

Course Title: ANALYTICAL SKILLS-I

Time Allowed: 02:00hrs.

Max Marks: 80

Read the following instructions carefully before attempting the question paper.

1. Match the Paper Code shaded on the OMR Sheet with the Paper code mentioned on the question paper and ensure that both are the same.
2. This question paper contains 80 questions of 1 mark each. 0.25 marks will be deducted for each wrong answer.
3. Attempt all the questions in serial order.
4. Do not write or mark anything on the question paper and/or on rough sheet(s) which could be helpful to any student in copying, except your registration number on the designated space.
5. Submit the question paper and the rough sheet(s) along with the OMR sheet to the invigilator before leaving the examination hall.
6. Use of calculator/log table is not allowed.

Q(1) Chance that Sheela tells truth is 40% and for Ramesh is 75%. In what percent they likely to contradict each other in the same situation?

- (a) 35 % (b) 40 % (c) 45 % (d) 80 %

.L3

Q(2) The total number of squares of all dimension on a chessboard is

- (a) 64 (b) 160 (c) 204 (d) 224

.L2

Q(3) Lionel Messi and his wife appear in an interview for two vacancies in the same post. The probability of Messi's selection is $(1/7)$ and the probability of wife's selection is $(1/5)$. What is the probability that both of them are selected?

- (a) 2 (b) 1 (c) $1/35$ (d) None

.L5

Q(4) In how many ways shyam can choose a vowel and a consonant from the letters of the word ALLAHABAD?

- (a) 5 (b) 9 (c) 7 (d) 4

.L4

Q(5) All the letter of word 'LPU' are arranged in all possible ways, what is the rank of the word 'LPU' as per dictionary order(alphabetical order)?

- (a) 2 (b) 3 (c) 1 (d) None

.L5

Q(6) In how many ways can the letters of the word "ÉQUÁTOR" be arranged so that all vowels come together?

- (a) $7!/4!$ (b) 7! (c) $7!-4!3!$ (d) $4!4!$

.L4

Q(7) When 4 fair coins are tossed together what is the probability of getting at least 3 heads?

- (a) $1/4$ (b) $3/4$ (c) $5/16$ (d) $3/8$

.L5

Q(8) When 4 fair coins are tossed together what is the probability of getting at least 3 heads?

- (a) $3/8$ (b) $5/16$ (c) $1/4$ (d) $3/4$

.L4

Q(9) One evening before sunset Rekha and Hema were talking to each other face to face. If Hema's shadow was exactly to the right of Hema, which direction was Rekha facing?

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

.L5

Q(10) From her home, Prema wishes to go to school. From home, she goes towards North and then turns left and then turns right, and finally she turns left and reaches school. In which direction her school is situated with respect to her home?

- (a) North - east (b) North - west (c) South - east (d) South - west

.L2

Q(11) Suman is 40 metres South-West of Ashok. Prakash is 40 meters South-East of Ashok. Prakash is in which direction of Suman?

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

.L2

Q(12) Mohan travels 7 km to the north direction from where he is standing and turns to his right. He then walk straight for another 3 km. Turning to his right he moves 7 km. How many km away from starting point is he?

- (a) 4 (b) 3 (c) 5 (d) 2

.L5

Q(13) Veena who is the sister-in-law of Ashok, is the daughter-in-law of Kalyani. Dheeraj is the father of Sudeep who is the only brother of Ashok. How Kalyani is related to Ashok?

- (a) Mother-in-law (b) Aunt (c) Wife (d) None of these

.L5

Q(14) A started from his house towards North. After covering a distance of 8 km. he turned towards left and covered a distance of 6 km. What is the shortest distance now from his house?

- (a) 10 km (b) 18 km (c) 14 km (d) 2 km

.L5

Q(15) Golu started from his house towards North. After covering a distance of 8 km. he turned towards left and covered a distance of 6 km. What is the shortest distance now from his house?

- (a) 10 km (b) 11 km (c) 12 km (d) 13 km

.L5

Q(16) Divyansh said to Nimish, "The boy playing with the football is the younger of the two brothers of the daughter of my father's wife." How is the boy playing football related to Divyansh?

- (a) Cousin (b) Brother (c) Son (d) Brother-in-law

.L2

Q(17) There are 5 friends in a party all of them handshakes with each other. How many handshakes they did

- (a) 60 (b) 30 (c) 10 (d) 50

.L5

Registration No.:

- Q(18) One card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is a face card (Jack, Queen and King only)?
 (a) $1/13$ (b) $3/13$ (c) $1/4$ (d) $9/52$.L3
- Q(19) In how many ways can a group of 4 men and 2 women be made out of a total of 7 men and 4 women?
 (a) 210 (b) 98 (c) 650 (d) 57 .L5
- Q(20) Ravi has a bag full of 10 nestle and 5 Cadbury chocolates. Out of these he draws two chocolates. What is the probability that he would get at least one nestle chocolate.
 (a) $19/21$ (b) $3/7$ (c) $2/21$ (d) $1/3$.L4
- Q(21) How many 7 digit numbers can be formed using the digits 1, 2, 0, 2, 4, 2, 4?
 (a) 360 (b) 120 (c) 400 (d) 480 .L5
- Q(22) Determine the probability that a digit chosen at random from the digits 1, 2, 3, ... 19 will be even ?
 (a) $9/19$ (b) 2 (c) 1 (d) None .L5
- Q(23) One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?
 (a) north (b) South (c) east (d) west .L5
- Q(24) Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?
 (a) Brother (b) Mother (c) Father (d) Son .L5
- Q(25) In a certain coded language, 'hit ka tom' is written as 'tie the shoes', 'ka lo fod' is written as 'shoes of leather' and 'lo tin lot' is written as 'leather and raxin'. How is 'LEATHER' written in this code language?
 (a) fod (b) ka (c) lo (d) tin .L5
- Q(26) What will be the next term in : BDF, CFI, DHL, ____
 (a) CJM (b) EIM (c) EJO (d) EMI .L4
- Q(27) The present ages of three persons are in proportions 4:7: 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years).
 (a) 16,28,36 (b) 2,8,9 (c) 33,5,6 (d) None .L5
- Q(28) The number of oranges in three baskets are in the ratio of 3 : 4 : 5. In which ratio the no. of oranges in first two baskets must be increased so that the new ratio becomes 5 : 4 : 3?
 (a) 2:1 (b) 5:1 (c) 3:1 (d) 6:1 .L5
- Q(29) In what ratio must a grocer mix two varieties of pulses costing Rs.15 and Rs. 20 per kg respectively so as to get a mixture worth Rs. 16.50 per kg ?
 (a) 3 : 7 (b) 5 : 7 (c) 7 : 3 (d) 7 : 5 .L5
- Q(30) The sum of ages of 4 children born at the intervals of 3 years each is 26 years. What is the age of the youngest child?
 (a) 2 (b) 11 (c) 34 (d) 56 CO4,L5
- Q(31) A vessel is filled with liquid, 3 parts of which are water and 5 parts syrup. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half syrup ?
 (a) $\frac{1}{3}$ (b) $\frac{1}{4}$ (c) $\frac{1}{5}$ (d) $\frac{1}{7}$.L5
- Q(32) The salaries A, B, C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries?
 (a) 3:3:10 (b) 10:11: 20 (c) 23:33:60 (d) Cannot be determined CO4,L4
- Q(33) P is six times as large as Q. The per cent that Q is less than P is
 (a) 83.33% (b) 16.66% (c) 90% (d) 60% .L5
- Q(34) A student scored 30 % in an examination and still failed by 40 marks while another candidate scored 50% marks and get 20 marks more than the passing marks. Then find the passing marks
 (a) 150 (b) 230 (c) 130 (d) 170 .L1
- Q(35) Find Simple interest on Principal Rs 2000 at 8% per annum for 3 years
 (a) 490 (b) 480 (c) 230 (d) None .L5
- Q(36) The SI and CI on a sum for two years at a fixed rate are Rs 900 & Rs 954 respectively. Then the sum will be
 (a) Rs 3700 (b) Rs 4650 (c) Rs 3850 (d) Rs 3750 .L5
- Q(37) The sum of n terms of an A.P. is $3n^2 + n$, find the nth term.
 (a) $6n - 4$ (b) $4n - 4$ (c) $6n - 2$ (d) $4n - 2$.L5
- Q(38) If the letters in the word PASTE are rearranged in the alphabetical order, which one will be in the middle in order after the rearrangement?
 (a) S (b) P (c) T (d) None .L2

Registration No.:

- Q(39) Find the sum of $1 + \frac{1}{3} + \frac{1}{9} + \frac{1}{27} + \frac{1}{81} + \dots$ upto infinity.
 (a) $\frac{4}{3}$ (b) $\frac{1}{4}$ (c) $\frac{2}{3}$ (d) $\frac{3}{2}$,L4
- Q(40) If it is possible to make a meaningful word from the third, fifth, sixth, eighth and tenth letters of the word PAROCHIALISM using each letter only once, third letter of the word would be your answer. If more than one such word can be formed, your answer would be 'y' and if no such word can be formed, answer is 'G'.
 (a) Y (b) G (c) C (d) X ,L4
- Q(41) Find the ratio in which rice at Rs. 7.20 a kg be mixed with rice at Rs. 5.70 a kg to Produce a mixture worth Rs. 6.30 a kg.
 (a) 1 : 3 (b) 2 : 3 (c) 3 : 4 (d) 4 : 5 ,L4
- Q(42) If $a:b = 4:1$, then find $(a - 3b) / (2a - b)$?
 a) $\frac{1}{7}$ b) $\frac{2}{7}$ c) $\frac{3}{7}$ d) $\frac{5}{7}$ CO4,L2
- Q(43) In an alloy ratio of Cu and Zn is 4:3. when 5 kg Zn is mixed into that alloy then the ratio of Cu and Zn becomes 6:5. Find the initial amount of Cu.
 (a) 15 (b) 45 (c) 60 (d) 80 ,L5
- Q(44) 64 boys and 40 girls form a group for social work. During their membership drive, the same number of boys and girls joined the group. How many members does the group have now, if the ratio of boys to girls is 4:3?
 a) 100 b) 150 c) 168 d) 170 ,L5
- Q(45) Two Container X and Y contain spirit and water in the ratio 5: 2 and 7: 6 respectively. Find the ratio in which these mixtures be mixed to obtain a new mixture in vessel Z containing spirit and water in the ratio 8: 5?
 (a) 5:6 (b) 6:5 (c) 7:9 (d) 9:7 ,L5
- Q(46) A sum of Rs.312 was divided among 100 boys and girls in such a way that the boy gets Rs.3.60 and each girl Rs. 2.40 the number of girls is
 (a) 40 (b) 41 (c) 42 (d) 43 ,L5
- Q(47) A jar full of whisky contains 40% alcohol. A part of this whisky is replaced by another containing 19% alcohol and now the percentage of alcohol was found to be 26%. The quantity of whisky replaced is :
 (a) $\frac{1}{3}$ (b) $\frac{2}{3}$ (c) $\frac{2}{5}$ (d) $\frac{2}{5}$ CO4,L5
- Q(48) Three numbers are in ratio 2 : 3 : 5. If the sum of the squares of those three numbers is 342 then find the sum of the three numbers.
 (a) 30 (b) 40 (c) 60 (d) 50 ,L4
- Q(49) The average weight of 10 person's increased by 3.7 kg when a new person comes in group whose weight is 71 kg. What was the average of the group in starting?
 (a) 42.3 (b) 41.3 (c) 32.3 (d) 30.3 ,L5
- Q(50) If 70% of $\frac{5}{7}$ th of a number is 90, find the number.
 (a) 180 (b) 190 (c) 200 (d) 205 ,L4
- Q(51) Three number are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:
 (a) 40 (b) 43 (c) 44 (d) 42 ,L4
- Q(52) What is the remainder when 3^{10} is divided by 10?
 (a) 9 (b) 5 (c) 2 (d) 8 ,L4
- Q(53) Simplify: $5 + \sqrt{5} = ?$
 (a) $\sqrt{5}$ (b) 5 (c) 25 (d) 0.005 ,L4
- Q(54) The ratio of two numbers is 8:10 and their LCM is 240.the numbers are
 (a) 52, 25 (b) 45, 60 (c) 24, 30 (d) 40, 50 ,L4
- Q(55) What will be the CI on Rs 18000 @ 10% p.a. for 3 years?
 (a) Rs 5628 (b) Rs 5400 (c) Rs 5940 (d) Rs 5958 ,L4
- Q(56) Find Compound interest on Principal Rs 2000 at 10% per annum for 2 years
 (a) 420 (b) 120 (c) 343 (d) None ,L5
- Q(57) If BEAT is written as GIDV, then SOUP may be written as
 (a) YSXR (b) ZSYS (c) XSYS (d) XSXR ,L5
- Q(58) Find the 12th and 9th term of the series 6, 4, 3, ...
 (a) $\frac{7}{12}$, $\frac{6}{5}$ (b) $\frac{6}{7}$, $\frac{6}{5}$ (c) $\frac{7}{19}$, $\frac{12}{5}$ (d) $\frac{12}{13}$, $\frac{6}{5}$,L5
- Q(59) In a coding system, 'JUNE' is written as 'PQRS' and 'AUGUST' is written as 'WQFQMN'. How can 'NEST' be written in the same coding language?
 (a) SRMN (b) RSNM (c) RSMN (d) SRNM ,L5
- Q(60) In a certain code, 'TERMINAL' is written as 'NSFUMBOJ' and 'TOWERS' is written as 'XPUTSF'. How is 'MOVEMENT' written in that same code?
 (a) FWPNUOFN (b) BNDSUOFN (c) FUBNUONF (d) UFNBNFOP ,L5

- Q(61) In a certain code language,
(A) 'pit dar na' means 'you are good'
(B) 'dar tok pa' means 'good and bad'
(C) 'tim na tok' means 'they are bad'
In that language, which word stands for 'they' ?
(a) na (b) tok (c) tim (d) pit .L5
- Q(62) If "BOOK" is 43 and "PEN" is 35 and "COPY" is
(a) 49 (b) 59 (c) 60 (d) 79 .L5
- Q(63) If air is called green, green is called blue, blue is called sky, sky is called yellow, yellow is called water and water is called pink, then what is the color of clear sky ?
(a) Blue (b) Sky (c) Yellow (d) Water .L5
- Q(64) In a certain code, if LOGIC is coded as 1512201824, how is PEARL coded as?
(a) 112226915 (b) 113331596 (c) 112226571 (d) 113336734 .L1
- Q(65) Find the average of first 21 whole numbers
(a) 100 (b) 10 (c) 11 (d) None .L4
- Q(66) The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:
(a) 1 (b) 2 (c) 3 (d) 4 .L4
- Q(67) A, B and C start running at the same time and at the same point in the same direction in a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds. After what time will they meet again at the starting point?
(a) 26 minutes 18 seconds (b) 42 minutes 36 seconds (c) 45 minutes (d) 46 minutes 12 seconds .L5
- Q(68) I want to stack the wooden blocks left after the carpentry work at home. I stack them in groups of 4 but 3 blocks get left out. So, I attempt with stacks of 5 blocks each but again 3 blocks remain left out. The same thing happens even when I try with 9 blocks and 10 blocks in each stack. Find the total number of blocks I have.
(a) 183 (b) 90 (c) 180 (d) 900 .L5
- Q(69) For two three digit numbers, their HCF and LCM are 17 and 714 respectively. Then the sum of the numbers will be:
(a) 289 (b) 391 (c) 221 (d) 731 .L5
- Q(70) If a nine-digit number 7698x138y is divisible by 72, then the value of $\sqrt{(4?? + ??)}$ is
(a) 8 (b) 6 (c) 5 (d) 9 .L5
- Q(71) 10 Consecutive numbers are given. If the average of the two numbers given in the middle is 13.5, then what is the sum of the first 6 numbers?
(a) 65 (b) 69 (c) 72 (d) 77 .L4
- Q(72) The sum of five consecutive numbers is 55 while the sum of seven consecutive numbers is 77. Then what is the difference of the greatest number of the first series and the smallest number of the second series ?
(a) 5 (b) 11 (c) 13 (d) 8 .L4
- Q(73) A shopkeeper selling his goods at 5% loss. Had he sold it for Rs.900 more then he would get 10% profit. Find the CP of that article
(a) 5000 (b) 6000 (c) 2000 (d) 15000 .L5
- Q(74) If books bought at prices ranging from Rs. 200 to Rs. 350 are sold at prices ranging from Rs. 300 to Rs. 425, what is the greatest possible profit that might be made in selling eight books ?
(a) 1600 (b) 1800 (c) 2100 (d) 2200 .L5
- Q(75) A man sells 520 bananas at the cost price of 650 bananas. His gain percent is?
(a) 15% (b) 20% (c) 25% (d) 30% .L5
- Q(76) 75% of a number is added to 75, then the result is the number itself. The number is :
(a) 300 (b) 200 (c) 100 (d) 400 .L5
- Q(77) The percentage profit earned by selling an article for Rs. 1920 is equal to the percentage loss incurred by selling the same article for Rs. 1280. At what price should the article be sold to make 25% profit?
(a) 2200 (b) 2000 (c) 1800 (d) none .L5
- Q(78) A number when decreased by 10% became 450. Find the original number.
(a) 360 (b) 400 (c) 500 (d) 700 .L5
- Q(79) At what percent per annum will Rs. 3000/- amounts to Rs. 3993/- in 3 years if the interest is compounded annually?
(a) 5% (b) 6% (c) 7% (d) 10% .L4
- Q(80) A vendor bought toffees at 7 for a rupee. How many for a rupee must he sell to gain 40%?
(a) 6 (b) 4 (c) 7 (d) 5 .L5

--End of Question paper--