Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM & ENERGY STUDIES
End Semester Examination (Online) – Dec, 2021

Program: BBA LM **Semester: III**
Subject/Course: Spreadsheet Modeling **Max. Marks: 100**
Course Code: DSQT 2005 **Duration: 3 Hours**

1.	Define two person zero-sum game?	**2**	**CO1**
2.	Which of the following is a logical function (a) SUM (b) OR (c) COUNT (d) None of the above	**2**	**CO1**
3.	When you open an Excel workbook or spreadsheet, what kind of file is it? (a) .xlsx (b) .docx (c) .gsheet (d) .pdf	**2**	**CO1**
4.	The saddle point in a payoff matrix is always the _____ (a) largest number in the matrix (b) smallest number in its column and the smallest number in its row (c) smallest number in the matrix (d) largest number in its column and the smallest number in its row	**2**	**CO1**
5.	In ABC analysis the criteria for selection of the category is (a) Annual usage value (b) Unit price of item (c) Criticality of the item (d) None of the above	**2**	**CO1**
6.	Which symbol must all formula begin with? (a) = (b) + (c) ((d) %	**2**	**CO1**
7.	NWCM (North West Corner Method) is connected with (a) Transportation Problem	**2**	**CO1**

	(b) Game theory (c) Inventory Problem (d) None of the above		
8.	Which of the following is not an inventory? (a) Machine (b) Raw material (c) Finished products (d) Consumable tools	**2**	**CO1**
9.	<table><tr><th></th><th>A</th></tr><tr><td>1</td><td>104524</td></tr><tr><td>2</td><td>906346</td></tr><tr><td>3</td><td>176897</td></tr><tr><td>4</td><td>104524</td></tr><tr><td>5</td><td>906346</td></tr><tr><td>6</td><td>276897</td></tr><tr><td>7</td><td>004524</td></tr><tr><td>8</td><td>906346</td></tr><tr><td>9</td><td>76897</td></tr></table> Out of the formulas mentioned below, which formula result excel will not be able to calculate? (Use above mentioned excel sheet table) (a) =SUM(Sales)-A3 (b) =SUM(A1:A5)*.5 (c) =SUM(A1:A9)/(10-10) (d) =SUM(A1:A5)-10	**2**	**CO2**
10	Define SUM function with an example?	**2**	**CO2**

Section-B

Q.No	**Question**	**Marks**	**COs**
11.	A toy manufacturing company is giving discount on the marked price. Write a function to calculate the selling price and total selling price paid for the items ordered in the following format of excel. (Selling price of the item X is already calculated for your reference) <table><tr><th></th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th></tr><tr><td>1</td><td>Toys Category</td><td>Marked Price (M.P.)</td><td>Discount Per Unit</td><td>Quantity Ordered</td><td>Selling Price (S.P.) = M.P. - Discount</td><td>Total Selling Price = S.P. × Quntity ordered</td></tr><tr><td>2</td><td>X</td><td>12</td><td>2</td><td>10</td><td>=B2-C2</td><td></td></tr><tr><td>3</td><td>Y</td><td>8</td><td>3</td><td>5</td><td></td><td></td></tr><tr><td>4</td><td>Z</td><td>14</td><td>4</td><td>8</td><td></td><td></td></tr></table>	5	CO1

12. Discuss the importance of using spreadsheet in business. — 5 — CO1

13. Following are the per unit price of apple of different category. — 5 — CO4

	A	B
1	**Category**	**Price**
2	A	12
3	B	8
4	C	14
5	D	19
6	E	20

Which function will be used to solve the following questions also write an excel function to find

(a) The average price of the apples.

(b) The category of apple with maximum price.

14. Write a short note on linear programing model by considering a suitable example? — 5 — CO4

Section-B

15. The cost of a machine is Rs. 10,500 and the scrap (resale) value is Rs. 500. The yearly maintenance cost is as follows: — 10 — CO2

Year	1	2	3	4	5	6	7	8	8
Maintenance Cost	300	500	700	1000	1400	1900	2400	3000	3500

Find the optimum replacement period (considering the constant time value of money)

16. Explain the method of solving transportation problem in excel by taking suitable example. — 10 — CO2

17. The payoff matrix of a game is given below. Find the solution of the game to A and B. — 10 — CO3

	B1	B2	B3	B4	B5
A1	4	6	5	10	6
A2	7	8	5	9	10
A3	8	9	11	10	9
A4	6	4	10	6	4

'OR'

<table>
<tr><td></td><td>Discuss any four kinds of error appears in spreadsheet?</td><td></td><td></td></tr>
<tr><td colspan="4">Section-C</td></tr>
<tr><td>18.</td><td>Formulate an LP problem and determine an initial basic feasible solution of the following transportation problem by using North West Corner Method (NWCM)
<table>
<tr><th></th><th>D1</th><th>D2</th><th>D3</th><th>D4</th><th>supply</th></tr>
<tr><td>S1</td><td>2</td><td>3</td><td>11</td><td>7</td><td>6</td></tr>
<tr><td>S2</td><td>1</td><td>0</td><td>6</td><td>1</td><td>1</td></tr>
<tr><td>S3</td><td>5</td><td>8</td><td>15</td><td>9</td><td>10</td></tr>
<tr><td>Demand</td><td>7</td><td>5</td><td>3</td><td>2</td><td></td></tr>
</table></td><td>15</td><td>CO3</td></tr>
<tr><td>19.</td><td>A company manufactures a line of 10 items. Their usage and unit cost are shown in the accompanying table along with annual rupee value usage of each. Group items into ABC classification.
<table>
<tr><th>Item</th><th>Unit Usage</th><th>Unit Cost (in Rs.)</th></tr>
<tr><td>A</td><td>1100</td><td>2</td></tr>
<tr><td>B</td><td>600</td><td>40</td></tr>
<tr><td>C</td><td>100</td><td>4</td></tr>
<tr><td>D</td><td>1300</td><td>1</td></tr>
<tr><td>E</td><td>100</td><td>60</td></tr>
<tr><td>F</td><td>10</td><td>25</td></tr>
<tr><td>G</td><td>100</td><td>2</td></tr>
<tr><td>H</td><td>1500</td><td>2</td></tr>
<tr><td>I</td><td>200</td><td>2</td></tr>
<tr><td>J</td><td>500</td><td>1</td></tr>
</table></td><td>15</td><td>CO4</td></tr>
</table>