

COURSE CODE:PEA515
COURSE TITLE:ANALYTICAL SKILLS-I

Max. Marks: 80**Time Allowed: 2 hrs****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.

Q1) In a division problem, the divisor is 4 times the quotient and 3 times the remainder. If the remainder is 4, the dividend is

- (a) 40 (b) 80 (c) 540 (d) 580

CO1, L3

Q2) If $5432 * 7$ is divisible by 9, then the digit in place of * is

- (a) 0 (b) 1 (c) 6 (d) 9

CO1, L3

Q3) The average age of 40 persons increased by 1.25kg when a person whose weight is 50kg left the group and a new person joined the group.

Calculate the average weight of the new person.

- (a) 41 (b) 50 (c) 51 (d) none of these

CO1, L3

Q4) The six digit number 54321A is divisible by 9 where A is a single digit whole number. Find A.

- (a) 0 (b) 2 (c) 3 (d) 4

CO1, L3

Q5) Simplify the expression $(105 + 206) - 550 \div 5^2 + 10$

- (a) 399 (b) 289 (c) 299 (d) 298

CO1, L3

Q6) What is remainder obtained if 455^{18} is divided by 19?

- (a) 2 (b) 3 (c) 1 (d) 5

CO1, L3

Q7) The average weight of A, B and C is 45 kg. If the average weight of A and B be 40 kg and that of B and C be 43 kg, then the weight of B is:

- (a) 31 (b) 23 (c) 25 (d) 35

CO1, L3

Q8) What is the units digit of the product $(5 + 1)(5^2 + 1)(5^3 + 1)(5^4 + 1) \dots (5^{2000} + 1)(5^{2001} + 1)$?

- (a) 6 (b) 7 (c) 8 (d) none of these

CO1, L3

Q9) The least number, which when divided by 12, 15, 20 and 54 leaves in each case a remainder of 8 is

- (a) 504 (b) 548 (c) 536 (d) 544

CO1, L3

Q10) The average weight of 8 person's increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What might be the weight of the new person?

- (a) 76 (b) 85 (c) 82 (d) 80

CO1, L3

Q11) In an examination, 65% of the students passed in Mathematics, 48% passed in Physics and 30% passed in both. How much percent of students failed in both subjects?

- (a) 17% (b) 43% (c) 13% (d) 47%

CO1, L3

Q12) By selling 90 ball pens for ₹160 a person loses 20%. How many ball pens should be sold for ₹96 so as to have a profit of 20%?

- (a) 34 (b) 35 (c) 36 (d) 38

CO1, L3

Q13) A person buys a horse for 15 pounds. After one year, he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the overall profit percent for that person over both the transactions?

- (a) 30.33% (b) 33.33% (c) 35.33% (d) 40.33%

CO1, L3

Q14) A property decreases in value every year at the rate of $6\frac{1}{4}\%$ of its value at the beginning of the year. Its value at the end of 3 years was Rs. 21,093. Find its value at the beginning of the 1st year?

- (a) Rs. 18,060.36 (b) Rs. 18,600 (c) Rs. 25,600.24 (d) Rs. 32,000.50

CO1, L3

Q15) A and B's salaries together amount to Rs. 2,000. A spends 95% of his salary and B spends 85% of his. If now their savings are the same, what is A's salary?

- (a) 500 (b) 700 (c) 1500 (d) 1000

CO1, L3

Q16) A man bought oranges at the rate of 8 for Rs. 34 and sold them at the rate of 12 for Rs. 57. How many oranges should be sold to earn a net profit of Rs. 45?

- (a) 90 (b) 100 (c) 135 (d) 150

CO1, L3

Q17) A village lost 12% of its goats in a flood and 5% of remainder died from diseases. If the number left now is 8360, what was the original number before the flood?

- (a) 1000 (b) 10000 (c) 1,00,000 (d) 8360

CO1, L3

Q18) A reduction of 25 per cent in the price of tea would enable a purchaser to obtain 5 kg. more for 120, what is the reduced price?

- (a) 8 (b) 5 (c) 7.25 (d) 6

CO1, L3

Q19) Kamal purchased a scooter for Rs 15000. He sold the scooter to Rakesh at 12% profit and Rakesh sold it at 10% loss. At what price did Rakesh sell the scooter?

- (a) 18200 (b) 15120 (c) 16400 (d) 16400

CO1, L3

Q20) A person bought two watches for 880. He sold one at a loss of 20% and the other at a gain of 40% and he found that each watch was sold at the same price. Find the cost price of two watches.

- (a) 340, 540 (b) 560, 320 (c) 420, 460 (d) 550, 330

CO1, L3

Q21) 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) East (b) West (c) North (d) South

CO1, L3

Q22) If A × B means A is to the south of B; A + B means A is to the north of B; A % B means A is to the east of B; A - B means A is to the west of B; then in P % Q + R - S, S is in which direction with respect to Q?

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

CO1, L3

Q23) A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 4 km. And then he goes back 10 km straight. Now in which direction is he from the starting place ?

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

CO1, L3

Q24) In a row of boys, If A who is 10th from the left and B who is 9th from the right interchange their positions, A becomes 15th from the left. How many boys are there in the row ?

- (a) 22 (b) 24 (c) 23 (d) 25

CO1, L3

Q25) Read the arrangement carefully and give the answer of following questions ?

K\$23DBE8HM4@5JF4%K1+WR#AA*415

How many such symbols are there which is not immediately preceded by a letter but immediately followed by a number ?

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

CO1, L3

Q26) A Driver left his village and drove North for 20 kms, after which he stopped for breakfast. Then he turned left and drove another 30 kms, when he stopped for lunch. After some rest, he again turned left and drove 20 kms before stopping for evening tea. Once more he turned left and drove 30 kms to reach the town where he had supper. After evening tea in which direction did he drive ?

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

CO1, L3

Q27) A man starts from his office and goes 5 km East. Then, he turns to the left and again walks for 3 km. Again he turns left and walks 5 km. At what distance is he from the starting point ?

- (a) 3 km (b) 4 km (c) 6 km (d) 7 km

CO1, L3

Q28) Pointing to a person, a man said to the woman, "He is the father of your daughter's daughter".
(a) Grandson (b) Father-in-law (c) mother-in-law (d) son-in-law

CO1, L3

Q29) If A * B means A is the brother of B, A - B means A is the husband of B, and A + B means A is the daughter of B, then which statement shows that Z is the mother of W?

- (a) X+Y-W*Z (b) X-W*Y+Z (c) Z-W*Y+X (d) W*Y+X-Z

CO1, L3

Q30) Some boys were sitting in a row, R is fourth from the right end and W is tenth from the left end. How many boys are there between R and W?

- (a) 15 (b) 16 (c) 17 (d) Can't be determined

CO1, L3

Q31) If the ratio of the ages of two friends A and B is in the ratio 3 : 5 and that of B and C is 3 : 5 and the sum of their ages is 147, then how old is B?
(a) 27 Y (b) 45 Y (c) 75 Y (d) 35 Y

CO1, L3

Q32) The concentration of petrol in three different mixtures (petrol and kerosene) is $1/2$, $3/5$ and $4/5$ respectively. If 2 litres, 3 litres and 1 litre are taken from these three different vessels and mixed. what is the ratio of petrol and kerosene in the new mixture?

- (a) 4:5 (b) 3:2 (c) 3:4 (d) 2:1

CO5, L4

Q33) The incomes of two persons A and B are in the ratio 3 : 4. If each saves Rs.100 per month, the ratio of their expenditures is Rs. 1 : 2. Find their incomes.

- (a) Rs. 100 and Rs.150 (b) Rs. 150 and Rs.200 (c) Rs.200 and Rs.250 (d) Rs.250 and Rs.300

CO5, L4

Q34) The sum of the present ages of a father and his son is 60 years. five years ago, father's age was four times the age of the son. so now the son's age will be:

- (a) 10 (b) 15 (c) 20 (d) 25

Q35) A person's present age is two-fifth of the age of his mother. After 8 years, he will be one-half of the age of his mother. How old is the mother at present ?

- (a) 36 (b) 32 (c) 40 (d) 42

CO5, L4

Q36) A starts business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2 : 3. What is B's contribution in the capital?

- (a) Rs. 7500 (b) 8000 (c) 9000 (d) 1000

CO5, L4

Q37) If $a : b : c = 3 : 4 : 7$, then the ratio $(a + b + c) : c$ is equal to

- (a) 2:1 (b) 14:3 (c) 7:2 (d) 1:2

CO5, L4

Q38) 33,630 are divided among A, Band C in such a manner that the ratio of the amount of A to that of B is 3 : 7 and the ratio of the amount of B to that of C is 6 : 5. The amount of money received by B is

- (a) 14868 (b) 16257 (c) 13290 (d) 12390

CO5, L4

Q39) 200 litres of a mixture contains milk and water in the ratio 17 : 3. After the addition of some more milk to it, the ratio of milk to water in the resulting mixture becomes 7 : 1. The quantity of milk added to it was

- (a) 20 litres (b) 40 litres (c) 60 litres (d) 80 litres

CO5, L4

Q40) A shopkeeper bought 50 kg of paddy at the rate of Rs. 7.50 per kg and 70 kg of mustard at the rate of Rs. 12.50 per kg and mixed them. he sold the mixture at the rate of Rs. 10.90 per kg. His total profit or loss in the transaction was

- (a) Rs. 68 loss (b) Rs. 58 profit (c) Rs. 58 loss (d) Rs. 68 profit

CO5, L4

Q41) In a dump yard, there are cars and scooters. In total, they are 250 and if wheels are counted, there are 740. How many scooters are there?

- (a) 110 (b) 120 (c) 130 (d) 140

CO5, L4

Q42) 5 liters are drawn from a cask full of wine and are then filled with water. This operation is performed three more times. The ratio of the quantity of wine now left in the cask to that of water is 16: 65. How much wine did the cask hold originally?

- (a) 15L (b) 10L (c) 24L (d) 18L

CO5, L4

Q43) If $a:b$ is 3:4 and $b:c$ is 5:7. Find the combined ratio

- (a) 5:18:20 (b) 15:20:28 (c) 15:28:20 (d) None

CO2, L2

Q44) In my pocket there are rs. 25 consisting of only the denomination of 20 paise and 50 paise thus there are total 80 coins in my pocket find the no. of coins of 20 paise denomination

- (a) 50 (b) 30 (c) 40 (d) None

CO5, L4

Q45) The cost of Type I rice is Rs. 15 per kg and Type 2 rice is Rs 20 per kg. If both Type 1 and Type 2 are mixed in the ratio 2: 3, then the price per kg of the mixed variety of rice is:

- (a) 18 (b) 18.50 (c) 19 (d) None

CO2, L2

Q46) In a certain school, the ratio of boys to girls is 7 : 5. If there are 2400 students in the school, then how many Boys are there?

- (a) 1400 (b) 1000 (c) 500 (d) None

CO5, L4

Q47) From a pack of 52 cards, two cards are drawn together at random. What is the probability of both the cards being kings?

- (a) 3/221 (b) 1/221 (c) 3/56 (d) 27/52

CO5, L4

Q48) 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) 3/13 (b) 4/13 (c) 5/13 (d) 2/13

CO2, L2

Q49) A committee of 5 persons is to be formed from 6 men and 4 women. In how many ways can this be done when at least 2 women are included

- (a) 185 (b) 186 (c) 175 (d) 196

CO2, L2

Q67) In a survey, it is found that 21 people read English newspaper, 26 people read Hindi newspaper, and 29 people read regional language newspaper. If 14 people read both English and Hindi newspapers; 15 people read both Hindi and regional language newspapers; 12 people read both English and regional language newspaper and 8 read all types of newspapers, How many people were surveyed?

CO1, L3

- (a) 43 (b) 44 (c) 35 (d) 30

Q68) In a survey among 140 students, 60 likes to play videogames, 70 likes to play indoor games, 75 likes to play outdoor games, 30 play indoor and outdoor games, 18 like to play video games and outdoor games, Number 42 play video games and indoor games and 8 likes to play all types of games. Number of students who play only outdoor games?

- (a) 30 (b) 35 (c) 36 (d) 38

CO1, L3

Q69) Study the following table and answer the questions based on it.

Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

Year	Item of Expenditure			
	Salary	Fuel and Transport	Bonus	Interest on
1998	288	98	3.00	23.4
1999	342	112	2.52	32.5
2000	324	101	3.84	41.6
2001	336	133	3.68	36.4
2002	420	142	3.96	49.4

- (a) Rs. 32.43 lakhs (b) Rs. 33.72 lakhs (c) Rs. 34.18 lakhs (d) Rs. 36.66 lakhs

CO1, L3

Q70) Study the following table and answer the questions based on it.

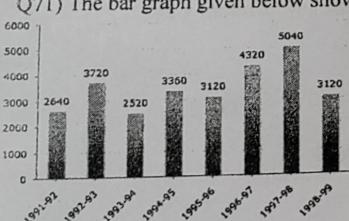
Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

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- (a) 4:7 (b) 10:13 (c) 15:18 (d) 11:12

CO1, L3

Q71) The bar graph given below shows the foreign exchange reserves of a country (in million US \$) from 1991 - 1992 to 1998 - 1999.



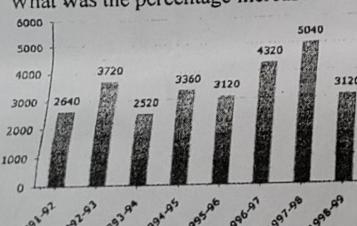
Foreign Exchange Reserves Of a Country. (in million US \$) The foreign exchange reserves in 1997-98 was how many times that in 1994-95?

- (a) 0.7 (b) 1.2 (c) 1.4 (d) 1.5

CO1, L3

Q72) The bar graph given below shows the foreign exchange reserves of a country (in million US \$) from 1991 - 1992 to 1998 - 1999.

What was the percentage increase in the foreign exchang



Foreign Exchange Reserves Of a Country. (in million US \$)

- (a) 100 (b) 200 (c) 150 (d) 250

CO1, L3

Q50) In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?
(a) 32 (b) 36 (c) 39 (d) 40

CO2, L2

Q51) How many different words can be formed from the alphabets of the word SCISSORS?
(a) 1440 (b) 1680 (c) 1800 (d) 2100

CO2, L2

Q52) From a group of 6 men and 4 women we have to choose a committee of 5 people. How many committees are possible if there are no restrictions?
(a) 262 (b) 252 (c) 785 (d) 9800

CO2, L2

Q53) A committee of 3 members is to be formed out of 3 men and 4 women. In how many different ways can it be done?
(a) 34 (b) 30 (c) 12 (d) 36

CO2, L2

Q54) What is the probability of getting a sum 9 from two throws of a die?
(a) 1/6 (b) 1/9 (c) 1/8 (d) 1/12

CO2, L2

Q55) Three unbiased coins are tossed. What is the probability of getting at most two heads?
(a) 1/8 (b) 1/2 (c) 3/4 (d) 7/8

CO2, L2

Q56) From a pack of 52 cards, two cards are drawn together at random. What is the probability of both the cards being kings?
(a) 1/15 (b) 25/57 (c) 35/256 (d) 1/221

CO2, L2

Q57) 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) 1260 (b) 1400 (c) 1250 (d) 1600

CO2, L2

Q58) A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red, is:
(a) 2/91 (b) 1/22 (c) 3/22 (d) 2/77

CO2, L2

Q59) Two dice are tossed. The probability that the total score is a prime number is
(a) 5/12 (b) 1/6 (c) 1/2 (d) 7/9

CO2, L2

Q60) In how many ways letters of the word " CHINA" be arranged.
(a) 110 (b) 120 (c) 720 (d) None

CO2, L2

Q61) Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?
(a) 25200 (b) 120 (c) 22400 (d) None

CO2, L2

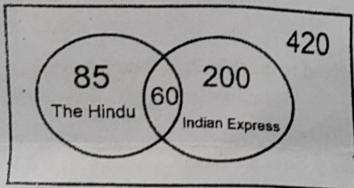
Q62) In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?
(a) 720 (b) 520 (c) 230 (d) None

CO2, L2

Q63) How many integers, greater than 999 but not greater than 4000, can be formed with the digits 0, 1, 2, 3 and 4, if repetition of digits is allowed?
(a) 367 (b) 375 (c) 376 (d) None

CO2, L2

Q64) From the information given below, find out the number of people who do not read any newspaper.



- (a) 165 (b) 195 (c) 155 (d) 175

CO2, L2

Q65) According to the survey made among 200 students, 140 students like cold drinks, 120 students like milkshakes and 80 like both. How many students like atleast one of the drinks?
(a) 120 (b) 180 (c) 160 (d) 170

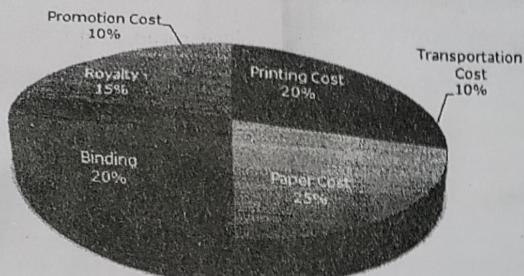
CO1, L3

Q66) In a group of 500 people, 350 people can speak English, and 400 people can speak Hindi. Find how many people can speak both languages?
(a) 200 (b) 250 (c) 300 (d) 350

CO1, L3

Q73) The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.

Various Expenditures (in percentage) Incurred in Publishing a Book



What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

- (a) 15 (b) 24 (c) 54 (d) 48

CO1, L3

Q74) Statements: Some Cats are Rats. All bats are tables. All Rats are Bats. Conclusion: I. Some Cats are bats

- II. All bats are rats
III. All tables are cats
IV. All bats are cats

- (a) Only I & II follow (b) Only II follows (c) Only I & IV follow (d) None of these

CO1, L3

Q75) Statements: Some ships are boats. All boats are submarines. Some submarines are yatches. Conclusion: I. Some yatches are boats.

- II. Some submarines are boats. III. Some submarines are ships. IV. Some yatches are ships
(a) All follow (b) Only II and III follow (c) Only III follows (d) Only IV follows

CO1, L3

Q76) Statements: All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone. Conclusion: I. All bedsheets are birds

- II. Some bedsheets are birds III. Some birds are telephone IV. All telephone are birds

- (a) Only I follows (b) Only II follows (c) Only I and III follow (d) Only III follows

CO1, L3

Q77) Statements: Most CPUs are keyboards. No keyboard is a Mouse. All Mouses are CPU. Conclusion: I. Some keyboards are CPU

- II. All CPU's are Mouse
III. No Mouse is a keyboard
IV. Some Mouse are keyboard

- (a) Only I follows (b) Only II and III follow (c) Only I and III follow (d) Only II follows

CO1, L3

Q78) Statements: Samosas are Jalebi. All Jalebis are Tikki. All Tikkis are Barfi Conclusion: I. All Jalebis are Barfi

- II. All Tikkis are Samosas III. All Samosas are Barfi IV. All Barfi are Jalebi

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

CO1, L3

Q79) In a class of 50 students, 10 take Guitar lessons and 20 take singing classes, and 4 take both. Find the number of students who don't take either Guitar or singing lessons.

- (a) 24 (b) 26 (c) 4 (d) 34

CO1, L3

Q80) In a school, 150 students have to opt for at least one subject out of English, Physics and Mathematics. If 71 students opted for English, 98 students opted for Maths, 68 students opted for Physics and 14 students opted for all the three subjects, find the number of students who opted for exactly two subjects

- (a) 49 (b) 59 (c) 55 (d) 44

CO1, L3

-End of Question paper-