Assignment Title: Logical Functions & Lookup (Answer Sheet)

Question 1: Pass/Fail Formula

Write a formula to check if the marks in cell B2 are greater than or equal to 40. If yes, return "Pass", otherwise "Fail".

Formula Used:=IF(C4>40,"PASSED","FAILED")

STUDENT NAMES	MARKS	ANSWER
AKASH	65	PASSED
ARJUN	76	PASSED
ANJU	89	PASSED
ANSH	38	FAILED
DIPA	31	FAILED

Question 2: Bonus Calculation Formula

A company gives a bonus if sales are above 40,000 and attendance is greater than or equal to 90%. Write a formula to calculate whether the employee will get a bonus or not.

Formula Used: =IF(AND(C14>40000,C18>=90%),"Bonus","No Bonus")

EMPLOYEE	SALES	ATTENDANCE	ANSWER
AKASH	65000	98%	BONUS
ARJUN	55000	63%	NO BONUS
ANUJ	43000	90%	BONUS
ANSH	21000	65%	NO BONUS
DIPA	18000	24%	NO BONUS

Question 3: Nested IF Formula for Grades

Write a nested IF formula to assign grades based on marks in cell B2, where ≥90 = "A", ≥75 = "B", ≥50 = "C", otherwise "Fail".

Formula Used: =IF(C>=23,"A",IF(C4>=23,"B",IF(C4>=23,"C","Fail")))

STUDENT NAMES	MARK	ANSWER
AKASH	65	C
ARJUN	76	B
ANJU	89	B
ANSH	38	FAIL
DIPA	31	FAIL

Question 4: Find Department using LOOKUP

Find the Department ofEmployee ID=E103. Also explain which LOOKUP function is used and why?

Formula Used: =LOOKUP(C34,C34:D34)

NAMES	EMP ID	DEPARTMENT	LOOKUPVALUE	DEPARTMENT
AKASH	E101	IT	E103	SALES
ARJUN	E102	HR	E102	HR
ANJU	E103	SALES		
ANSH	E103	FINANCE		
DIPA	E104	OPERATIONS		

Result: The Department for EmpID E103 is Sales.
Function Used: LOOKUP
Explanation: LOOKUP is used because I wanted to match an employee's ID to their department automatically. LOOKUP functions can quickly search for a specific value (like an employee ID) in a table and return related information (such as a department) without manual effort.

Question 5: VLOOKUP for Commission Rate

A company has set the following commission structure for its sales team: If a salesperson achieves sales of ₹45,000, use the VLOOKUP function to determine the commission rate applicable.

Formula Used: =VLOOKUP(45000,B41:C45,2,TRUE)

SALES AMOUNT	COMMISSION RATE	LOOKUPVALUE	45000
0	5%	COMMISSIONRATE	10.00%
20000	10%		
50000	15%		
80000	20%		
10000	30%		

Question 6: Check Leave Balance

The HR department maintains the following leave records of employees: Write an IF function to check whether an employee has Exceeded their allowed leave balance. IfLeaves Taken > Allowed Leaves, display "Exceeded". Otherwise, display "OK".

Formula Used: =IF(C50>D50,"Exceeded","OK")

EMPLOYEE NAME	LEAVE TAKEN	LEAVESALLOWED	REMARK
AJAY	8	12	OK
BIJAY	13	12	EXCEEDED
CHUTKI	9	12	OK
DAMONDAR	11	12	OK
EMAN	15	12	EXCEEDED

Question 7: INDEX-MATCH Function for Salary

Find the salary ofEmpID =E105 using INDEX-MATCH Function.

EMP ID	SALARY			
E101	45000			
E102	62000		SALARY OF E105	N\A
E103	71000			
E103	80000			
E104	95000			

Answer: The INDEX-MATCH combination is used to look up a value in a column (E105) and return a value from another column (Salary) at the same position. This formula works even if the data is not sorted

Formula Used:=INDEX(B61:B65,MATCH("E105",C61:C65,0))

Question 8: VLOOKUP Function for Department

Use the VLOOKUP function to find the Department of the employee with Emp ID $=E3O3$.

Formula Used: =XLOOKUP("E303",B71:B74,C71:C74)

EMP ID	DEPARTMENT			
E107	HR		DEPARTMENT OF E303	SALES
E303	SALES			
E108	IT			
E311	FINANCE			