Nirmala Memorial Foundation College of Commerce and Science

ASSIGNMENT TOPICS FOR INTERNAL ASSESSMENT ATKT

EXAMINATION, JANUARY,2025

FYBMS Semester I

<table>
<tr><td>Foundations of Human Skills</td><td>Stress management techniques adopted by companies</td></tr>
<tr><td>Business Communication</td><td>Colours as non-verbal communication</td></tr>
<tr><td>Introduction to Financial Accounting</td><td>A study on International Financial Reporting Standards</td></tr>
<tr><td>Foundation Course I</td><td>A study on social inequalities</td></tr>
<tr><td>Business Law</td><td>Cheque, essentials and various kinds of crossing of cheque</td></tr>
<tr><td>Business Statistics</td><td>
Q. 1) Find the median of the following distribution
<table>
<tr><td>Marks obtained</td><td>0 – 10</td><td>10 – 20</td><td>20 – 30</td><td>30 – 40</td><td>40 – 50</td></tr>
<tr><td>No of Students</td><td>5</td><td>8</td><td>27</td><td>14</td><td>6</td></tr>
</table>
Q. 2) Compute the Quartile deviation and coefficient of quartile deviation for the following distribution.
<table>
<tr><td>Weekly wages (in Rs)</td><td>0 – 100</td><td>100 – 200</td><td>200 – 300</td><td>300 – 400</td></tr>
<tr><td>No of workers</td><td>12</td><td>18</td><td>35</td><td>42</td></tr>
<tr><td>Weekly wages (in Rs)</td><td>400 – 500</td><td>500 – 600</td><td>600 – 700</td><td>700 – 800</td></tr>
<tr><td>No of workers</td><td>50</td><td>45</td><td>20</td><td>8</td></tr>
</table>
Q. 3) Two friends A and B fire at a target. The odds in favour of A hitting the target are 2/3 and the odds against B hitting the target are 3/5. Find the probability that
i. the target is hit,
ii. both hit the target,
iii. both miss the target.

Q. 4. Explain The concept of data and its types.
Q. 5) Following is the pay off matrix corresponding to four states of nature S1, S2, S3, S4 and four courses of action A1, A2, A3, A4.
</td></tr>
</table>

	<table><tr><td rowspan="2">State of nature</td><td colspan="4">Course action</td><td rowspan="2">Probability of state</td></tr><tr><td>A1</td><td>A2</td><td>A3</td><td>A4</td></tr><tr><td>S1</td><td>50</td><td>400</td><td>-50</td><td>0</td><td>0.15</td></tr><tr><td>S2</td><td>300</td><td>0</td><td>200</td><td>300</td><td>0.45</td></tr><tr><td>S3</td><td>-150</td><td>100</td><td>0</td><td>300</td><td>0.25</td></tr><tr><td>S4</td><td>50</td><td>0</td><td>100</td><td>0</td><td>0.15</td></tr></table> Calculate expected pay off and find best course of action using EMV. Calculate EOL for each course of action and find best course using EOL. Q. 6) Wirte a short note on skeness and kurtosis. Q. 7) Discuss the merits and demerits of Karl pearson's coefficient of correlation. Q. 8) Write a short note on expected value of perfect information. Q. 9) State the elements common to decision theory problems. Q. 10)State the merits and demerits of mean.
Business Economics I	A study on monopolistic and oligopolistic markets

FYBMS Semester II

Principles of Management	A study on 14 principles of management with a relevant case study
Business Communication II	Write a project on making of power point presentation
Principles of Marketing	A study on elements of marketing mix
Foundation Course II	A study on soil pollution
Industrial Law	A study on trade union act, 1926

Business Mathematics

1. A person has taken a loan of Rs. 40,000 from a money lender who charges a high interest at 10% per month. The person returns the loan in equal installments in 4 months. Find the EMI he has to pay and also prepare the amortization table of repayment.

2. In how many distinct ways can the letters of the word "CHEMISTRY" be arranged such that (i) there is no restriction (ii) the word begins with a vowel (iii) the letters T, R and Y are never together.

3. Obtain the technology matrix A for the following two industry input-output model. Assuming A to be constant, find the level of output when the final demand of both products is doubled.

Industry	Consumption by industry		Final demand	Total output
	X	Y		
X	40	50	110	200
Y	100	80	120	300
Labour	60	170		

What is the labour input requirement of this output?

4. Solve the following system of equations using Cramer's rule.
$2x + 3y + z = 9, \quad x + 2y + z = 6, \quad 3x + y + 2z = 8$

5. Find the inverse of $A = [1\,2\,-1\;4\,-1\;8\;6\;3\;5]$ using adjoint method.

6. Examine the maxima and minima for function $f(x) = 2x^3 - 9x^2 + 12x + 5$.

7. Differentiate the following with respect to x.
(i) $y = x^3 logx - xe^x$ (ii) $y = (2x^3 - 3x^2 + 5x - 10)(5e^x - 2logx)$

8. If the total cost of producing a product is given by $C(x) = 2x^3 - 5x^2 + 15x + 100$, find (i) average cost (ii) marginal cost (iii) actual cost of producing 11^{th} unit of product.

9. Using Newton's forward interpolation formula, find $f(70)$.

x	19	39	59	79	99
$f(x)$	41	103	168	218	235

10. The population of a town in the decennial census is given below. Estimate the population for the year 1976, using Newton's backward interpolation formula.

Year	1951	1961	1971	1981	1991
Population (in thousands)	46	66	81	93	104

Business Environment

A study on external environment