MCA / **Paper / Subject Code: 54803 / Computer Network** Nov - 2018

Sem - II CBSGS

[3 hours] [Marks: 80]

a) Question No. 1 is compulsory
b) Attempt **any four** from the remaining six questions
c) Assumptions should be made whenever required and should be clearly stated
d) Answers to sub questions should be answered together
e) Illustrate answers with diagrams wherever necessary
f) Use of Calculators is permitted

Q1	A	Explain the IEEE 802.3 standard.	10
	B	What are connecting devices? Explain the various connecting devices used at the various layers of the communication model	10
Q2	A	Explain difference between distance vector and link state routing protocol. Explain anyone link state routing algorithm in detail.	8
	B	Find the CRC for $F(x) = X^6 + 1$ using the divisor polynomial $G(x) = X^4 + X^3 + X + 1$.	7
Q3	A	Explain the IP Addressing System along its classes. What do you mean by subnet masking?	8
	B	Describe the congestion control mechanism used in TCP.	7
Q4	A	Explain the Multicasting Algm MOSPF.	8
	B	Differentiate between the following 1. Connection Oriented and Connectionless communications 2. Routers and Switches	7
Q5	A	Explain how MPLS solves the problems of traditional routing algorithms.	8
	B	What are transmission impairments? Explain the various impairments effecting wired medium.	7
Q6	A	What are the guided and unguided media? Explain the twisted pair and optical fibers as guided medium	8
	B	In which Layer PPP works ? Explain PPP in detail	7
Q7	A	Write Short Notes on **any three** of the following 1. BGP 2. FTP 3. NAT 4. QOS	15

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MCA. / Paper / Subject Code: 54705 / Financial Management / NOV-2018.

Sem-II.

(3 Hours) Total Marks: 100

Please check whether you have got the right question paper.

Note : 1. Question No. 1 is compulsory.
2. Attempt any two questions from question no. 2-4
3. Attempt any two questions from question no. 5-7
4. Answer to questions should be grouped and written together.
5. Figures to the right indicate full marks assigned to the question.

Q1

(A) What do mean by Ratio Analysis? Explain advantages and disadvantages of Ratio Analysis. 10M

(B) From the following trial balance and additional information prepare Trading account, Profit & Loss account and the Balance Sheet of Ranbeer Singh & Sons. For the year ended on 31st March, 2018. 10M

Particulars	Dr. (Amount)	Cr. (Amount)
Purchases	67,000	-
Sales	-	1,25,000
Salaries	10,000	-
Rent	3,000	-
Carriage inward	2000	-
Purchase Return	-	2000
Insurance	3000	-
Wages	5000	-
Bad Debts	2000	-
Advertisement	5000	-
Opening stock	8000	-
Debtors	35000	-
Creditors	-	19000
Cash in hand	24000	-
Machinery	46000	-
Building	20000	-
Loan from SBI	-	21000
Miscellaneous Expenses	2000	-
Capital	-	65000
Total	**2,32,000**	**2,32,000**

Additional Information

1) Closing Stock Rs.7600/-
2) Depreciation on Machinery @ 10% per Annum and Building @15% per Annum.

Q 2 (A) Journalized the following transactions in the journal of Pallavi Traders for the month of October 2018 10M

October 1st	Pallavi started business with cash of Rs. 200000/-
October 5th	Bought goods for cash Rs.10000/-
October 10th	Received a cheque of Rs.35000/- from Kaveri
October 12th	Purchased goods of Rs.56000 @ 10 % cash Discount
October 15th	Sold Motor car for Rs.35000/-
October 20th	Paid Cash to Ms.Neeta Rs.15000/-
October 22nd	Withdrew goods worth Rs.15000/- for personal use.
October 24th	Salaries paid Rs.70000/-
October 27th	Paid Income Tax of Rs.25000/- by cash
October 31st	Paid Insurance Premium of Rs.16250/- by cheque

(B) What do you mean by Cost? Explain different Cost elements in detail. 10M

Q3

(A) Explain Master and Flexible Budget in detail. 10M

(B) What is an Account? What are the different types of Accounts? Explain the golden rules of accounting with suitable examples. 10M

Q 4

(A) Prepare Cash Book with Discount, Cash and Bank as Column for October. 2018 of M/s. Deepika & Co. 10M

October 2018	
1st	Cash balance Rs. 80,000/- and bank balance Rs.10,000/-
5th	Received from Nandesh cash of Rs. 5,000/- and crossed cheque for Rs.35,000/-
6th	Paid to Manish Rs. 3000/- by cheque.
8th	Cash sales Rs. 7,000/-
15th	Deposited into bank Rs. 15,000/-
18th	Purchased goods for Rs. 6,000/-
25th	Surya Enterprise has directly deposited into our bank account Rs.3,000/-
28th	Paid Advertisement Charges by cheque Rs. 1,000/-
30th	Withdrew by cheque Rs.1,500 for office use and Rs. 1,000 for personal use.
31st	Paid Rent Rs.2,500/-

(B) Explain advantages and disadvantages of a Fund Flow Statement 10M

Q.5

(A) What is Working Capital? Explain importance of Working Capital. 10M

(B) From the Following information of Subhod and Kashinath Company : 10M

Particulars	Amount(Rs.)
Sales	15,00,000
Cost of Sales	14,00,000
Net Profit	3,00,000
Inventory	6,00,000
Current Assets	5,00,000
Fixed Assets	8,00,000
Net Worth	10,00,000
Long-term Debt	6,00,000
Net profit before tax and Interest	5,00,000
Current Liabilities	1,00,000

Calculate Gross Profit Ratio, Net Profit Ratio, Current Ratio, Liquid Ratio

Q.6

(A) Explain the reasons for disagreements in Bank Reconciliation Statements. 10M

(B) From the following information prepare a Cash Budget for the months of January to April 2018 : 10M

Months	Sales (Rs)	Purchases(Rs)	Wages (Rs)	Manufacturing Expenses(Rs)
Nov 2017	300000	150000	30000	11000
Dec 2017	350000	200000	32000	12000
Jan 2018	250000	150000	25000	9000
Feb 2018	300000	200000	30000	10500
Mar 2018	350000	225000	24000	11000
Apr 2018	400000	250000	26000	12000

Additional information

1. Opening Cash Balance on 1st January 2018 is Rs.150000/-
2. The customers are allowed a credit period of two months.
3. The creditors are allowing a credit of two months
4. Interest payable Rs.100000/- in April 2018.

Q.7

(A) Explain different methods of Costing. 10M

(B) Explain Cash Discount and Trade discount with examples 10M

MCA / Paper / Subject Code: 54804 / Probability & Statistics / NOV-2018

MCA - II - CBSGS

Time: 3 Hours **(Total Marks: 80)**

N.B (1) Question No1 is compulsory.
(2) Attempt any four questions out of remaining six questions.
(3) Assume necessary data but justify the same
(4) Figures to the right in parenthesis indicate full marks
(5) Use of scientific calculator is allowed

1. (a) Find the probability that all the vowels in the word 'ACCREDITATION' come together (05)

(b) Mean & standard deviation of 100 items are 40 & 10. If at the time of the calculation two items are wrongly taken as 30 & 72 Instead of 3 & 27, find the correct mean and S.D. (05)

(c) Calculate the mean, median & mode for the following (05)

i)16,19,27,10,5,7,12,15 ii)4,1,3,2,3,4,3,3,1,2,5,2,0,1,6

(d) Consider an experiment "three coins are tossed". Let the random variable X='number of heads' a) Find the values of X b) Find the probability of X c) Find the probability mass function d) Find the cumulative distribution function (05)

2. (a) The regression line of y on x for a certain bivariate data is (08)

$5y + 3x = 52$ and the regression line of x on y is $2x + y = 30$.

Find 1) the arithmetic mean of x and y

2)the coefficient of correlation between x and y

3) the most probable value of y when $x = 10$

(b) Calculate modal marks obtained by 49 students from the following. (07)

Marks obtained	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
No. of students	5	6	15	10	5	4	2	2

3. (a) The probability mass function of a random variable x is zero Except at the points x=0,1,2 At these points it has the values (08)

$P(0)=3c^2$, $P(1)=4c-10c^2$ and $P(2)=5c-1$, for some $c>0$

i)Determine the value of c ii) Compute the $P(X<2)$

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3. (b) The following table gives the number of accidents in a city during a week whether the accidents are uniformly distributed over a week. Find whether the accidents are uniformly distributed over a week (07)

Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
No of accidents	13	15	9	11	12	10	14

(Given: The value of x^2 at 5% level of significance for 6 degree of freedom is 12.59)

4. (a) i)If four squares are chosen at a random on a chess board, find the chance that they should be a diagonal line. (08)

(b) The following are the marks in P&S(X) and DS(Y) of 10 students: (07)

X	56	55	58	58	57	56	60	54	59	57
Y	68	67	67	70	65	68	70	66	68	66

Calculate Karl Pearson's coefficient of correlation between X and Y.

5. (a) The probability that the man aged 60 will live up to 70 is 0.65. What is the probability that out of 10 such men now at 60, at least 7 will live up to 70? (08)

(b) Calculate Bowley's coefficient of skewness from the following data: (07)

Wages	1000-2000	2000-3000	3000-4000	4000-5000	5000-6000
Number of workers	7	12	18	8	5

6. (a) The number of accidents in a year attributed to taxi drivers in a Dadar follows Poisson Distribution with mean 3. Out of 1000 taxi drivers, find approximately the number of drivers With (08)

i)no accident in a year ii)more than 3 accident in a year

(Given that e-1 =0.3679 , e-2 =0.1353 , e-3 =0.0498)

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6. (b) Ram plays 12 game of chess with computer and he wins 6 games while computer wins 4 games and 2 games end in a tie. Ram again decides to play 3 games more. Find the probability that- (07)

i) Ram wins all three games. ii) Two games end in a tie.

7. (a) The Joint probability density function of the two dimensional random variable (X,Y) is given by (08)

$f(x,y)=8/9xy, \quad 1\leq x\leq y\leq 2$

$=0, \quad$ otherwise

i)Find the marginal densities of X and Y.

ii)Find the conditional density function of Y given X=x and conditional density function of X given Y=y.

(b) Find the Spearman's rank correlation of coefficient of the following (07)

X	20	23	23	25	27	27	32	45
F	18	22	24	29	33	36	36	36