

(New Pattern) Inter (Part-I) Lahore Board 2004**Statistics****Paper I (Essay Type)****Time Allowed: 1.15 Hour****Max. Marks : 30**

Note: Each question starts from the sign ■. All questions are **COMPULSORY** and attempted on the answer-book.

- From the following data make a cumulative frequency polygon (Ogive) and locate median graphically: 3,2

Groups	5-10,	10-15,	15-20,	20-25,	25-29
F	10,	15,	20,	30,	17

- Compute the median co-efficient of dispersion from the following data: 5

Marks	No. of Students
30-39	8
40-49	87
50-59	190
60-69	86
70-79	20

- Find the Index number of Price from the following data taking average price of all years as base: 5

Years	1970	1971	1972	1973	1974	1975	1976	1977
Price	15	19	21	30	37	38	40	48

- A fair die is rolled once. You win the game if the outcome is either even or divisible by 3. What is the probability of winning the game? 5

- The r.v. X has the following probability distribution:

$X: 1, 5, 9$

$f(x) : a, b, c$

Where $a, b,$ & c are constants. It is known that $P(X < 4) = P(X > 4)$ and $P(X \leq 5) = 2P(X > 5)$ Find the values of $a, b,$ & c .

- Determine the probability distribution of white beads, if 5 beads are drawn from a bowl containing 4 white and 7 black beads.

Statistics
Time: 45 Minutes

Paper: I
Max. Marks: 29

(Objective Type)

Note: Use this paper to write the answer to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

7. Four possible answers to each statement are given below. Tick (✓) mark the correct answer: 10
- (i) Weight of earth is:
(Discrete variable, Continuous variable, Qualitative variable, Difficult to tell)
 - (ii) Statistics must be:
(Comparable, Not comparable, Discrete in nature, Qualitative in nature)
 - (iii) The data collected by NADRA to issue computerized identity cards are:
(Primary data, Secondary data, Un-official data, Qualitative data.)
 - (iv) The most suitable average for index numbers is:
(Arithmetic mean, Geometric mean, Harmonic mean, Median)
 - (v) The probability of red card out of 52 cards is:
(1/4, 1/2, 4/52, Zero)
 - (vi) var (ax + b) is:
(a² var(x) + b, a var(x), a² var(x), Zero)
 - (vii) Which is correct for the binomial distribution:
(Mean > Variance, Mean < Variance, Mean = Variance, Mean = Standard Deviation)
 - (viii) If var (x) = 5, var(y) = 10, then var (2x + y) is:
(10, 15, 30, 25)
 - (ix) In which distribution the successive trials are with replacement:
(Hypergeometric distribution, Binomial distribution, Continuous distribution, None of these)
 - (x) A fair coin is tossed four times the prob. of getting four heads is:
(1/4, 1/2, 1/16, 1)

8.(a) Tick (✓) mark T for True and F for False for the following statements: 5

- (i) Mode is suitable average for qualitative data. T/F
- (ii) $\sum X^2 = (\sum X)^2$ T/F
- (iii) In binomial distribution E (X) = 5 and S.D. = 3. T/F
- (iv) Mean deviation is greater than S.D. T/F
- (v) Paasches Index Number is base period weighted Index number. T/F

8.(b) Match the column A with column B and write correct answer in column C: 5

Column A	Column B	Column C
Cumulative frequency polygon	Standard deviation	-----
Index for base period in fixed base method	1	-----
Square root of second moment about mean	100	-----
Total relative frequency	OGIVE	-----
In hypergeometric distribution	Histogram	-----
$P(X < 0) =$	Zero	-----
	Variance	-----

9. Complete the following sentences: 9

- (i) Sum of deviation from mean is always _____.
- (ii) Mode is value that occur _____ number of time in a data.
- (iii) Measures of dispersion can not be _____.
- (iv) A set of possible out come is called _____.
- (v) In _____ both quantities and prices are used.
- (vi) Mathematical expectation is _____ of probability distribution.
- (vii) If $\beta_1 = 0$ and $\beta_2 = 3$ the distribution will be _____ and _____.
- (viii) The standard deviation of binomial distribution is _____.
- (ix) The parameters of hypergeometric distribution are _____.

(Objective Type)

Note: Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using pencil. This paper must be tagged with the answer-book.

7. Some possible answers to each statement are given below. Tick (✓) mark the correct answer: 10
- (i) A graph of a cumulative frequency distribution is called:
(Frequency curve. Frequency polygon. Ogive. Histogram)
 - (ii) The average value of the lower and upper limits of a class is called:
(Class boundary. Class frequency. Mid point. Class interval.)
 - (iii) The harmonic mean of two numbers a and b is:
 $\left(\frac{2ab}{a+b}, \frac{2}{\frac{1}{a} + \frac{1}{b}}, \frac{ab}{a+b}, \frac{a+b}{ab}\right)$
 - (iv) If any value is zero in the data then it is impossible to calculate:
(Arithmetic mean. Geometric mean. Mode. Median)
 - (v) If right tail is longer than the left tail, then distribution is called:
(Negatively skewed. Positively skewed. Symmetrical. None.)
 - (vi) The first moment about origin is equal to:
(Variance. Mode. Mean. Standard deviation)
 - (vii) The index numbers calculated by considering the relative importance of variables are called:
(Unweighted. Weighted. Simple. None)
 - (viii) The probability of sure event is:
(Zero. Negative. One. Less than one.)
 - (ix) In binomial experiment each trial has:
(One outcome. Two outcomes. Three outcomes. Four outcomes.)
 - (x) The properties of hypergeometric experiment are:
(Three. Four. Five. One.)

- 8.(a) Tick 'T' for True and 'F' for False: 5
- (i) A parameter is a measure computed from sample data. T / F
 - (ii) If left tail is longer than right tail then distribution is called symmetrical. T / F
 - (iii) When A and B are two disjoint events then $P(A \cap B) = 0$ T / F
 - (iv) A continuous random variable can be measured exactly. T / F
 - (v) The mean of the binomial distribution is less than its variance. T / F
- 8.(b) Match column 'A' with column 'B' and write correct answer in column 'C': 5

Column 'A'	Column 'B'	Column 'C'
Tabulation	Dividing a current period price by a base period price and multiplying the result by 100	
Inter quartile range	Number of errors per page of a balance sheet	
Price relative	Half of the difference between upper and lower quartiles	
Mutually exclusive events	The distance between the lower and the upper quartiles	
Discrete random variable	Arrangement of data into rows and columns	
	$P(A \cap B) = \phi$	
	When events have no experimental outcomes in common	

9. Complete the following sentences: 9
- (i) The height of the histogram represents the class _____.
 - (ii) When the qualitative data is divided into two groups it is called _____.
 - (iii) The _____ is a measure of relative variation expressed in percentage form.
 - (iv) If all items are given equal weights, the index number is called _____.
 - (v) When A and B two mutually exclusive events then $P(A \cap B) =$ _____.
 - (vi) When two cards are selected at random without replacement from an ordinary pack of 52 cards there are _____ possible outcomes.
 - (vii) The sum of squared deviations about the mean is _____ than the sum of the squared deviations about other measures central tendency.
 - (viii) If there are N sets of n independent trials, then the binomial frequency distribution is given by _____.
 - (ix) When 'p' the probability of success changes from trial to trial then the experiment would be a _____ experiment.

Section - I

2. Write any TWENTY-TWO (22) short answers of the following questions: 44
- (i) Describe two functions of Statistics.
 - (ii) What is primary data?
 - (iii) What is tabulation?
 - (iv) Define histogram.
 - (v) What is an Ogive?
 - (vi) Define arithmetic mean.
 - (vii) What is the mode of the letters in the word "STATISTICS"?
 - (viii) Define mode.
 - (ix) What are important types of average?
 - (x) What do you mean by percentiles?
 - (xi) Find the arithmetic mean given $D = X - 18$, $\sum D = 150$ and $n = 25$.
 - (xii) Define range.
 - (xiii) What will be the variance of 3, 3, 3, 3, 3, 3?
 - (xiv) Define moments.
 - (xv) What are important types of dispersion?
 - (xvi) For a set of ungroup values the following sums are found:
 $n = 5$, $\sum X = 480$, $\sum X^2 = 15735$. Find coefficient of variation.
 - (xvii) What would be the shape and name of the frequency distribution if
(i) mean = median = mode
(ii) mean > median > mode
 - (xviii) Define an index number.
 - (xix) Name the three basic types of index number.
 - (xx) Given the following information:
 $\sum(W \times I) = 8074.5$, $\sum W = 60.25$. Find consumer price index number.
 - (xxi) What is Laspeyre's index number?
 - (xxii) How many possible permutations can be formed from the word "PAKPATIAN"?
 - (xxiii) Show that ${}^n C_r = {}^n C_{n-r}$.
 - (xxiv) Write the statement for multiplication law of probability for independent events.
 - (xxv) What is the range of probability?
 - (xxvi) What is the probability of selecting a white ball from 4 red, 8 black, and 3 white balls?
 - (xxvii) Define equally likely events?
 - (xxviii) What does "P.d.f." stand for?
 - (xxix) Given $E(X) = 3.5$ and $E(X^2) = 15.17$ find var (X).
 - (xxx) Is it possible to have a binomial distribution with mean 5 and S.D. = 3?
 - (xxxi) What is range of the binomial random variable X?
 - (xxxii) What is mean and variance of the binomial probability distribution?
 - (xxxiii) Define hypergeometric distribution.

Section - II

- Note: Attempt any THREE questions.
- 3(a) Following are the number of mistakes made by 30 typists in a test: 4
- 5, 6, 0, 5, 8, 4, 3, 5, 7, 9, 4, 7, 8, 6, 8, 3, 2, 7, 1, 4, 5, 9, 6, 4, 5, 10, 5, 4, 9, 6
- Make a frequency distribution of the data.
- (b) Find mean, median number of leaves per branch:
- | | | | | | | | | |
|-----------------|---|----|----|----|----|----|---|---|
| No. of leaves | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| No. of branches | 5 | 23 | 34 | 50 | 98 | 75 | 4 | 2 |
- 4(a) Following information regarding the two series are given below: 4
- $n_1 = 150$, $\sum (x_1 - 100) = 180$, $\sum (x_1 - 100)^2 = 245320$
- $n_2 = 200$, $\sum (x_2 - 100) = 250$, $\sum (x_2 - 100)^2 = 43850$
- (b) The first four moments about $X = 62$ are 1, 4, 10 and 46. Find first four moments about mean. 4
- 5(a) Construct chain base indices using A. mean as average taking base 1940: 4

Commodities	Years				
	1940	1941	1942	1943	1944
Wheat	2.8	3.4	3.6	4.0	4.2
Rice	10.5	10.8	10.6	11.0	11.5
Maize	2.7	3.2	3.5	3.8	4.0

- (b) Construct I-N for 1950 and 1951 from given data with current year weighted: 4

Commodities	Price			Quantities		
	1946	1950	1951	1946	1950	1951
A	64	75	80	270	276	290
B	40	45	41	124	118	144
C	18	18	20	130	121	137
D	25	25	56	185	267	335

- 6(a) A bag contains 2 red, 3 green, 5 blue, 2 yellow, balls. Find the probability that balls of all the colours are represented if a sample of four balls is selected at random. 4
- (b) A continuous random variable x that can assume values between $x = 2$ and $x = 5$ has a density function given by $f(x) = \frac{2(1+x)}{27}$
- Find: (i) $P(x < 4)$ (ii) $P(3 < x < 4)$ 4
- 7(a) If 10% of the parts produced by a machine are defective, determine the probability that of 4 parts chosen at random: 4
- (i) At most one defective. (ii) All are defective.
- (b) A box contains eight items from which three are defective. A sample of three items to be selected. Compute the probability distribution for the number of defective items. Also compute mean and variance of this distribution. 4

(Essay Type)

Note: All questions are attempted on the answer book.

SECTION - I

1. Write any TEN short answers of the following questions: 20
- (i) Factorize $9a^2 + 16b^2$
 - (ii) Write two proper subsets of $\{0,1\}$
 - (iii) Define a Hermitian and Skew Hermitian matrix.
 - (iv) Use the factor theorem to show that $x - 2$ is a factor of $x^3 + x^2 - 7x + 1$.
 - (v) Evaluate $(1 + \omega - \omega^2)(1 - \omega + \omega^2)$, where ω is complex root of unity.
 - (vi) If $2n - 3 = 2n - 5$, find the n th term of the sequence?
 - (vii) Evaluate ${}^{12}P_5$.
 - (viii) State the principle of extended mathematical induction.
 - (ix) What is the sexagesimal system of angles?
 - (x) Express $2\sin 30\cos \theta$ as sum.
 - (xi) Find the period of $\sin \frac{x}{3}$.
 - (xii) State the laws of cosines for a triangle.
 - (xiii) Find the area of ΔABC with $a = 200$, $b = 120$, $\gamma = 150^\circ$.
 - (xiv) Prove that $\tan^{-1} A - \tan^{-1} B = \tan^{-1} \frac{A - B}{A + B}$
 - (xv) Find the solution of $\operatorname{cosec} x = 2$ on $[0, 2\pi]$

SECTION - II

Note: Attempt any FOUR questions.

- 2.(a) Find out real and imaginary parts of the complex number $(\sqrt{3} + i)^4$ 5
- (b) Solve the system of linear equations by Cramer's rule 5

$$\begin{aligned} 2x + 2y + z &= 3 \\ 3x - 2y - 2z &= 1 \\ 5x + y - 3z &= 2 \end{aligned}$$

- 3.(a) Solve the equation 5

$$\sqrt{3x^2 - 7x - 30} - \sqrt{2x^2 - 7x - 5} = x - 5$$

- (b) Resolve $\frac{3x - 11}{(x^2 + 1)(x + 3)}$ into partial fractions. 5

- 4.(a) Find the sum of the series $1^3 + 3^3 + 5^3 + \dots$ to n terms. 5

- (b) A card is drawn from a deck of 52 playing cards what is the probability that it is a diamond card or an ace? 5

- 5.(a) For what value of n is $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ 5

the geometric mean between a & b ?

- (b) Prove by mathematical induction for all positive integral values of n

$$2 + 6 + 18 + \dots + 2 \times 3^{n-1} = 3n - 1. \quad 5$$

- 6.(a) Prove that $\frac{2\sin \theta \sin 2\theta}{\cos \theta + \cos 3\theta} = \tan 2\theta \tan \theta$ 5

- (b) A kite flying at a height of 67.2 m is attached to a fully stretched string inclined at an angle of 55° to the horizontal. Find the length of the string. 5

- 7.(a) Prove that $\frac{1}{r^2} + \frac{1}{r_1^2} + \frac{1}{r_2^2} + \frac{1}{r_3^2} = \frac{a^2 + b^2 + c^2}{\Delta^2}$ 5

- (b) Solve the following trigonometric equation 5
- $$2\sin \theta + \cos^2 \theta - 1 = 0$$

(Objective Type)

Note: Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

8. Four possible answers to each statement are given below. Tick (✓) mark the correct answer: 15

- (i) If n is a prime number then \sqrt{n} is:
(an irrational number, a rational number, a prime number, none of these)
- (ii) Number of identity elements in any group are:
(1, 2, 3, none of these)
- (iii) A square matrix A is skew hermitian if $(A)^t =$
($A, \bar{A}, A^t, -A$)
- (iv) If $f(x) = x^3 + 4x^2 - 2x + 5$ is divided by $(x - 1)$ then remainder is:
(8, 10, -8, none of these)
- (v) If a, A, b are in A.P then $2A$ is:
($a - b, \frac{a+b}{2}, a+b, b - a$)
- (vi) ${}^r C_{n-r} =$
(${}^{n+1} C_r, {}^n C_r, {}^{n-1} C_{n-r},$ none of these)
- (vii) Partial fraction of $\frac{7x^2 + 25}{(x+3)(x+4)}$ will be of the form:
($\frac{A}{x+3} + \frac{B}{x+4}, 1 + \frac{A}{x+3} + \frac{B}{x+4}, 7 + \frac{A}{x+3} + \frac{B}{x+4}$, none of these)
- (viii) If n is even then the middle terms in the expansion of $(a+b)^n$ are:
($\frac{n}{2} + 1, \frac{n+1}{2}, \frac{n-1}{2}$, none of these)
- (ix) The inequality $n! > 2^n - 1$ is valid if n is:
($n=3, n \leq 3, n < 4, n \geq 4$)
- (x) Value of $\sin 60^\circ$ is:
($\frac{2}{\sqrt{3}}, \frac{\sqrt{3}}{2}, 2\sqrt{3}$, none of these)
- (xi) $\sin 3\alpha =$
($3 \sin \alpha + 4 \sin^3 \alpha, 4 \sin \alpha + 3 \sin^3 \alpha,$
 $3 \sin \alpha - 4 \sin^3 \alpha, -3 \sin \alpha + 4 \sin^3 \alpha$)
- (xii) Domain of $\cos x$ is:
(Z, Q, R , none of these)
- (xiii) If $y = \cos^{-1} x$ then range is:
($[0, \pi], [-1, 1], [-\frac{\pi}{2}, \frac{\pi}{2}]$, none of these)
- (xiv) Radius of escribed circle opposite to the vertex A is:
($\frac{\Delta}{a}, \frac{\Delta}{s}, \frac{s-a}{\Delta}, \frac{\Delta}{s-a}$)
- (xv) Solution of the equation $1 + \cos \theta = 0$ are in quadrants:
(II & III, I & IV, II & IV, none of these)

9. Complete the following sentences: 15

- (i) Converse of the conditional : $q \rightarrow p$ is _____
- (ii) If two columns of a square matrix A are identical then $|A| =$ _____
- (iii) Conjugate of complex number $(-2, -3)$ is _____
- (iv) Four fourth roots of unity are: _____
- (v) If $|r| > 1$ then infinite geometric series is called _____
- (vi) With usual notations $\sum_{k=1}^n k^2 =$ _____
- (vii) ${}^n P_3 =$ _____
- (viii) $\frac{n!}{(n-2)!} =$ _____
- (ix) One degree \approx _____ radian.
- (x) Order of middle term in expansion of $(a+b)^{16}$ is _____
- (xi) If $\cot \theta > 0$ and $\operatorname{cosec} \theta < 0$ then terminal arm of θ lies in _____
- (xii) $\tan(\frac{3\pi}{2} - \theta) =$ _____
- (xiii) $\sin^{-1} \alpha + \sin^{-1} \beta =$ _____
- (xiv) Period of $y = \sec x$ is _____
- (xv) If $1 + \cos x = 0, x \in [0, 2\pi]$ then $x =$ _____

10. Match the column 'A' with column 'B' and write correct answer in column 'C': 10

Column 'A'	Column 'B'	Column 'C'
$\forall a, b, c \in R, c > 0$ $a > b \Rightarrow ac > bc$	Communicative	
$\sim (P \vee Q)$	$\bar{P} \wedge \bar{Q}$	
Matrix multiplication is not $\frac{1}{i^3}$	$1^3 + 2^3 + 3^3 + \dots + n^3$	
$\frac{n^2(n+1)^2}{4}$	General term	
$\binom{n}{r} a^n b^r$	0	
$\cos(\frac{3\pi}{2})$	Δ^2	
$s(s-a)(s-b)(s-c)$	$-\sin \theta$	
$\sin(-\theta)$	Area of in-circle	
πr^2	Multiplicative property	
	$P \wedge \sim Q$	
	$P \vee \sim Q$	
	Associative	

Inter(Part-I) Lahore Board 2007

Business Mathematics

Paper: I (Objective Type)

Time Allowed: 15 Min.

Max. Marks: 10

(Group – II)

Note: Write your Roll No. in space provided. Over-writing, Cutting, Erasing, Using lead pencil will result in loss of marks. This paper must be tagged with the answer-book.

1. Four possible answers are given for the following questions. Tick (✓) mark the correct answer: 15

- (i) The ratio $\frac{4}{9} : \frac{1}{3}$ in lowest term is:
(4 : 3 , 3 : 4 , 9 : 3 , 3 : 1)
- (ii) Interest is classified in:
(Two classes , Three classes , Four classes , None of these)
- (iii) Rs. 500 double itself in 5 years at the rate of:
(20% , 30% , 40% , 50%)
- (iv) 5 , 10 , 8 are:
(Variables , Constants , Independent variables , None of these)
- (v) In the equation $3x - 6 = 0$, the quantity x is called:
(Constant , Unknown , Coefficient , None of these)
- (vi) The solution set of the equation $x^2 + 2x + 1 = 0$ is:
({1} , {-1} , {1 , -1} , None of these)
- (vii) If order of A is $m \times n$ and order of B is $n \times p$, then order of AB is:
($m \times p$, $m \times n$, $n \times m$, $p \times m$)
- (viii) The determinant of the matrix $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ is:
(Zero , Negative , One , None of these)
- (ix) 21 in binary number system is:
(10101 , 1011 , 10111 , 10001)
- (x) Convert in decimal system to (1001):
(9 , 7 , 5 , 3)

Inter(Part-I) Lahore Board 2007

Business Mathematics

Paper: I (Objective Type)

Time Allowed: 15 Min.

Max. Marks: 10

(Group - I)

Note: Write your Roll No. in space provided. Over-writing, Cutting, Erasing, Using lead pencil will result in loss of marks. This paper must be tagged with the answer-book.

1. Four possible answers are given for the following questions. Tick (✓) mark the correct answer: 15

(i) What percent Rs.30 is of 300:

(30% , 20% , 10% , 15%)

(ii) The compound interest for two years at 10% is Rs. 4200 the principal is:

(Rs. 5000 , Rs.10000 , Rs.15000 , Rs.20000)

(iii) If 60 males do a job in 8 days, how many will require to do the job in 5 days:

(50 , 96 , 86 , 100)

(iv) The domain of the function $f(x) = \frac{1}{x-3}$ is:

($\{3\}$, \mathbb{R} , $\mathbb{R} - \{x \mid x = 3\}$, None of these)

(v) $x^4 - 6x^2 + 10 - \frac{6}{x^2} + \frac{1}{x^4} = 0$ is:

(Quadratic equation. Irrational equation. Exponential equation. Reciprocal equation.)

(vi) A linear equation has always:

(Three roots . Two roots . One root . None of these)

(vii) The determinant of an identity matrix is:

(0 , 1 , -1 , $\frac{1}{2}$)

(viii) If A is a matrix of order 2×3 and B is a matrix of order 3×2 then the order of AB is:

(3×3 , 2×2 , 2×3 , 3×2)

(ix) $(10110)_2 + (1000)_2 = :$

$(11000)_2$, $(11100)_2$, $(11110)_2$, $(11011)_2$

(x) 21 in binary number system is:

(10101 , 1011 , 10111 , 10001)

Inter(Part-I) Lahore Board 2005

New Scheme

Computer Science

Paper: I

Time: 1.45 Hour *ESSAY TYPE* Max. Marks: 46

Note: All questions are attempted on the answer book.

SECTION - I

1. Write any EIGHT short answers of the following questions: 16

- (i) What is a math co-processor?
- (ii) Define DVD ROM.
- (iii) Define Ethernet Card.
- (iv) What is Bus Topology?
- (v) What do you mean by full duplex mode?
- (vi) Define co-axial cable.
- (vii) Define online banking.
- (viii) Define voltage stabilizer.
- (ix) What is Aligning Paragraph in MS-Word?
- (x) Define Page Margin in MS-Word.
- (xi) Define two ways of copy and paste in Ms-Excel.
- (xii) What is a Format Painter in MS-Excel?

SECTION-II

Note: Attempt any three questions.

- 2.(a) What is computer? List out and explain three characteristics of personal computer. 5
- (b) What do you mean by "Cache Memory"? Explain the role of Cache Memory in computer system. 5
- 3.(a) Describe briefly three types of data transmission modes. 5
- (b) Define data. Describe any three types of data. 5
- 4.(a) What is meant by half and full duplex modes of data communications? 5
- (b) Write a note on Modem. 5
- 5.(a) What is Backup? Describe the media used for backup. 5
- (b) What is meant by software copyright? Write in detail. 5
- 6.(a) What is spreadsheet program? Define MS-Excel. 5
- (b) What is the purpose of the following: 5
 - (i) Bullets and numbers.
 - (ii) Find and replace commands.

Inter(Part-I) Lahore Board 2006

Computer Science (New Course)

Paper: I

Time: 1.45 Hours

Marks: 46

(Essay Type)

Note: All questions are attempted on the answer book.

SECTION – I

1. Write any Eight short answers of the following questions: 16
- (i) What is assembly language?
 - (ii) Write the names of some popular operating systems.
 - (iii) What are gateways?
 - (iv) Give three suggestions to protect from virus.
 - (v) What is data routing?
 - (vi) Define synchronous data transmission.
 - (vii) Purpose and short cut key of the Undo Command.
 - (viii) Give the difference between save and save as options.
 - (ix) List any four functions of excel.
 - (x) Define LAN and WAN.
 - (xi) What is search engine?
 - (xii) Define Hardware and Software.

SECTION – II

Note: Attempt any THREE questions.

- 2.(a) what is SDLC? Write down its phases with flow chart. 5
- (b) What are the characteristics that greatly affect the appearance of text on the page in MS-Word? 5
- 3.(a) What do you know about E-mail? Discuss briefly. 5
- (b) What is the purpose of Registers? Explain various Segment Registers. 5
- 4.(a) What is star topology? Explain its working with diagram. 5
- (b) What is signal? Discuss its different forms. 5
- 5.(a) What is output? How can we classify them into two types? Explain. 5
- (b) What is CBT (Computer Based Training)? 5
- 6.(a) What do you know about compiler and interpreter? Explain in detail. 5
- (b) How is the mouse used in windows environment? 5

(Objective Type)

Note: Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using pencil. This paper must be tagged with the answer-book.

7. Some possible answers to each statement are given below. Tick (✓) mark the correct answer: 8
- (i) A collection of raw facts and figure is called:
(Data, Information, Processing, None)
 - (ii) Which of the following is not a category of network:
(WAN, LAN, MAN, NAN)
 - (iii) GUI stands for:
(Graphical User Interface, General User Interrupt, Graphs, Utilities, Icon, Grayed User Interface.)
 - (iv) The top most layer of the OSI is:
(Application, Session, Transport, Presentation.)
 - (v) FTP stands for:
(File Transfer Protocol, Finis Tele Program, Finding Tele Path, Failed Transmission Pole.)
 - (vi) GB is approximately:
(1000 KB, 1024 MB, 100 TB, 1024 MB and 100 TB)
 - (vii) Temporary storage area within CPU is called:
(Registers, ALU, ROM, RAM.)
 - (viii) Which type of computer screen provides the highest quality image:
(LCD, CRT, Gas Plazma, None.)
8. Complete the following sentences: 8
- (i) An _____ records analog sound and translate it for digital storage and processing.
 - (ii) _____ is a 16 bit code.
 - (iii) The expansion bus is _____ to the system bus.
 - (iv) The technique of converting a digital signal to analog form is known as _____.
 - (v) The _____ reads the instruction from the memory and decodes these instructions.
 - (vi) Software is the _____ of person who develops it.
 - (vii) The _____ toolbar will allow you to draw many different geometrical shapes, arrows, flow charts etc. on the document.
 - (viii) A web page is a document written in _____.

9. Match the column 'A' with column 'B' and write correct answer in column 'C': 5,4

Column 'A'	Column 'B'	Column 'C'
RAM.	Output	-----
Scanner	Transmission mode	-----
Asynchronous	Physical Layer	-----
Full duplex	Volatile Memory	-----
Top layer of OSI	Element of Windows	-----
Icon	Input Device	-----
E-mail	Node	
Share ware	Character by character Transmission	
	Application layer	
	Name @ DNS Address	
	Limited period	
	Free of-cost	

Note: All questions are to be attempted on the answer book.

Section-I

2. Write any EIGHTEEN short answers of the following questions: (36)

- (i) What is a data process?
- (ii) What is application software?
- (iii) What is a plotter?
- (iv) What is meant by input devices?
- (v) What is a Gateway?
- (vi) What is an internet?
- (vii) What is FTP?
- (viii) What is meant by half duplex mode?
- (ix) What is meant by parallel transmission?
- (x) What is meant by online banking?
- (xi) What is meant by video conferencing?
- (xii) What is EEPROM?
- (xiii) What is a Cache Memory?
- (xiv) What is meant by a computer bus?
- (xv) What is meant by a serial port?
- (xvi) What is an object code?
- (xvii) What is language translator or language processor?
- (xviii) What is meant by anti-virus?
- (xix) What is purpose of password?
- (xx) What do you mean by plug and play?
- (xxi) What is meant by multi-user operating system?
- (xxii) What is meant by GUI?
- (xxiii) What is meant by word processing?
- (xxiv) What is header and footer?
- (xxv) What is spread sheet?
- (xxvi) What is nested function?
- (xxvii) What is www?

Section-II

Note: Attempt any THREE questions.

3. What are source Data-entry devices? List out different categories of devices? (8)
4. What is topology? Write note on any two of the following topologies: (8)
(a) Star (b) Ring (c) Bus
5. What do you mean by communication channel? Describe any three types in detail. (8)
6. Explain the architecture of computer system with the help of diagram. (8)
7. What is an operating system? Explain different objects of windows operating system. (8)

Note: Use this paper to write the answers to the objective questions. Nor make will be awarded for cutting, over-writing or using a pencil. The paper must be tagged with the answers-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer: (15)
- (i) Computer is a combination of:
(a) Hardware (b) Software
(c) Both (d) None of these
- (ii) System requirements are created during:
(a) Preliminary investigation (b) Analysis
(c) Design (d) Development
- (iii) A collection of computers connected is called:
(a) Processing (b) Networking
(c) Chatting (d) None of these
- (iv) Which of the following not a component of LAN:
(a) Cables (b) Gateway
(c) Bridge (d) Modem.
- (v) Which of the following coding scheme uses 4-bit code:
(a) ASCII (b) EDCDIC
(c) BCD (d) Unicode
- (vi) Which of the following is the fastest communication mode:
(a) Half duplex mode (b) Full duplex mode
(c) Simple (d) None of these
- (vii) CBT stand for:
(a) Computer Based Trade
(b) Computer Based Training
(c) Certified Based Training
(d) None of these
- (viii) Temporary storage area within CPU is called:
(a) Registers (b) ALU
(c) Bus interconnection (d) None of these
- (ix) A set of electrical path used to transfer data is called:
(a) Monitor (b) Bus
(c) Computer clock (d) None of these
- (x) Security protection for personal computers include:
(a) Internal component (b) Lock and cables
(c) Software (d) All of these
- (xi) A virus that replicates itself is called:
(a) Bug (b) Worm
(c) Vaccine (d) Bomb
- (xii) Window explorer is used to:
(a) Access the internet
(b) Explore the system resource
(c) Perform maintenance on the hard disk
(d) Navigate files and folders on the computer
- (xiii) Which of the following can be used to launch the Word Art:
(a) Status bar (b) Ruler
(c) Standard tool bar (d) Drawing tool bar
- (xiv) Which of the following is an absolute address:
(a) A1 (b) AIS
(c) A\$1\$ (d) None of these
- (xv) A computer can be linked to the internet through:
(a) A phone-line modem (b) DSL
(c) Cable modem (d) All of there

PART – I**Q. NO. 1 MCQ'S**

CHAPTER NO.	MCQ'S	CHAPTER NO.	MCQ'S
Chapter No. 1	2	Chapter No. 7	1
Chapter No. 2	2	Chapter No. 8	2
Chapter No. 3	2	Chapter No. 9	1
Chapter No. 4	1	Chapter No. 10	1
Chapter No. 5	2	Chapter No. 11	2
Chapter No. 6	1		

PART – II**SHORT QUESTIONS:****Q.NO. 2**

CHAPTER NO.	NO. OF QUESTIONS	
Chapter No. 1	4	
Chapter No. 3	4	
Chapter No. 11	4	

Q.NO. 3

CHAPTER NO.	NO. OF QUESTIONS	
Chapter No. 2	3	
Chapter No. 4	3	
Chapter No. 5	3	
Chapter No. 9	3	

Q.NO. 4 NO. OF QUESTIONS

CHAPTER NO.	NO. OF QUESTIONS	
Chapter No. 6	1	
Chapter No. 7	3	
Chapter No. 8	3	
Chapter No. 10	2	

Q.5

CHAPTER NO.	
Chapter No. 2	(A)
Chapter No. 4	(B)

Q. 6.

CHAPTER NO.	
Chapter No. 3	(A)
Chapter No. 5	(B)

Q.7.

CHAPTER NO.	
Chapter No. 6	(A)
Chapter No. 8	(B)

Q.8.

CHAPTER NO.	
Chapter No. 7	(A)
Chapter No. 9	(B)

Q.9.

CHAPTER NO.	
Chapter No. 10	(A)
Chapter No. 11	(B)