 4.2 m
40. A clock is set right at 5 a.m. The clock loses 16 min. in 24 hours. What will be the true time when the clock indicates 10 p.m. on the 4th day?
- (a) 11 p.m. (b) 10 p.m.
(c) 9 p.m. (d) 8 p.m.

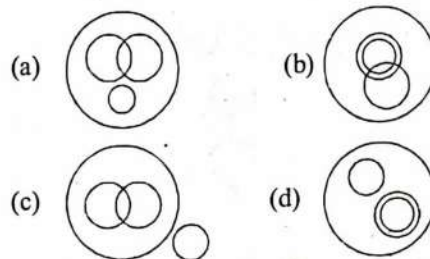
Logical Reasoning

DIRECTIONS (Qs. 41-42) : In each of the following questions, there are two words / set of letters to the left of the sign :: which are connected in some way. The same relationship obtains between the third words / set of letters and one of the four alternatives under it. Find the correct alternative in each question.

41. ACFJ : OUZJ :: SUXB : ?
- (a) GNSA (b) GLQZ
(c) GKPY (d) GMRB
42. Soldier : Regiment :: ?
- (a) Wheels : Bearings (b) Coil : Motor
(c) Book : Printer (d) Nitrogen : Gas
43. If MOBILITY is coded as 46293927, then EXAMINATION is coded as
- (a) 45038401854 (b) 56149512965
(c) 57159413955 (d) 67250623076
44. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother". How is the lady in the photograph related to the man's sister who has no other sister?
- (a) Cousin (b) Sister-in-law
(c) Mother (d) Mother-in-law

DIRECTIONS (Qs. 45 to 46) : Complete the given series.

45. 1, 3, 8, 19, 42, 89, ?
- (a) 108 (b) 184
(c) 167 (d) 97
46. 2 12 36 80 150 ?
- (a) 194 (b) 210
(c) 252 (d) 258
47. In a dinner party both fish and meat were served. Some took only fish and some only meat. There were some vegetarians who did not accept either. The rest accepted both fish and meat. Which of the following logic diagrams correctly reflects this situations ?



Consider the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusion(s) and then decide which of the given conclusion(s) logically follow(s) from the given statements.

48. **Statements:** A. All mirrors are phones.
B. Some phones are gadgets.
C. All gadgets are mirrors.
- Conclusions:** I. Some gadgets are phones.
II. Some gadgets are mirrors.
III. Some gadgets are not mirrors.
IV. Some mirrors are phones.

- (a) Only I, II and IV follow
(b) None follows
(c) Only II and III follow
(d) Either II or IV follow

49. **Statements:** A. All rackets are jackets.
B. No cow is cat.
C. All dogs are cats.
- Conclusions:** I. Some rackets are not cats
II. Some cats are jackets.
III. Some rackets are cats.
IV. No dog is a cow.

- (a) Only II and IV follow
(b) Only either I or III and IV follow
(c) Only III and IV follow
(d) Only I and IV follow

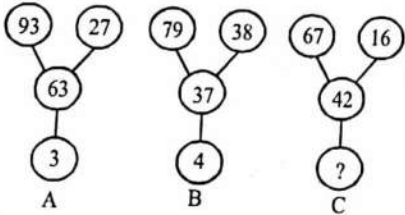
50. **Statements:** A. All stairs are lifts.
B. No lift is an escalator.
C. Some escalators are helicopters.
D. Some lifts are planes.
- Conclusions:** I. No stairs is an escalator.
II. Some helicopters are not escalators.
III. Some stairs are planes.
IV. Some helicopters are escalators.

- (a) Only I and IV follow
(b) Only I and either II or IV follow
(c) Either II or IV follows
(d) Only I, III or IV follow

51. A bigger cube of 3 inch side is formed by keeping together smaller cubes of 1 inch side. All the faces of this bigger cube is painted red. When the bigger cube is divided into original smaller cubes, then how many smaller cubes have two faces painted?

- (a) 12 (b) 0
(c) 8 (d) 4

52. Find the missing character in each of the following questions.



- (a) 5 (b) 6
(c) 8 (d) 9

DIRECTIONS (Qs. 53-54): In these questions, relationship between different elements is shown in the statements. These statements are followed by three conclusions. You have to find which of the given conclusions follows from the given statements.

53. **Statements :** $M < T, T \leq K, K = D$
Conclusions : I. $D \geq T$
II. $K > M$
III. $D > M$

- (a) Only I and II are true
(b) Only I and III are true
(c) Only II and III are true
(d) All are true

54. **Statements :** $B > H, H \geq A, A = K$
Conclusion : I. $B \geq K$
II. $K \leq H$
III. $A < B$

- (a) Only I and II are true
(b) Only I and III are true
(c) Only II and III are true
(d) Only II is true

DIRECTIONS (Qs. 55-56) : In the questions below two statements are given followed by two conclusions I & II. Take the statement to be true and then decide which of the conclusions logically follows. Mark your answer as

- (a) if the conclusion I follows,
(b) if the conclusion II follows,
(c) if either conclusion I or II is implicit,
(d) if neither conclusion I nor II follows.

55. **Statements :** Just about everyone in Germany has been on a diet at one time or the other and millions of them have learned that the weight they lose is all too easily regained. Still despite their frustration, few question the wisdom of dieting.

- Conclusions :** I. Germany should stop dieting.
II. Germans do not learn from experience.

56. **Statements :** A study of planning commission reveals boom in revenues. However, this has been of little avail owing to soaring expenditure. In the event, there has been a high dose of deficit financing, leading to marked rise in prices.

- Conclusions :** I. A boom in revenues leads to soar in prices.
II. Large financial outlays should be avoided.

57. A is three times as old as B. C was twice as old as A four years ago. In four years' time, A will be 31. What is the present age of B and C?

- (a) 9, 46 (b) 9, 50
(c) 10, 46 (d) 10, 50

DIRECTIONS (Qs. 58-59) : Read the following information carefully and answer the questions given below :

Six persons A, B, C, D, E and F took up a job with a firm in a week from Monday to Saturday. Each of them joined for different posts on different days. The posts were of — Clerk, Officer, Technician, Manager, supervisor, and Sales Executive, though not respectively. F joined as a Manager on the first day. B joined as a Supervisor but neither on Wednesday nor on Friday. D joined as a Technician on Thursday. Officer joined the firm on Wednesday. E joined as a Clerk on Tuesday. A joined as a Sales Executive.

58. Who joined the firm on Wednesday?
 (a) B (b) C
 (c) B or C (d) Data inadequate
59. Who was the last person to join the firm?
 (a) E (b) F
 (c) A (d) B

DIRECTIONS (Qs. 60-61) : Each of the following questions consists of two statements — one labelled as the Assertion (A) and other as Reason (R). You are to examine these two statements carefully and select the answer :

- (a) Both A and R are true and R is the correct explanation of A.
 (b) Both A and R are true but R is not the correct explanation of A.
 (c) A is true but R is false.
 (d) A is false but R is true.
60. **Assertion (A) :** Leakages in household gas cylinders can be detected.
Reason (R) : LPG has a strong smell.
61. **Assertion (A) :** Cut fruits and vegetables should not be kept in open for long.
Reason (R) : Their vitamin content is ruined.

DIRECTION (Qs. 62) : Read the information given below to answer the question that follows :

Roma and Mohan are a married couple having two daughters named Smita and Devika. Devika is married to Aman who is the son of Madhu and Jeewan. Romila is the daughter of Aman. Krishna who is Aman's sister is married to Sunil and has two sons Anuj and Ankur. Ankur is the grandson of Madhu and Jeewan.

62. How is Krishna related to Devika ?
 (a) Sister-in-law (b) Sister
 (c) Aunt (d) None of these
63. In a family, a couple has a son and a daughter. The age of the father is three times that of his daughter and the age of the son is half of his mother. The wife is 9 years younger to her husband and the brother is seven years older than his sister. What is the age of the mother?
 (a) 40 years (b) 45 years
 (c) 50 years (d) 60 years

DIRECTIONS (Qs. 64-65) : Each of these has a statement followed by two assumptions. Mark answer as:

- (a) if only assumption I is implicit;
 (b) if only assumption II is implicit;

- (c) if either I or II is implicit;
 (d) if neither I nor II is implicit.

64. **Statement :** All the employees are notified that the organization will provide transport facilities at half cost from the nearby railway station to the office except those who have been provided with travelling allowance.

- Assumptions :** I. Most of the employees will travel by the office transport.
 II. Those who are provided with travelling allowance will not read such notice.

65. **Statement :** Retired persons should not be appointed for executive posts in other organizations.

- Assumptions :** I. Retired persons may lack the zeal and commitment to carry out executive's work.
 II. Retired persons do not take interest in the work and welfare of the new organizations.

66. If 'cinto baoli tsi nzro' means 'her village is Sarurpur'; 'mhi cinto keepi tsi oind' means 'her first love is literature' and 'oind geit tsi cinto pki' means 'literature collection is her hobby', which word means 'literature'?

- (a) cinto (b) baoli
 (c) oind (d) geit

67. If A + B means A is brother of B;

A - B means A is sister of B;

A × B means A is wife of B and

A ÷ B means A is father of B then which of the following indicates 'S is son of P'?

- (a) $P \times Q + R + S - T$ (b) $P \times Q + S - R + T$
 (c) $P \times Q + R - T + S$ (d) $P \times Q + R - S + T$

DIRECTIONS (Qs. 68-69) : Each of these has a question followed by two arguments numbered I and II. Decide which of the arguments is 'strong' and which is 'weak'. Mark answer as

- (a) if only argument II is strong.
 (b) if only argument I is strong.
 (c) if either argument I or II is strong.
 (d) if neither argument I nor II is strong.

68. **Statement :** Should all the professional colleges in India be encouraged to run their own courses without affiliation to any university?

- Arguments :** I. Yes, this is the only way to create more opportunities for those who seek professional training.
 II. No, this will dilute the quality of professional training as all such colleges may not be equipped to conduct such courses.

69. **Statement :** Should all those who have come in contact with the patients of infectious respiratory disease be quarantined in their houses?

Arguments : I. No, nobody should be quarantined unless they are tested and found to be infected by the virus causing the disease.

II. Yes, this is the only way to control the spread of the dreaded disease.

70. If EARTHQUAKE is coded as MOGPENJOSM, then EQUATE will be coded as :

- (a) MENOPM (b) MENOMP
(c) MJOGPM (d) MNJOPM

71. At what time between 6 to 7 O' clock minute and hour hand will coincide?

- (a) $6 : 38 \frac{2}{11}$ (b) $6 : 43 \frac{7}{11}$
(c) $6 : 32 \frac{8}{11}$ (d) $6 : 5 \frac{5}{11}$

DIRECTION : In the question below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question and then mark the appropriate option as answer.

72. Six friends P, T, S, R, U and Q are sitting around a circular table facing the centre. What is the position of S with respect to P?

- I. P is between R and T.
II. R sits second to the left of Q.
III. U does not sit on the immediate right of R.

- (a) Only I and II (b) Only II and III
(c) Only III (d) All I, II and III together

DIRECTIONS (Qs. 73-76): Study the following information carefully and answer the given questions.

Eight people - E, F, G, H, J, K, L and M are sitting around a circular table facing the centre. Each of them is of different profession-Chartered Accountant, Columnist, Doctor, Engineer, Financial Analyst, Lawyer, Professor and Scientist but not necessarily in the same order. F is sitting second to the left of K. The Scientist is an immediate neighbour of K. There are only three people between the Scientist and E. Only one person sits between the Engineer and E. The Columnist is to the immediate right of the Engineer. M is second to the right of K. H is the Scientist. G and J are immediate neighbours of each other. Neither G nor J is an Engineer. The Financial Analyst is to the immediate left of F. The Lawyer is second to the right of the Columnist. The Professor is an immediate neighbour of the Engineer. G is second to the right of the Chartered Accountant.

73. Who is sitting second to the right of E?
(a) The Lawyer (b) G
(c) The Engineer (d) F
74. Who amongst the following is the Professor?
(a) F (b) L
(c) M (d) K
75. Four of the following five are alike in a certain way based on the given arrangement and hence form a group. Which of the following does not belong to that group?

- (a) Chartered Accountant - H
(b) M - Doctor
(c) J - Engineer
(d) Financial Analyst - L

76. What is the position of L with respect to the Scientist?
(a) Third to the left (b) Second to the right
(c) Second to the left (d) Third to the right
77. Mrs. Susheela celebrated her wedding anniversary on Tuesday, 30th September 1997. When will she celebrate her next wedding anniversary on the same day?
(a) 30 September 2003
(b) 30 September 2004
(c) 30 September 2002
(d) 30 October 2003

DIRECTIONS (Qs. 78-80): Study the following information and answer the questions that follow:-

Twelve people Abhishek, Binit, Chand, Dhiraj, Eshita, Fatima, Garima, Hena, Ishan, Jatin, Kamal and Lalit are sitting around a rectangular table. The following information is known-

The table has 12 chairs numbered from 1 to 12. 6 seats on one side of the table and 6 on the opposite side. The chairs are arranged in such a way that chair number 1 is just opposite to 12, 6 is opposite to 7 and so on-

Abhishek is sitting opposite to Kamal who is the only person sitting between Chand and Jatin. Eshita is sitting opposite to Ishan who is the only person sitting between Binit and Lalit. Fatima, sitting at chair number 1, is diagonally opposite to Chand who is sitting opposite to Dhiraj.

78. If Garima is sitting opposite to Fatima then who is sitting opposite to Hena?
(a) Lalit (b) Binit
(c) Ishan (d) Can't be determined.
79. If Lalit is sitting opposite to Hena, then who is sitting opposite to Garima?
(a) Eshita or Fatima (b) Jatin or Fatima
(c) Jatin or Eshita (d) None of these
80. How many persons are sitting between Binit and Dhiraj, if they are on the same side of the table?
(a) 2 or 3 (b) 1 or 2
(c) 1 or 3 (d) None of these

Verbal Ability

DIRECTIONS (Qs. 81-85) : Read the following passage and answer the following questions based on the knowledge gathered from the passage:

The solar system is a fascinating collection of celestial bodies that orbit around the Sun. It includes the Sun itself, eight planets, their moons, asteroids, comets, and other smaller objects. The Sun, a blazing ball of hydrogen and helium, is at the center of the solar system and provides light and heat to all the planets. **The Inner Planets:** The four inner planets-Mercury, Venus, Earth, and Mars-are known as terrestrial planets. They are primarily composed of rock and metal and have solid, rocky surfaces. Mercury, the closest planet to the Sun, has extreme temperature variations due to its lack of atmosphere. Venus, often called Earth's "sister planet," has a thick atmosphere that

traps heat, making it the hottest planet. Earth is unique with its abundant water and life-supporting atmosphere. Mars, the "red planet," is known for its rusty surface and polar ice caps.

The Outer Planets: The outer planets-Jupiter, Saturn, Uranus, and Neptune-are called gas giants. They are primarily composed of gases like hydrogen and helium and lack solid surfaces. Jupiter, the largest planet, has a famous Great Red Spot, which is a massive storm. Saturn is known for its spectacular ring system, made up of ice particles. Uranus and Neptune are often referred to as the "ice giants" due to their icy mantles.

Moons, Asteroids, and Comets: Many of the planets have moons, which are natural satellites that orbit around them. Earth has one moon, while Jupiter has a whopping 79 known moons. In addition to moons, there are asteroids, rocky fragments that orbit the Sun, mostly found in the asteroid belt between Mars and Jupiter. Comets, cosmic snowballs of dust and ice, have highly elliptical orbits and often develop tails when they approach the Sun.

81. Which planet is referred to as the "sister planet" of Earth?
 - (a) Mars
 - (b) Venus
 - (c) Neptune
 - (d) Jupiter
82. Which planet has a famous Great Red Spot?
 - (a) Saturn
 - (b) Uranus
 - (c) Neptune
 - (d) Jupiter
83. What are the four inner planets primarily composed of?
 - (a) Gases
 - (b) Water
 - (c) Rock and metal
 - (d) Ice
84. What are comets made of, and why do they develop tails?
 - (a) Rock and metal; due to their fast rotation
 - (b) Gases; due to volcanic activity
 - (c) Dust and ice; they develop tails when approaching the Sun
 - (d) Hydrogen and helium; due to solar radiation
85. How is Earth different from the gas giants in the solar system?
 - (a) Earth has a rocky surface, while gas giants lack solid surfaces.
 - (b) Earth is the largest planet, while gas giants are smaller.
 - (c) Earth has a thick atmosphere, while gas giants have no atmosphere.
 - (d) Earth is composed mainly of gases, while gas giants are rocky.

DIRECTIONS (Qs. 86-90) : Read the following passage and answer the following questions based on the knowledge gathered from the passage:

The concept of universal basic income (UBI) has gained significant attention in recent years as a potential solution to various socioeconomic challenges. UBI is a system in which all citizens or residents of a country receive a regular, unconditional amount of money from the government. Proponents argue that UBI could address issues such as poverty, unemployment, and income inequality, while also adapting to the changing nature of work in an increasingly automated world. Supporters of UBI emphasize its potential to alleviate poverty. By providing a basic income floor, individuals and families would have a financial safety net, reducing the risk of extreme poverty. This could also streamline and replace complex welfare systems, leading to cost savings and greater efficiency.

Another key argument for UBI is its relevance in the face of automation and technological advancements. As machines and algorithms replace certain jobs, concerns about unemployment rise. UBI could provide a buffer during economic transitions, giving individuals the means to meet their basic needs as they adapt to new employment opportunities or engage in retraining. However, critics raise several valid concerns about UBI. One major challenge is the potential for disincentivizing work. If individuals receive a basic income without the requirement to work, there is a fear that some might choose not to seek employment, leading to a decrease in overall productivity. Moreover, financing UBI on a national scale is a significant hurdle, as it requires substantial funding that could strain government budgets.

In essence, the UBI debate hinges on its potential to balance economic security and individual motivation. As the world continues to grapple with issues of economic disparity and the impact of automation, the idea of a universal basic income sparks both hope and scepticism.

86. What is universal basic income (UBI)?
 - (a) A government program that provides free education to all citizens.
 - (b) A regular allowance provided to senior citizens.
 - (c) A system where all citizens receive unconditional money from the government.
 - (d) A tax reduction scheme for low-income individuals.
87. How could UBI address the challenges of poverty?
 - (a) By automating welfare systems.
 - (b) By offering employment opportunities.
 - (c) By providing financial assistance during economic transitions.
 - (d) By offering cost-saving solutions to the government.
88. What role could UBI play in the context of automation and technological advancements?
 - (a) UBI could prevent all job losses caused by automation.
 - (b) UBI could encourage individuals to work longer hours.
 - (c) UBI could provide financial support during employment transitions due to automation.
 - (d) UBI could lead to a decrease in overall productivity.
89. What concern do critics of UBI often raise?
 - (a) UBI might result in a decrease in overall productivity.
 - (b) UBI could lead to higher taxes for citizens.
 - (c) UBI might discourage individuals from seeking employment.
 - (d) UBI could replace complex welfare systems.
90. What is a major challenge in implementing UBI on a national scale?
 - (a) Straining government budgets to fund UBI.
 - (b) Convincing citizens to accept UBI.
 - (c) Ensuring equal distribution of UBI funds.
 - (d) Addressing technological advancements.
91. Choose the correct word/ phrase to fill in the blank:
She was so tired that she quickly _____ as soon as her head hit the pillow.
 - (a) fell apart
 - (b) took off
 - (c) nodded off
 - (d) turned in

92. Choose the correct word/ phrase to fill in the blank:
The scientists aim to _____ a solution to the environmental crisis.
(a) figure out (b) put up with
(c) run into (d) look after
93. Choose the correct word/ phrase to fill in the blank:
The teacher asked the students to _____ on the main points of the reading.
(a) break into (b) think over
(c) bring out (d) focus on
94. Choose the synonym of "Ubiquitous":
(a) Scarce (b) Rare
(c) Widespread (d) Hidden
95. Pick the synonym of "Pernicious":
(a) Harmless (b) Beneficial
(c) Destructive (d) Kind
96. Choose the correct antonym of Insolent:
(a) Submissive (b) Arrogant
(c) Overbearing (d) Disdainful
97. Choose the correct antonym of Tardy:
(a) Gradual (b) Prompt
(c) Reluctant (d) Quick
98. Choose the correct idiom to fill in the blank:
The new employee seems friendly on the surface, but I think she might have a _____.
(a) green thumb (b) heart of gold
(c) chip on her shoulder (d) bee in her bonnet
99. Choose the correct idiom to fill in the blank:
He's always so optimistic and sees the silver lining in every situation. He definitely has a knack for finding the _____.
(a) pot of gold
(b) light at the end of the tunnel
(c) fly in the ointment
(d) chip on his shoulder
100. Choose the correct one word which contains the meaning of the given phrase:
Words written on the tomb of a person
(a) manuscript (b) inscription
(c) Epitaph (d) Engrave
101. Ram speaks less in the forum. Ram is
(a) unintelligible (b) reticent
(c) garrulous (d) banal
102. Which of the following four sentences is grammatically correct?
(a) Today we love, what tomorrow we hate; today we seek, what tomorrow we shun, today we desire, what tomorrow we fear.
(b) Today, we love what tomorrow we hate, today, we seek what tomorrow we shun, today, we desire what tomorrow we fear.
(c) Today we love what tomorrow we hate, today we seek what tomorrow we shun, today we desire what tomorrow we fear.
(d) Today we love what tomorrow we hate; today we seek what tomorrow we shun; today we desire what tomorrow we fear.
103. Which of the following four sentences is grammatically correct?
Although she was highly talented in singing, she didn't believe in herself.
(a) Despite her high talent in singing, she didn't believe in herself.
(b) Despite her high talent for singing, she didn't believe in herself.
(c) Although she was highly talented in singing, but she didn't believe in herself.
(d) She didn't believe in herself even though she was highly talented in singing.
104. Which of the following four sentences is grammatically correct?
The speech by the renowned scientist was both enlightening and held the audience's attention.
(a) The speech by the renowned scientist not only held the audience's attention but was also enlightening.
(b) The renowned scientist's speech was not only enlightening but also held the audience's attention.
(c) The renowned scientist's speech was enlightening and held the audience's attention as well.
(d) The renowned scientist's speech was both enlightening and it held the audience's attention.
105. Arrange the following sentences to form a coherent paragraph.
A. It was a picturesque village.
B. Nestled amidst lush green hills.
C. The river flowed gently through it.
D. People greeted each other warmly.
E. The sun was setting, casting a warm glow.
Which is the correct order?
(a) B, C, E, D, A (b) A, B, C, D, E
(c) E, B, A, C, D (d) C, A, D, B, E
106. Rearrange the following sentences to create a logical sequence.
A. The chef meticulously prepared each dish.
B. Guests marvelled at the exquisite flavours.
C. The restaurant was dimly lit, creating an intimate atmosphere.
D. The aroma of spices filled the air.
E. Diners savoured the culinary delights.
What is the correct order?
(a) D, C, A, B, E (b) A, C, D, E, B
(c) E, B, C, D, A (d) C, D, A, B, E
107. Arrange the following sentences into a coherent paragraph.
A. The company's financial woes were further exacerbated(d)
B. It had already faced declining profits.
C. When the stock market crashed unexpectedly.
D. Layoffs became inevitable.
E. Employees felt the impending crisis.
What is the correct order?
(a) B, C, E, A, D (b) C, B, A, E, D
(c) E, A, C, B, D (d) B, C, A, D, E
108. In each of the following questions, select the related word from the given alternatives:
Smoke: Pollution:: War: ?
(a) Victory (b) Peace
(c) Treaty (d) Destruction

109. In each of the following questions, select the related word from the given alternatives:
Genuine: Authentic:: Mirage : ?
(a) Illusion (b) Image
(c) Reflection (d) Hideout
110. Choose the correctly spelt word, from the following options:
(a) Necessary (b) Borad
(c) Possession (d) Asemble
111. Choose the incorrectly spelt word, from the following options:
(a) Investment (b) Terain
(c) Futile (d) Docile
112. The sentences below have words that are missing. Choose the best option from those below to complete the sentence.
Governments frame laws and regulations to steer business _____ in what they _____ to be beneficial directions.
(a) Ethics; believe (b) Meetings; agree
(c) Behaviour; perceive (d) People; consider
113. The sentences below have words that are missing. Choose the best option from those below to complete the sentence.
For silent movies to succeed, the quality of acting has to be _____ as there are no _____ dialogues or music for support.
(a) Mediocre...engaging
(b) Sublime...intimate
(c) Realistic...melodramatic
(d) Extraordinary...mesmerizing
114. The sentences below have words that are missing. Choose the best option from those below to complete the sentence.
Our job as teachers is to _____ the thirst for knowledge and _____ the spark of enthusiasm.
(a) quench...Ignite (b) substantiate...quell
(c) sensitize...douse (d) sustain...mitigate
115. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'
We all remember tales of how (A) / our grandparents' generation crossed rivers, walked long distances (B) / and braved unsafe paths to reach schools. Sadly, a disconcertingly large numbers of children of this generation (C) / also faces the same grim reality. (D) / No error (E)
(a) A (b) B
(c) C (d) D
116. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'
I asked the salesman (A) / if I could exchange (B) / the faulty camera (C) / with another one. (D) / No error (E)
(a) A (b) B
(c) C (d) D
117. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'
I would always (A) / cherished the fond (B) / memories of (C) / our association. (D) / No error (E)
(a) A (b) B
(c) C (d) D
118. Rearrange the sentences to create a logical and well-structured paragraph.
A. The company announced a competition for its employees.
B. Many employees worked hard to come up with innovative ideas.
C. The management reviewed all the submissions and selected the winner.
D. The winner was rewarded with a week-long, all-expenses-paid trip.
E. This initiative boosted employee morale and encouraged teamwork.
(a) AEDBC (b) CBAED
(c) ECDBA (d) BEDAC
119. Rearrange the following sentences to form a coherent paragraph.
A. He decided to take a vacation.
B. The beach resort was crowded with tourists.
C. After months of hard work, John felt burnt out.
D. In need of a break, he browsed the internet for travel destinations.
E. Eventually, he booked a cosy cottage by the sea (a)
(a) EDCAB (b) BCDAE
(c) ADEBC (d) CBEDA
120. Put the following sentences in the correct sequence to form a coherent paragraph.
A. The book captured my imagination with its vivid descriptions.
B. I decided to read it after a friend's recommendation.
C. The bookstore had a special discount on bestsellers.
D. As I turned the pages, I was transported to a different world (d)
E. I was pleasantly surprised by how much I enjoyed it.
(a) BECAD (b) ECBDA
(c) ACBDE (d) DCBAE