Registration No.: [redacted]

Course Code:PEA305
Course Title:ANALYTICAL SKILLS-I

Paper Code A
Max Marks: 60

Time Allowed: 01:30hrs.

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 60 questions of 1 mark each. 0.25 marks will be deducted for each wrong answer.
3. All questions are compulsory.
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 calculators is prohibited.

Q1) Examine which term of the series 1, 3,5..... will be 79? CO1, L3
(a) 36th (b) 40th (c) 38th (d) 39th

Q2) Determine the fourth term of a geometric progression, whose first term is 3 and the common ratio is 5. CO1, L3
(a) 254 (b) 375 (c) 288 (d) 320

Q3) Examine the sum of values of N for which the number 98752N is exactly divisible by 4? CO1, L3
(a) 12 (b) 8 (c) 4 (d) 10

Q4) Determine HCF of (2/4, 8/12, 16/20, 12/15) is CO1, L3
(a) 12 (b) 1/30 (c) 2/56 (d) 1/60

Q5) Compute the maximum possible length of a scale required to exactly measure 176 cm, 110 cm and 154 cm? CO1, L3
(a) 10 (b) 22 (c) 11 (d) 88

Q6) Compute the remainder when 2^(35) is Divided by 9? CO1, L3
(a) 5 (b) 0 (c) 8 (d) 1

Q7) Examine what is the highest power of 72 which can divide 70! Completely. CO1, L3
(a) 16 (b) 22 (c) 67 (d) 32

Q8) Compute the unit digit for 235^(1982) × 784^(2023) CO1, L3
(a) 2 (b) 5 (c) 0 (d) 1

Q9) Compute the unit digit of the product 2^(2010) × 6^(2011) × 7^(2012) × 8^(2013) CO1, L3
(a) 2 (b) 4 (c) 8 (d) 0

Q10) Examine if Vivek Bindra wants to count number of zeros at the end of 150!. How many are there? CO1, L3
(a) 37 (b) 38 (c) 39 (d) 40

Q11) A earns 25% more than B. C earns 25% more than A. A earns 20% more than D. E earns 20% more than A. A, B, C, D, and E earn integer amounts less than Rs. 100. What is the total amount earned by all five of them put together CO2, L2
(a) 305 (b) 310 (c) 300 (d) NONE

Q12) Class B has 50% more students than class A. Number of girls in class A is equal to number of boys in class B. The percentage of girls is the same in both classes. What percentage of the student group are boys? CO2, L2
(a) 40 % (b) 30% (c) 35% (d) 40%

Q13) A two digit number ab is 60% of x. The two-digit number formed by reversing the digits of ab is 60% more than x. Find x. CO2, L2
(a) 45 (b) 54 (c) 65 (d) 56

Q14) Ram sells onions in the streets of Chandni Chowk. Due to recent shortfall in the supply of onions, he doubles his selling price despite the cost price remains same for him due to a fixed price contract. He realizes that his profit have tripled. Find the original profit percent CO2, L2
(a) 100% (b) 200% (c) 105% (d) 50%

Q15) In a tournament, a team has played 40 matches so far and won 30% of them. If they win 60% of the remaining matches, their overall win percentage will be 50%. Suppose they win 90% of the remaining matches, then the total number of matches won by the team in the tournament will be CO2, L2
(a) 84 (b) 74 (c) 64 (d) 54

Q16) Anil buys 12 toys and labels each with the same selling price. He sells 8 toys initially at 20% discount on the labeled price. Then he sells the remaining 4 toys at an additional 25% discount on the discounted price. Thus, he gets a total of Rs 2112, and makes a 10% profit. With no discounts, his percentage of profit would have been CO2, L2
(a) 40 (b) 50 (c) 60 (d) 70

Q17) Mukesh purchased 10 bicycles in 2017, all at the same price. He sold six of these at a profit of 25% and the remaining four at a loss of 25%. If he made a total profit of Rs. 2000, then his purchase price of a bicycle, in Rupees, was CO2, L2
(a) 4000 (b) 2000 (c) 10000 (d) NONE

PEV-307

Q18) The manufacturer of a table sells it to a wholesale dealer at a profit of 10%. The wholesale dealer sells the table to a retailer at a profit of 30%. Finally, the retailer sells it to a customer at a profit of 50%. If the customer pays Rs 4290 for the table, then its manufacturing cost (in Rs) is CO5, L2

(a) 2000 (b) 3000 (c) 4000 (d) 6000

Q19) If Fatima sells 60 identical toys at a 40% discount on the printed price, then she makes 20% profit. Ten of these toys are destroyed in fire. While selling the rest, how much discount should be given on the printed price so that she can make the same amount of profit? CO5, L2

(a) 28% (b) 26% (c) 22% (d) 20%

Q20) In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs CO5, L2

(a) 6.25 (b) 6.15 (c) 6.20 (d) 6

Q21) Find the next term of the series 27, 35 ,43 , 51 , 59 , ... CO6, L4

(a) 45 (b) 67 (c) 87 (d) none

Q22) Find the next term of the series 7, 35 ,14 , 70, 28 ,140 , 56 ,..... CO6, L4

(a) 280 (b) 65 (c) 22 (d) None

Q23) Find the next term of the series 4 , 20 , 100 , 500 ,..... CO6, L4

a) 2000 (b) 2500 (c) 4000 (d) None

Q24) Calculate the next term of series 2500, 500,100,20,..... CO6, L4

(a) 4 (b) 1 (c) 11 (d) None

Q25) Calculate the next term of series 3600 , 1800, 1600, 800, 600, 300,. CO6, L4

(a) 700 (b) 100 (c) 890 (d) None

Q26) If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called black, black is called violet and violet is called orange, what would be the color of grass CO6, L4

(a) Green (b) Black (c) Red (d) None

Q27) If the animals which can walk are called swimmers, animals who crawl are called flying, those living in water are called snakes and those which fly in the sky are called hunters. then what will a Dog be called ? CO6, L4

(a) Swimmers (b) Hunters (c) Snakes (d) None

Q28) In a certain code, 2 is coded as P, 3 as N, 9 as Q, 5 as R, 4 as A and 6 as B. How is 96355 coded in that code? CO6, L4

(a) QBNRR (b) RRNQB (c) BNQRR (d) None

Q29) In a certain code, BCA is written as CDB. How MCA is written in that code ? CO6, L4

(a) NDB (b) DBN (c) DER (d) none

Q30) In a certain code, LPU is written as KOT How THE is written in that code ? CO6, L4

(a) SGD (b) GGG (c) DGS (d) None

Q31) Determine the age of the teacher (in years) if the average age of 30 students is 12 years and when the age of their teacher is included, it becomes 13 years. CO1, L3

(a) 35 (b) 39 (c) 42 (d) 43

Q32) Determine the third number if the average of three numbers is 20 and the remaining two numbers are 18 and 26, CO1, L3

(a) 16 (b) 18 (c) 19 (d) 20

Q33) Compute the average of first 98 even numbers CO3, L3

(a) 99 (b) 77 (c) 33 (d) None

Q34) Determine the smallest number if average of five consecutive natural number is 93 CO3, L3

(a) 91 (b) 81 (c) 71 (d) None

Q35) Determine the HCF of 24, 60 , 48 , 72 CO3, L3

(a) 12 (b) 18 (c) 20 (d) None

Q36) How many positive integers are there from 0 to 1000 that leave a remainder of 3 on division by 7 and a remainder of 2 on division by 4 CO3, L3

(a) 32 (b) 36 (c) 30 (d) 18

Q37) LCM of 2 natural numbers p and q where p > q is 935. What is the maximum possible sum of the digits of q CO3, L3

(a) 1 (b) 16 (c) 8 (d) 2

Q38) Find the smallest number that leaves a remainder of 4 on division by 5, 5 on division by 6, 6 on division by 7, 7 on division by 8 and 8 on division by 9? CO3, L3

(a) 2519 (b) 2509 (c) 2521 (d) 2522

Q39) What are the last two digits of the number 7^45 CO3, L3

(a) 17 (b) 27 (c) 07 (d) none

Q40) A 4-digit number of the form aabb is a perfect square. What is the value of a - b? CO3, L3

(a) 1 (b) 2 (c) 3 (d) 4

Q41) Identify loss or gain percent if on selling 15 articles, a merchant loses equal to cost price of 12 articles. CO2, L2

(a) 72% gain (b) 86% gain (c) 80% loss (d) 85% loss

Q42) A certain amount earns simple interest of Rs. 2450 after 7 years. Had the interest been 3% more, how much more interest would it have earned? CO2, L2

(a) 35 (b) 245 (c) 350 (d) Can not be determined

Q43) A sells an item at a profit of 10% to B and B sells it to C at a profit of 30%. Find the resultant profit percent? CO2, L2

(a) 23 percent (b) 43 percent (c) 33 percent (d) None

Q44) A sells an item at a profit of 40% to B and B sells it to C at a loss of 10%. Find the resultant profit percent? CO2, L2

(a) 26 percent (b) 33 percent (c) 81 percent (d) None

Q45) Raghav spends 80% of his income. If his income increases by 12% and his expenditure increases by 17.5%, then what is the percentage decrease in his savings? CO1, L1

(a) 10% (b) 20% (c) 30% (d) none of these

Q46) There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs. 12,000 after 3 years at the same rate CO1, L1

(a) 2972 (b) 3972 (c) 4972 (d) 5972

Q47) If the cost price is 80% of selling price. Then what is the profit percent? CO5, L2

(a) 25 percent (b) 45 percent (c) 88 percent (d) None

Q48) If a sum of money at simple interest doubles in 7 years, it will become 4 times in: CO2, L2

(a) 21 years (b) 29 years (c) 9 years (d) None

Q49) The difference between the C.I. and S.I. on a certain sum of money at 10% per annum for 2 years is Rs 89.92. Find the sum. CO2, L2

(a) 8992 (b) 1298 (c) 2399 (d) None

Q50) John borrowed Rs. 2,10,000 from a bank at an interest rate of 10% per annum, compounded annually. The loan was repaid in two equal instalments, the first after one year and the second after another year. The first instalment was interest of one year plus part of the principal amount, while the second was the rest of the principal amount plus due interest thereon. Then each instalment, in Rs., is

(a) 121000 (b) 120000 (c) 115000 (d) 10000 CO5, L2

Q51) Analyze the following coding:

In a code language PROPER is coded as NTMRCT, how is RETURN coded in the same code?

(a) TCVSTL (b) PGRWPP (c) CNBPXU (d) PGRWQB CO6, L4

Q52) Analyze the following coding and answer the question

If rit puc bec means eat fresh food,

puc tec jac means food is tasty,

jac lac mac means she is beautiful,

then which word means tasty?

(a) puc (b) bec (c) rit (d) tec CO6, L4

Q53) Analyze the following coding and answer the question:

If PARROT is written as 269951 and GRAND is written as 79684, how is PANT coded?

(a) 2681 (b) 2641 (c) 2651 (d) 2645 CO6, L4

Q54) Analyze which of the following words will come third in the English dictionary?

(a) Gerund (b) German (c) Gerbil (d) Gerent CO6, L4

Q55) Point out if the letters in the word ' UNDERSTANDING' are rearranged in the alphabetical order, which one will be in the middle in order after the rearrangement?

(a) T (b) R (c) N (d) S CO6, L4

Q56) Explore the missing number in the series?

B6, D13, F27, H55, J111, ...

(a) L313 (b) L223 (c) L181 (d) L193 CO6, L4

Q57) If the letters in the word WATER are rearranged in the alphabetical order, which one will be in the middle after the rearrangement?

(a) A (b) W (c) R (d) None CO6, L4

Q58) Which letter in the word ALIGN occupies the same position as it does in the English alphabet?

(a) I (b) L (c) A (d) None CO6, L4

Q59) In a certain code language FOR is written as ROF. How will PEA be written in that code language?

(a) APE (b) AEP (c) APP (d) None CO6, L4

Q60) In a certain code 'SEQUENCE' is coded as 'FDOFVRFT. How is 'CHILDREN' coded in that code?

(a) OFSEMJID (b) OFSEMJIE (c) OFSEMJIG (d) NONE CO6, L4

--End of Question paper--