

Name:  
Enrolment No:



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

**Program: BBA DM**  
**Subject/Course: Spreadsheet Modeling**  
**Course Code: DSQT 2005**

**Semester: III**  
**Max. Marks: 100**  
**Duration: 3 Hours**

1.	Define SUMIF function?	2	CO1
2.	When creating formulas, what is a mixed reference? (a) One cell reference is absolute, the other must be manually assigned (b) Both cell references are either absolute, or relative (c) Both cell references are manually assigned (d) One cell reference is absolute, the other one is relative	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.	You can activate a cell by (a) Pressing the Tab key (b) Clicking the cell (c) Pressing an arrow key (d) All of the above	2	CO1
5.	In H-M-L (High, Medium, Low) 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.	A discount rate that makes the net present value (NPV) of all cash flows equal to zero in a discounted cash flow analysis. (a) MIRR	2	CO1

	(b) IRR (c) Profitability Index (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 border="1"> <thead> <tr> <th></th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Out of the formulas mentioned below, which formula result excel will not be able to calculate? (Use above mentioned excel sheet table)</p> <p>(a) =SUM(Sales)-A3 (b) =SUM(A1:A5)*.5 (c) =SUM(A1:A9)/(10-10) (d) =SUM(A1:A5)-10</p>		A	1	104524	2	906346	3	176897	4	104524	5	906346	6	276897	7	004524	8	906346	9	76897	2	CO2
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<b>Section-B</b>																							
<b>Q.No</b>	<b>Question</b>	<b>Marks</b>	<b>COs</b>																				
11.	A toy manufacturing company is giving 8% percent discount on the marked price. Calculate the total price paid for the items ordered in the following format using excel functions	5	CO1																				

	<b>Toys Category</b>	<b>Marked Price</b>	<b>Quantity Ordered</b>	<b>Total Marked Price</b>	<b>Discount (8%)</b>	<b>Final Price</b>		
	A	12	2					
	B	8	3					
	C	14	4					
	D	19	1					
	E	12	6					

**12.** Discuss the dimensions to judge product quality? 5 CO1

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

<b>Category</b>	<b>Price</b>
A	12
B	8
C	14
D	19
E	20
F	11
G	6
H	16
I	29
J	5

Use an excel function to find  
 (a) The average price of the apples.  
 (b) Maximum price of the apple.

**14.** 5 CO4

<b>Date</b>	<b>Region</b>	<b>Sales Person</b>	<b>Units</b>	<b>Total Amount</b>
24/06/2021	North	Jenifer	186	\$ 50,592
01/06/2021	East	Albert	356	\$ 96,832
09/09/2021	West	George	907	\$ 2,46,704
26/06/2021	South	Dyna	190	\$ 51,680
22/04/2021	North	Mark	717	\$ 1,95,024
22/03/2021	West	Jimmy	550	\$ 1,49,600
19/12/2020	East	George	942	\$ 2,56,224
31/10/2020	North	Jenifer	901	\$ 2,45,072
02/10/2020	West	Jimmy	117	\$ 31,824

Write the function in excel based on below conditions  
 (a) Find the total unit raised by George after 3/10/2021.  
 (b) Find the total unit raised from “North” region where items sold is greater than 300.

**Section-B**

15.	<p>Solve the following linear programming problem using simplex method in excel.</p> <p><b>Maximise</b> <math>Z = 3X_1 + 2X_2</math></p> <p><b>Subject to Constraints:</b></p> <p><math>X_1 + 2X_2 \leq 6,</math></p> <p><math>2X_1 + X_2 \leq 8,</math></p> <p><math>-X_1 + X_2 \leq 1,</math></p> <p><math>X_2 \leq 2,</math></p> <p><math>X_1, X_2 \geq 0</math></p>	10	CO2																														
16.	<p>Solve the following transportation problem using excel solver.</p> <table border="1" data-bbox="178 850 1258 1039"> <thead> <tr> <th>Unit Cost</th> <th>W1</th> <th>W2</th> <th>W3</th> <th>W4</th> <th>Supply</th> </tr> </thead> <tbody> <tr> <td>F1</td> <td>10</td> <td>0</td> <td>20</td> <td>11</td> <td>20</td> </tr> <tr> <td>F2</td> <td>12</td> <td>7</td> <td>9</td> <td>20</td> <td>25</td> </tr> <tr> <td>F3</td> <td>0</td> <td>14</td> <td>16</td> <td>18</td> <td>15</td> </tr> <tr> <td>Demand</td> <td>10</td> <td>15</td> <td>15</td> <td>20</td> <td></td> </tr> </tbody> </table>	Unit Cost	W1	W2	W3	W4	Supply	F1	10	0	20	11	20	F2	12	7	9	20	25	F3	0	14	16	18	15	Demand	10	15	15	20		10	CO2
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17.	<p>Using excel draw percentage pie chart for the following data and interpret your result.</p> <table border="1" data-bbox="178 1102 1339 1417"> <thead> <tr> <th>Crop</th> <th>Area (In Sq. ft.)</th> </tr> </thead> <tbody> <tr> <td>Cereals</td> <td>235</td> </tr> <tr> <td>Pulses</td> <td>180</td> </tr> <tr> <td>Vegetables</td> <td>320</td> </tr> <tr> <td>Fruits</td> <td>150</td> </tr> <tr> <td>Flowers</td> <td>80</td> </tr> <tr> <td>Others</td> <td>35</td> </tr> </tbody> </table> <p style="text-align: center;"><b>‘OR’</b></p> <p>Discuss any four kinds of error appears in spreadsheet?</p>	Crop	Area (In Sq. ft.)	Cereals	235	Pulses	180	Vegetables	320	Fruits	150	Flowers	80	Others	35	10	CO3																
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<b>Section-C</b>																																	

18.	<b>Cost of capital</b>		15%	5 5 5	CO3
	<b>Year</b>	<b>Project 1</b>	<b>Project 2</b>		
	1	-₹ 400	-₹ 800		
	2	₹ 130	₹ 360		
	3	₹ 190	₹ 360		
	4	₹ 260	₹ 360		
<p>(a) Calculate NPV for both the projects?  (b) Calculate IRR for both the projects?  (c) If the company can choose only one project, which project should it choose and why?</p>					
19.	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.			15	CO4
	<b>Item</b>	<b>Unit Usage</b>	<b>Unit Cost (in Rs.)</b>		
	A	1100	2		
	B	600	40		
	C	100	4		
	D	1300	1		
	E	100	60		
	F	10	25		
	G	100	2		
	H	1500	2		
	I	200	2		
J	500	1			