

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306

**POST GRADUATE DIPLOMA IN MANAGEMENT (2024-26)**  
**MID TERM EXAMINATION (TERM -IV)**

Subject Name: **HR Metrics and Analytics**

Time: **01.00 hrs**

Sub. Code: **PGH43**

Max Marks: **20**

**Note: All questions are compulsory.**

**Read the following case and answer the following questions:**

**10×2 = 20 Marks**

**Kindly write the all the course outcomes as per your TLEP in the box given below:**

**CO1-** Understand and employ appropriate software to record, maintain, retrieve and analyze human resources information (e.g., staffing, skills, performance ratings and compensation information) (**L2**)

**CO2-** Identify and analyze appropriate internal and external human resource metrics, benchmarks, and indicators (**L3, L5**)

**Caselet 1 – Use of HR data sources to find a solution through HR Analytics implementation**

**Company Profile**

Vision Solutions is a mid-sized IT services company with 850 employees across three locations in India (Bangalore, Pune, and Gurgaon). Founded in 2015, the company provides software development, cloud solutions, and IT consulting services to clients globally. The company has experienced rapid growth, expanding from 400 to 850 employees over the past three years.

**The Problem Statement**

In early 2024, the CEO, Rajesh Mehta, called an urgent meeting with CHRO Priya Sharma, presenting the following concerns:

**Business Challenges Identified:**

1. Employee attrition rate has increased from 12% to 23% over the past 18 months
2. Average time-to-hire has increased from 35 days to 52 days
3. Employee engagement scores have dropped from 7.8 to 6.2 (out of 10)
4. Project delivery delays have increased by 30% due to resource shortages
5. The company spends ₹55 Lakhs annually on training, but there's no clear measurement of its effectiveness
6. Cost-per-hire has risen to ₹65,000

**CEO's Directive:** "We're losing good people, struggling to hire replacements, and it's affecting our ability to deliver projects on time. I need data-driven solutions, not gut feelings. Can HR use analytics to diagnose what's wrong and fix it?"

**Available Resources**

Priya has been given:

- A budget of ₹8 lakhs for the analytics initiative
- Permission to form a cross-functional team
- 3-month timeline to present initial findings and recommendations
- Access to all company systems and data

**Question**

**5 x 2 = 10 marks**

1. Identify and list at least **8 data sources** (internal and external) that Priya's team should use for this HR analytics project.
2. For each source, specify, why is the data relevant to the problem?

## Caselet 2: Data Analysis

**Table 1**

Employee ID	Years Experience (X1)	Training Hours (X2)	Work-Life Balance (X3) #	Job Satisfaction (Y) #
1	5	40	4	7.5
2	2	25	3	6.2
3	8	60	4	8.1
4	1	20	2	5.8
5	7	55	5	7.9
6	3	30	3	6.5
7	10	70	5	8.3
8	1	15	2	5.5
9	4	45	4	7.2
10	6	35	3	6.8
11	9	65	4	8
12	2	22	2	5.9
13	5	50	4	7.6
14	2	28	3	6.1
15	8	62	5	8.2

# Higher value in work life means higher work life balance with 5 as highest value

# Higher value in Job satisfaction means higher Job Satisfaction with 10 as highest value

**Table 2**

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4.561037399	0.205318067	22.2144961	1.72755	4.10913538	5.012939417	4.10913538	5.012939417
X Variable 1	0.059611805	0.060750195	0.981261127	0.347553545	-0.07409847	0.193322082	-0.07409847	0.193322082
X Variable 2	0.027451655	0.013274381	2.068017704	0.062988093	-0.00176506	0.056668371	-0.00176506	0.056668371
X Variable 3	0.297317883	0.118995614	2.498561697	0.0295819	0.035410303	0.559225464	0.035410303	0.559225464

### Questions

**5 x 2 = 10 marks**

Table 1 - Y (Job satisfaction is the dependent variable) and Years of Experience, Training Hours and Work life balance are independent variables.

Table 2 is regression data analysis results

3. Ram has 20 years of exp. and has been trained for 70 hours. He has been rated 5 as his work life balance. HRBP wants to know Ram's attrition risk.  
Prepare the regression equation (where Y is Job Satisfaction) & predict the job satisfaction score for Ram.
4. Explain various data cleaning techniques?