

Roll No



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF MANAGEMENT  
MAKEUP EXAMINATION - SEP 2023**

**Course Code :** MBA3010

**Course Name :** MBA3010 - HR Analytics

**Program :** MBA

**Date :** 30-SEP-2023

**Time :** 9.30AM - 12.30PM

**Max Marks :** 100

**Weightage :** 50%

**Instructions:**

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

**Part A [Memory Recall Questions]**

**Answer all the Questions. Each question carries Five marks**

**(6Q X 5M = 30M)**

1. Infer, why should we be careful while conducting correlation on organizational variables?  
(CO1) [Knowledge]
2. Classify the most important direct and indirect costs of training and development for any organization. Describe about depreciation of training benefits over time.  
(CO2) [Knowledge]
3. Interpret the values of correlation 'r' for the given two variables. if the 'r' value as follows,
  1.  $r = -0.70$
  2.  $r = 1$
  3.  $r = 0.70$
  4.  $r = -1$
  5.  $r = 0$(CO3) [Knowledge]
4. Mr. Muniraj joined TAHA Company on 1st March 2022, which was a Monday. As per his offer letter, he has a six-day working in a week (Monday to Saturday). However, during the whole month, he was absent for 8 working days. Identify the absenteeism rate for Muniraj for the month of March (2022) assuming that there was no holiday listed by the organization  
(CO3) [Knowledge]

5. The top management of the firm ABC Ltd was interested to see the impact of training intervention on the performance level of its employees. Mr.Anil, the training analyst was called to propose the way forward so that the impact of the training can be calculated. Imagine yourself as Mr.Anil, design an experiment to assess the impact of the intervention between Group A and Group B. Describe the test that is applicable and its scope of the test for HR analytics.

(CO3) [Knowledge]

6. Define the concept of outliers in the collected data and identify the effects of these outliers on the end results with the help of diagram.

(CO3) [Knowledge]

### **Part B [Thought Provoking Questions]**

**Answer all the Questions. Each question carries Ten marks**

**(4Q X 10M = 40M)**

7. (i) Distinguish the different variants of T-tests and when are these variants used.  
(ii) Identify the common data assumptions for conducting T-test.

(CO1) [Comprehension]

8. The case study describes and discusses a range of issues related to the implementation and meaningful use of an HR information systems at Agoda Company Pte. Ltd. Agoda is a subsidiary of Priceline.com, an online accommodation service. It had grown from a startup with a small number of employees to a multinational company with 40 offices in 31 countries, and more than 2,500 employees. The company's HQ is located in Singapore but it maintains a substantial presence in Bangkok, Thailand. Agoda manages an inventory of over 1 million accommodations in various global locales. Agoda boasts a solid business model that allowed the company to remain profitable despite high complexity of its operations. However, in recent years the company started facing threats from new entrants into the online booking industry. The competitors are steadily turning this niche into a contested market by consistently relying on the latest technological innovation to improve customer experience and streamline operations. Due to these competitive pressures, Agoda's leaders refocused their attention on talent management. Specifically, Agoda's CEO viewed the relationship between managers and employees as a critical factor to building the strongest company and achieving optimal performance. Still, the biggest challenge for Agoda is to find the right balance between the need for traditional HR functions (recruitment, compensation, performance management, learning and development, and talent management) and the performance of Agoda's diverse employees. To avoid bureaucratic overload that impedes creativity, Agoda's leaders opted for a data-driven HR solution. Such HR solution would not add to the bureaucracy, but instead would work as an advisory decision-making tool in supporting and enhancing the role of management. In other words, HR would act as an internal consultancy that would empower key managers in managing talent through data-driven people analytics.

Question: Discuss the Allen's Challenge at Agoda? How would you characterize Agoda's work culture with Geert Hofstede's Six dimensions of organizational culture

(CO2) [Comprehension]

9. Below are the results of the data sheet containing scores on the job satisfaction of employees working in different departments. As an employee engagement manager, suggest whether there lies a difference in the level of job satisfaction across departments. Using ANOVA single factor the data is analyzed and the following is the output of the data summary

SUMMARY				
Groups	Count	Sum	Average	Variance
HR	25	128	5.12	1.61
Marketing	25	93	3.72	1.043333333
Finance	25	81	3.24	1.856666667
Sales	25	83	3.32	1.476666667
Consulting	25	128	5.12	1.276666667

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	89.328	4	22.332	15.37310693	3.53454E-10	2.447237
Within Groups	174.32	120	1.452667			
Total	263.648	124				

Based on the data given above, express the following statements

- Discuss when we use ANOVA single factor.
- Identify the hypotheses of table
- Significance of the variables (Yes/No). Why?
- Explain the descriptive statistics of table
- Explain ANOVA values of SS and MS

(CO3) [Comprehension]

10. Korolla Mills is a garment manufacturing firm operating from Jalandhar. It was founded by Mr. Shyam Korolla in 1978. In order to expand the business Mr. Korolla had to recruit them at lower pay as compared to the equivalent internal candidates. At present, it has three manufacturing plants across India. Mr. Korolla at the age of 70 handed his company to his eldest son Mr. Dheeraj Korolla in 2015. He had a dream to develop a world-class working culture in Korolla Mills and take it to new heights. He started the professionalism of the various departments. However, Mr. Korolla did face a serious challenge when a group of management (so called outsiders by the internal people during the time of Mr. Shyam Korolla) put forward a demand to significantly raise their salaries. They told him that their salaries are not equivalent to those of internal people even at equivalent positions. Mr. Korolla ensured that the salaries will be raised if there is a significant difference in the salaries of internal and external candidates. Mr. Korolla requested Mr. Amit Patani to figure out whether there really exists a difference between the salaries of internal and external candidates. Mr. Patani collected the salary data in order to find out the mean scores of the two groups and obtained the following results

	Variable 1	Variable 2
Mean	56193.6875	73941.75
Variance	15813346.54	65547093.87
Observations	32	32
Pooled Variance	40680220.21	
Hypothesized Mean Difference	0	
Df	62	
t Stat	-11.13061839	
P (T<=t) one tail	0.00	
t Critical one tail	1.669804163	
P (T<=t) two tail	0.00	
t Critical two tail	1.998971517	

Explain about the test applied by Korolla Mills and interpret the output of the test given in the table.

(CO3) [Comprehension]

### Part C [Problem Solving Questions]

Answer all the Questions. Each question carries Fifteen marks

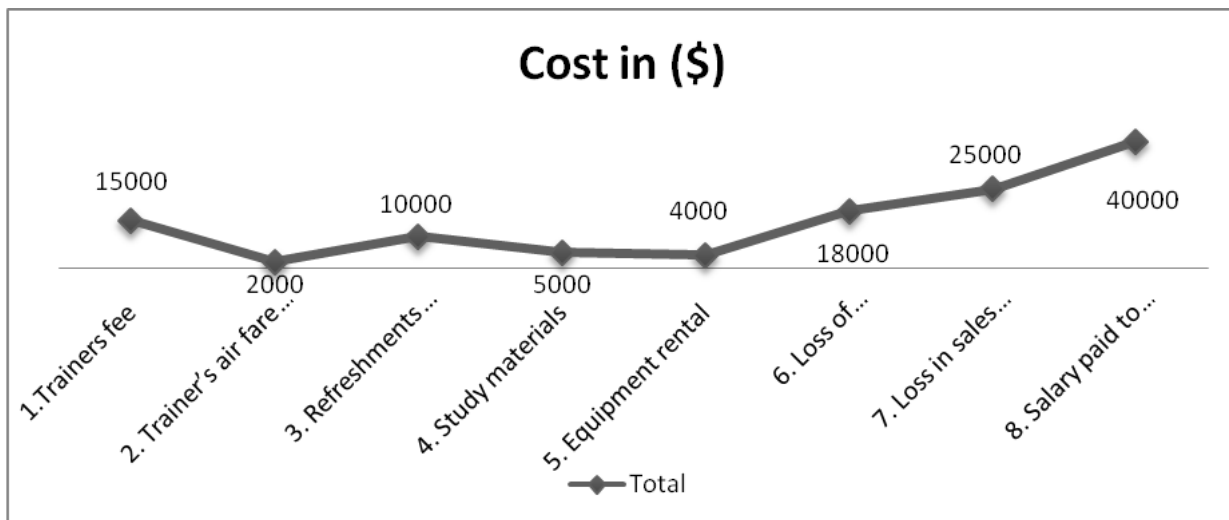
(2Q X 15M = 30M)

11. Khajuriya, as one of the leading tiles manufactures, is particular about the provision of safety and health related training to its employees so as to reduce the chances of accidents and brand defamations. Although the firm is known for its training culture and safety environment, the real return on investment (ROI) on training is rarely in practice in the organization. Hence, the top management requested the HR head to conduct an ROI study of the training program and present the result before the management. The ROI results further enable the top management to decide on the future training budgets and calendars. Ms.Pawani Wadher, the HR manager training and development, was delegated the duty of this project.

As pilot project, she decided to calculate the ROI of training on organizational health and safety. The total productivity rate per day of the manufacturing department before the training was noted. The training on Occupational Health and Safety Assessment Series (OHSS) was conducted, and its impact was measured after 3 months (a 3 month time period was taken as the period of learning transfer). It was ensured that nothing else was changed in the working conditions apart from the training.

The total cost of the training and the productivity improvement was noted as per the below

Types of cost in Training	Cost (in \$)
Trainers fee	15000
Trainer's air fare and stay	2000
Refreshments for meetings	10000
Study materials	5000
Equipment rental	4000
Loss of productivity during training	18000
Loss in sales during training	25000
Salary paid to the employees during training	40000
<b>Total Cost</b>	???
<b>Benefits after training</b>	
Productivity improvement of the trained employees	250000



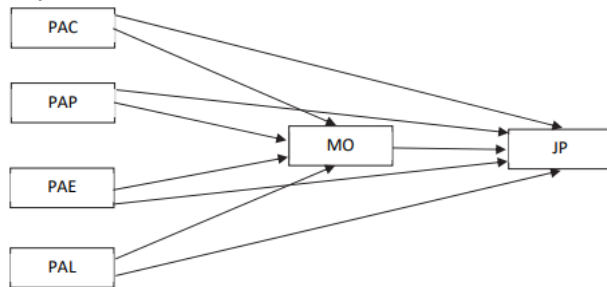
Based on the above values calculate the Total cost and ROI

Also, Ms.Pawani showed the calculation to the HR head, and he congratulated the team on the success of the pilot project. The HR head decided to showcase the ROI of the technical training in front of the top management, The top management could now get more substantial proof about the ROI of training.

Excited by the results, the top management further requested the HR head to undertake a new project related to the ROI of behavioral training, such as team building and conflict management. Although the HR head accepted, he knew that the project is not going to be easy. Schedule what type of training cost will be involved for the training specified (imaginary figures) and calculate ROI for the cost specified by you. (CO3) [Application]

12. The conceptual model designed consists of six constructs. Four constructs Performance Appraisal Factors – PA, Performance Appraisal Purpose PAP, Performance Appraisal Criteria PAC, Employee Motivation EMV, Employee Job Performance EJP were adopted from Impact of Performance Appraisal on Employee Motivation and Productivity. The results were given below.

Study Model:



Correlation Table:

Constructs	PAP	PAC	PAL	PAE	JP	MO
PAP	1					
PAC	.491**	1				
PAL	.323**	.454**	1			
PAE	.577**	.646**	.579**	1		
JP	.370**	.492**	.483**	.666**	1	
MO	.497**	.328**	.367**	.494**	.538**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed). N=294

Regression Results:

The results of regression							
Model	Unstandardized Coefficients	Standardized Coefficients			Collinearity Statistics		
	B	Std.Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.356	0.192		7.054	.000	
	PAP	-0.031	0.055	-0.031	-0.561	0.575	1.642
	PAC	0.096	0.053	0.105	1.791	0.074	1.829
	PAL	0.042	0.05	0.043	0.834	0.405	1.417
	PAE	0.619	0.07	0.595	8.8	.000	2.412

The summary model

R	R2	Adj.R2	Std.Err	R2 change	F	df1	df2	Sig.F Change	Durbin Watson
.562a	0.316	0.307	0.68522	0.316	33.378	4	289	0	1.896

a. Predictors: (Constant), PAE, PAL, PAP, PAC

b. Dependent Variable: MO

Question: From the above information, Interpret the results and summarise the inferences from correlation and regression tables.

(CO3) [Application]