

**JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA**

**PGDM / PGDM (SERVICE MANAGEMENT)**

**V TRIMESTER (Batch 2021-23)**

**END TERM EXAMINATION, FEBRUARY 2023**

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| Course Name | **Human Resource Analytics** | Course Code | **20328** |
| Max. Time | **2 Hours** | Max. Marks | **40 MM** |

**Instructions:**

1. All the questions are compulsory and carry 10 marks each.
2. Q.1-3 to be done in **a new MS-Word file** (Arial font size 11) while **Q.4 in MS-Excel file** named after Your Name & Roll No.
3. Overall Permissible Plag. is 10%, **Penalty Clause: 11-20% - Minus 5 Marks, Above 20% - Reappear**.
4. Be precise and objective in your answers.

**Q1.** Basis your good grade in the HR Analytics and relevant certifications in HR, you are hired for an HRBP role by an ITES firm. The CHRO and some reps. of top management want to understand the foundations of HR Analytics at this organization. Read, the below facts about the company’s requirement…

Over the last couple of years, I-Tec., a global software developing firm, is struggling to achieve its strategic plans. Though it has been able to achieve the intended sales figures with few new assignments with global clients, however, it has failed to touch the ropes when it comes to Human Resources emerging as a valued business partner. The gamut of HRP, TA, I&O, PMS, L&D, Comp. & Ben., Payroll, Employee Relations, HR Shared Services, has not delivered any strategic value but has been more traditional.

Make use of the tenet of descriptive, predictive, and prescriptive HR analytics and present your plan with a

a Blueprint for the HR Functions & Process of TA, I&O, L&D, PMS, C&B, ER, EE & HRSS.

**Q2.** *MegaMart* has the following historical HR data. Apply the relevant HR Metrics and assess health of HR functions/processes and their efficiency levels.

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| **Particulars** | **Benchmark** |
| * The company has over 1000 employees at its Faridabad office. For the month of Dec., the number of employees absent recorded were 550. It had 1003 active employees on Dec. 1, 2022 while this number got reduced to 453 at the end of Dec., 2022. The co. was open for 30 working days in the month of Dec. Measure the Absence Rate and Reflect. | 2% |
| * The company had a prog. to train new machine operators which costs Rs.20,25,000 to develop and implement. After completing the training prog., the average number of parts produced each year increased by 3,000, with a profit on each new part @ Rs.750. | As per Std. |
| * The company received 240 applications from a head-hunting firm. From those, only 120 candidates could qualify to Screening Calls. Then, 30 were given a Sales Assignment. Next, only 15 were invited to Prelim. Interview out of which 05 went through to Final Interview and finally 01 candidate received the offer. Measure Yield Ratios & Rates. | Min. & Max. Conversion Yield |
| * The following costs (in INR) were ascertained post the exits of 05 Hi-per employees in Sales department. Separation Cost 1,50,000; Replacement Cost 1,20,000; Training Cost 25,000; Loss of Sales 1,00,000. To replace those 05 employees, Recruiters took 02 weeks’ time with an additional bonus of 1,000 per replacement. | INR 65000-75000 |

**Q.3** SigmaTel, a TPP associate of global software giants, has delivery centers in Pan India. It has Software Developers, Programmers, and Consultants which are deployed in several locations (as mentioned in the table below). A month after SigmaTel decided to call back their 80% employees for WFO, is now baffled with the upsurge of the new variant of COVID-19. Given the situation, many requests are received by the management from the team members for allowing them to shift to their hometowns. The management agreed to accept formal requests and also communicated that if the requests are within specific limits and do not affect the delivery of the projects, they would allow the relocations.

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| **Data of SWD Team Members Movement in at SigmaTel (12 months)** | | | | | | | | |
| **SigmaTel** | **Trainee Software Developers (TSDs)** | No. of TSDs | CHN | HYD | DEL | BLR | MUM | Exit |
| **Dec-22** | Chennai (CHN) | 350 | 0.6 | 0.15 | 0.2 | - | - | 0.05 |
|  | Hyderabad (HYD) | 360 | 0.1 | 0.8 | 0.05 | - | - | 0.05 |
|  | Delhi (DEL) | 320 | 0.05 | 0.05 | 0.6 | 0.1 | 0.1 | 0.1 |
|  | Bengaluru (BLR) | 200 | - | - | - | 0.8 | - | 0.2 |
|  | Mumbai (MUM) | 150 | - | - | - | 0.2 | 0.6 | 0.2 |
|  | Total | 1380 | ? | ? | ? | ? | ? | ? |

The above table is about post-COVID situation staff strength and the requests received and the probabilities.

Apply the framework of Markov Analysis (Transition Matrix) to forecast envisaged sales team strength for Jan. 2023 onwards for each of the territories if the management accepts transfers. Use step-wise solution.

**Q.4** You are National Sales Head at *QualKom* India situated at Mumbai Office. You have been facing a problem of disturbed bottom-line figures of Heavy Equipment (Ultrasound, X-Ray, MRI, CT-Scan machines) with respect to the salaries of current Sales Managers (SM). You have to take a call at PAN India level about hiring two types of Sales Managers:

1. SM – MBA + B.Tech. (Electronics) and

2. SM – PGP (IIM)

SM – MBA + B.Tech. (Electronics) charges Rs.500 per client and makes 2 client visits only in a day while SM – PGP (IIM) charges Rs.700 per client and makes only 1 client visit in a day. After thorough research with the help of HR team, you have come to the conclusion that you cannot afford to pay more than Rs.2,50,000 per day to all SM – MBA + B,Tech. (Electronics) and SM – PGP (IIM) accounted together. Further, the maximum client visits that can be made by SM – MBA + B,Tech. (Electronics) and SM – PGP (IIM) is always less than equal to 500. Further, each SM – MBA + B,Tech. (Electronics) is billed for Rs.1000 and SM – PGP (IIM) for Rs.700.

# Apply optimizing technique using linear programming model to prescribe optimal number of SMs – MBA + B.Tech. (Electronics) and SMs – PGP (IIM), with an objective to maximize the billed revenue for *QualKOm* and eventually fix the issue of bottom-line. Use MS-Solver.

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