Registration No.:_____

22232PEA8988
Paper Code: A

Course Code: PEA305
Course Title: ANALYTICAL SKILLS-I

Time Allowed: 2 hrs | 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) A number is divided by 52 gives the remainder 45. If the number is divided by 13, the remainder will be
(a) 5 (b) 6 (c) 7 (d) 12
CO1,L3

Q(2) Solve 5(1/2) + 6(1/2) - 8(1/4)
(a) 2(3/4) (b) 3(3/4) (c) 2(1/4) (d) none of these
CO1,L3

Q(3) The average of 20 numbers is 15 and the average of first five is 12. The average of the rest is.
(a) 16 (b) 15 (c) 14 (d) 13
CO1,L3

Q(4) The sum of the digits of a two-digit number is 15 and the difference between the digits is 3. What is the two-digit number?
(a) 96 (b) 69 (c) 57 (d) can't say
CO1,L3

Q(5) In a two-digitnumber, if it is known that its unit's digit exceeds its ten's digit by 2 and that the product of the given number and the sum of its digits is equal to 144, then the number is:
(a) 24 (b) 23 (c) 29 (d) 25
CO1,L3

Q(6) $4^{61} + 4^{62} + 4^{63} + 4^{64}$ is divisible by:
(a) 3 (b) 11 (c) 13 (d) 17
CO1,L3

Q(7) The numbers 1, 3, 5 . . . 25 are multiplied together. The number of zeroes at the right end of the product is:
(a) 22 (b) 8 (c) 13 (d) 0
CO1,L3

Q(8) In a division sum, the divisor is 12 times the quotient and 5 times the remainder. If the remainder is 36, then the dividend is
(a) 2706 (b) 2796 (c) 2736 (d) 2826
CO1,L3

Q(9) Find the least number which when divided by 20, 25, 30, 36 and 48 leaves the remainders 15, 20, 25, 31 and 43 respectively.
(a) 2165 (b) 144 (c) 3595 (d) 3600
CO1,L3

Q(10) $2\frac{1}{2}\text{of}\frac{3}{4} \times \frac{1}{2} \div \frac{3}{2} + \frac{1}{2} \div \frac{3}{2}\left(\frac{2}{1} - \frac{1}{2}\text{of}\frac{2}{3}\right)$ to get
(a) 1 (b) $3\frac{3}{8}$ (c) $2\frac{7}{3}$ (d) $1\frac{5}{8}$
CO1,L3

Q(11) A dealer loses 20% if an article is sold at the price of 2000. At what price he/she has to sell to gain 20%?
(a) 7890 (b) 3000 (c) 5000 (d) None
CO1,L3

Q(12) A man sells two houses at the rate of Rs.1000000 each. On one he gains 20% and on the other, he loses 20%. What is his gain or loss percent in the whole transaction?
(a) 4% loss (b) 41 % gain (c) No profit No loss (d) None CO6,L4

(13) The difference between the C.I. and S.I. on a certain sum of money at 10% per annum for 2 years is Rs 297.50. Find the sum.
(a) 11002 (b) 29750 (c) 2933 (d) None
CO6,L4

Q(14) A milkman purchases the milk at Rs. x per litre and sells it at Rs. 2x per litre still he mixes 2 litres water with every 6 litres of pure milk. What is the profit percentage?
(a) 66.66% (b) 100% (c) 116.67% (d) 166.67%

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CO3,L2

Q(15) The price of sugar has gone down by 10%, a consumer can buy 5 kg more sugar for Rs 270. The difference between the original and reduced price per kg is.
(a) 42 paise (b) 60 paise (c) 75 paise (d) 53 paise
CO2,L5

Q(16) In an election between two candidates, one got 55% of the total valid votes, 20% 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
CO2,L5

Q(17) A dishonest shopkeeper professes to sell goods at his cost price but uses a false weight of 950 gms, for each kilogram. His gain per cent is :
(a) 6.25% (b) 5(5/19)% (c) 5(3/17)% (d) 6(2/7)%
CO2,L5

Q(18) A sum of money placed at compound interest becomes 27 times of itself in 15 years. In 25 years, it will become how many times?
(a) 729 times (b) 135 times (c) 243 times (d) 81 times
CO2,L5

Q(19) In how many months will Rs.8000 yield Rs. 2648 as compound interest at 20% per annum compounded semi-annually?
(a) 18 (b) 24 (c) 12 (d) 30
CO2,L5

Q(20)
In a certain school, 20% of students are below 8 years of age. The number of students above 8 years of age is $\frac{2}{3}$ of the number of students of 8 years of age which is 48. What is the total number of students in the school?
(a) 100 (b) 110 (c) 120 (d) 130
CO2,L5

Q(21) In a certain code, if BCA is coded as 8271 , how is ACE coded as?
(a) 432165 (b) 127125 (c) 767654 (d) None
CO3,L2

Q(22) If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called violet, and violet is called orange, what would be the color of grass?
(a) VIOLET (b) yellow (c) GREEN (d) None
CO3,L2

Q(23) Look at this series: 544, 509, 474, 439, ... What number should come next?
(a) 404 (b) 414 (c) 420 (d) 425
CO6,L4

Q(24) what should come next ?

B2CD, _____, BCD4, B5CD, BC6D
(a) B2C2D (b) BC3D (c) B2C3D (d) BCD7
CO6,L4

Q(25) Find the missing numbers in series 2, 15, 4, 47, 7, 118, 11, ?, ?
(a) 260, 15 (b) 252,16 (c) 250, 17 (d) 254, 16
,L1

Q(26) 975, 864, 753, 642, ?
(a) 431 (b) 314 (c) 531 (d) 532
,L1

Q(27) If in a code language "ORGANISATION" is written as "CBDWLQJWYQCL" and "OPERATION" is written as "CXFBWYQCL", how is "SEPARATION" coded?
(a) EJXEBEYQCL (b) JFQYWBCXQL (c) JFXWBWYQCL (d) QCLYWBFXJE
CO3,L2

Q(28) 53, 53, 40, 40, 27, 27, ... What number should come next?
(a) 14 (b) 17 (c) 19 (d) 11
CO3,L2

Q(29) 31, 29, 24, 22, 17, ... What number should come next?
(a) 12 (b) 15 (c) 16 (d) 18
CO3,L2

Q(30) If 'nso ptr kli chn' stands for 'sharma get marriage gift', 'ptr lnm wop chn' stands for 'wife gives marriage gift', 'tti wop nhi' stands for 'he gives nothing' what would mean 'gives'?
(a) wop (b) wou (c) wog (d) wom
CO3,L2

Q(31) If x:y is 1:2, find the value of (8x + 7 y) :(2x+5y)
(a) 11 : 6 (b) 8 : 9 (c) 9 :11 (d) None
CO1,L3

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Q(32) A invests Rs.200 for 6 months, B invests Rs.600 for 2 months and C invests Rs.300 for 4 months in a business. If profit is Rs.3000 then what is the share of C?
(a) 1500 (b) 1000 (c) 2500 (d) None
CO1,L3

Q(33) The sum of ages of 4 children born at the intervals of 2 years each is 52 years. What is the age of the youngest child?
(a) 10 (b) 20 (c) 40 (d) None
CO1,L3

Q(34) In a zoo, there are rabbits and pigeons. If heads are counted, there are 340 heads and if legs are counted there are 1060 legs.How many pigeons are there?
(a) 150 (b) 120 (c) 170 (d) 155
CO1,L3

Q(35) A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was:
(a) 14 (b) 22 (c) 18 (d) 32
CO1,L3

Q(36) .If a : b = 9 : 11 and b : c = 3 : 7, then what is a : b : c ?
(a) 27 : 33 : 77 (b) 18 : 33 : 66 (c) 36 : 44 : 88 (d) 27 : 33 : 99
CO1,L3

Q(37) The monthly income of A & B is 4 : 3 & their expenditure are in the ratio of 3 : 2. Each save Rs. 9000, then B's income is?
(a) 18000 (b) 27000 (c) 15000 (d) 25000
CO1,L3

Q(38) .In a bag, there are coins of 25 p, 10 p and 5 p in the ratio of 2 : 3 : 4. If there is Rs. 20 in all, how many 5 p coins are there?
(a) 60 (b) 40 (c) 20 (d) 80
CO1,L3

Q(39) . A Jar contains 60 litres of milk. 15 litres of milk is taken out from it and replaced by water.Then again from mixture, 15 litres is again taken out and replaced by water. Find final quantity of milk present in the mixture?
(a) 36.45 (b) 33.75 (c) 38.75 (d) 34.25
CO1,L3

Q(40) An Alloy A of gold and silver contains 89% gold and 11% silver .A second alloy B of gold and silver contains 75% gold and 9% silver and rest part is impurities, an alloy C is made by mixing alloy A and alloy B equally and it contains 10% silver find the % of gold in alloy C?
(a) 85% (b) 84% (c) 82% (d) 86%
CO1,L3

Q(41) If 0.75: x :: 5:8, then x is equal to:
(a) 1.20 (b) 1.30 (c) 1.12 (d) 1.15
CO1,L3

Q(42) The compounded ratio of (2 : 3), (6: 11) and (11 :2) is
(a) 1:2 (b) 1:5 (c) 2:1 (d) 1:3
CO1,L3

Q(43) A mixture contains alcohol and water in the ratio 4 : 3. If 5 liters of water is added to the mixture, the ratio becomes 4: 5. Find the quantity of alcohol in the given mixture.
(a) 10 (b) 12 (c) 15 (d) 13
CO1,L3

Q(44) A sum of Rs. 427 is to be divided among A, B and C such that 3 times A's share, 4 times B's share and 7 times C's share are all equal. The share of C is :
(a) 84 (b) 96 (c) 140 (d) 120
CO1,L3

Q(45) 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) 1:2 (b) 2:1 (c) 3:4 (d) 4:3
CO1,L3

Q(46) In a fort, there are 1200 soldiers. If each soldier consumes 3 kg per day, the provisions available in the fort will last for 30 days. If some more soldiers join, the provisions available will last for 25 days given each soldier consumes 2.5 kg per day. Find the number of soldiers joining the fort in that case ?
(a) 400 (b) 500 (c) 528 (d) 582
CO1,L3

Q(47) What is the sum of all 3 digit numbers formed using the digits 2, 3, 5 without repetition?
(a) 2220 (b) 77770 (c) 9090 (d) None
CO1,L3

Q(48) Find number of diagonals in regular hexagon
(a) 9 (b) 19 (c) 199 (d) None CO1,L3

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Q(49) In How many different ways the letters of the word BLOCK can be arranged starting with B?
(a) 24 (b) 223 (c) 343 (d) None
CO1,L3

Q(50) In How many different ways the letters of the word BLOCK can be arranged starting with B and ending with K?
(a) 6 (b) 24 (c) 120 (d) None
CO1,L3

Q(51) Find the rank of the word "LPU" if all the words can be formed by permuting the letters of this word without repetition are arranged in dictionary order.
(a) 1 (b) 2 (c) 3 (d) None
CO1,L3

Q(52) Find the rank of the word "MCQ" if all the words can be formed by permuting the letters of this word without repetition are arranged in dictionary order.
(a) 3 (b) 4 (c) 6 (d) None
CO1,L3

Q(53) Determine the probability that a number chosen at random from digits 1, 2, 3, ... 100 will be odd
(a) ½ (b) ¾ (c) 2/3 (d) None
CO1,L3

Q(54) A man and his wife appear in an interview for two vacancies in the same post. The probability of husband's selection is (1/5) and the probability of wife's selection is (1/4). What is the probability that both of them are selected?
(a) 3/7 (b) 2/9 (c) 1/20 (d) None
CO1,L3

Q(55) A college has 10 basketball players. A 5-member team and a captain will be selected out of these 10 players. How many different selections can be made?
(a) 1390 (b) 1260 (c) 1620 (d) 1080
,L1

Q(56) The Indian Cricket team consists of 16 players. It includes 2 wicket keepers and 5 bowlers. In how many ways can a playing eleven be selected if we have to select 1 wicket keeper and atleast 4 bowlers?
(a) 1092 (b) 1024 (c) 998 (d) 729
,L1

Q(57) In how many ways can the letters of the word EDUCATION be rearranged so that the relative position of the vowels and consonants remain the same as in the word EDUCATION?
(a) 4!*5! (b) 5!*4! (c) 6!*3! (d) NONE OF THESE
,L1

Q(58) man and his wife appear in an interview for two vacancies in the same post. The probability of husband's selection is (1/7) and the probability of wife's selection is (1/5). What is the probability that only one of them is selected ?
(a) 2/7 (b) 3/7 (c) ½ (d) 3/4
,L1

Q(59) In a class, there are 15 boys and 10 girls. Three students are selected at random. The probability that 1 girl and 2 boys are selected, is:
(a) 1/50 (b) 3/25 (c) 23/45 (d) 21/46
,L1

Q(60) What is the probability of getting 53 Mondays in a leap year?
(a) 2/7 (b) 1/7 (c) 3/7 (d) none of these
,L1

Q(61) If two letters are taken at random from the word HOME, what is the probability that none of the letters would be vowels?
(a) 1/6 (b) 1/3 (c) ½ (d) 1/4
,L1

Q(62) In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?
(a) 47200 (b) 48000 (c) 42000 (d) 50400
CO3,L2

Q(63) Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?
(a) 1/20 (b) 1/15 (c) 9/20 (d) 4/5
CO1,L3

Q(64) Ravi goes first 70 Km north then turns left and move 100 Km, again he turns left and moves 70 Km, in which direction is he from the starting point?
(a) WEST (b) EAST (c) NORTH (d) SOUTH
CO6,L4

Q(65) Pointing towards a boy in a photograph, lady said, "He is the only son of the husband of my mother" How is that boy related to lady?
(a) Sister (b) Brother (c) Aunt (d) None
CO6,L4

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Q(66) One morning after sunrise, Virat started to walk. During his walking he met Dhoni who was coming from opposite direction. Virat watch that the shadow of Dhoni is to the left of him (Virat). To Which direction Dhoni was facing?
(a) South (b) North (c) East (d) West
CO6,L4

Q(67) One morning after sunrise, Virat started to walk. During his walking he met Dhoni who was coming from opposite direction: Virat watch that the shadow of Dhoni is to the right of him (Virat). To Which direction Virat was facing?
(a) North (b) South (c) East (d) West
CO6,L4

Q(68) Introducing a man, a woman said, 'He is the only son of my mother's mother." How is the woman related to the man ?
(a) niece (b) mother (c) sister (d) aunt
CO3,L2

Q(69) A is father of C and D is son of B. E is brother of A. If C is sister of D, how is B related to E ?
(a) daughter (b) brother (c) sister-in-law (d) husband
CO3,L2

Q(70) The length and breadth of a room are 8 m and 6 m respectively. A cat runs along all the four walls and finally along a diagonal order to catch a rat. How much total distance is covered by the cat?
(a) 10 (b) 38 (c) 48 (d) 14
CO3,L2

Q(71) M is the daughter of L.
N is the brother of M;
K is the brother of L;
J is the sister of K;

Who are the aunt of M ?
(a) K (b) J (c) L (d) None of these
CO6,L4

Q(72) Imran's mother is the only daughter of Nusrat's father. How is Nusrat's husband related to Imran ?
(a) Father (b) Uncle (c) Grandfather (d) Brother
CO6,L4

Q(73) It is 4:30 by the clock. If the minute hand points towards the west direction, then which direction will the hour hand point to ?
(a) South--west (b) North--west (c) South--east (d) North--east
CO6,L4

Q(74) Mohandas Gandhi walks a distance of 5 kms towards North, then turns to his left and walks for 2 kms. He again turns left and walks for 7 kms. At this point he turns to his left and walks for 2 kms. How far is he from the starting point?
(a) 2 (b) 1 (c) 4 (d) 3
CO6,L4

Q(75) A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?
(a) Grand daughter (b) Grand mother (c) daughter (d) grand father
CO6,L4

Q(76) A man said to a lady, "Your mother's husband's sister is my aunt!! How is the lady related to the man ?
(a) mother (b) sister (c) father (d) brother
CO6,L4

Q(77) A is father of C and D is son of B. E is brother of A. If C is sister of D, how is B related to E ?
(a) siste-in-law (b) brother (c) mother (d) daughter
CO6,L4

Q(78) A is father of C and D is son of B. E is brother of A. If C is sister of D, how is B related to E ?
(a) siste-in-law (b) brother (c) mother (d) daughter
CO6,L4

Q(79) If South-East becomes North, North-East becomes West and so on. What will West become?
(a) North-east (b) south-east (c) north-west (d) south-west
CO6,L4

Q(80) Rahul put his timepiece on the table in such a way that at 6 P.M. hour hand points to North. In which direction the minute hand will point at 9.15 P.M. ?
(a) west (b) north (c) east (d) south
CO6,L4

--End of Question paper--