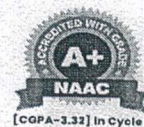




Maharashtra Education Society
Institute of Management & Career Courses, Pune (Autonomous)
M.B.A. End Semester Examination
AY 2024-25
Semester: I



Course Code: GM04

Total Marks: 50

Course Name: Business Analytics

Time: 2 hrs. 30 mins

Instructions:

1. All questions are compulsory
2. Use of non-programmable calculator is allowed

II B] A teacher claims that the mean score of students in his class is greater than 82 with a standard deviation of 20. If a sample of 81 students was selected with a mean score of 90 then check if there is enough evidence to support this claim at a 0.05 significance level. ($z_{tab} = 1.96$)

II C] A random sample of 395 people was surveyed and each person was asked to report the highest education level they obtained. The data that resulted from the survey are summarized in the following table: Is gender independent of education level? ($\text{Chi Square } \alpha(5\%) = 7.185$)

	High School	Bachelors	Masters	Ph.D.
Female	60	54	46	41
Male	40	44	53	57
Total	100	98	99	98

III A] One card is drawn from a deck of 52 cards, well-shuffled. Calculate the probability that the card will

- (i) be an ace,
- (ii) not be an ace

III B] An online medicine shop claims that the mean delivery time for medicines is less than 120 minutes with a standard deviation of 30 minutes. Is there enough evidence to support this claim at a 0.05 significance level if 49 orders were examined with a mean of 100 minutes? ($z_{tab} = 1.96$)

III C] In order to determine the possible effect of a chemical treatment on the rate of germination of cotton seeds a pot culture experiment was conducted. The results are given below ($\text{Chi Square } \alpha(5\%) = 3.841$)

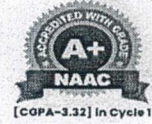
Chemical treatment and germination of cotton seeds

	Germinated	Not Germinated	Total
Chemically Treated	118	22	140
Untreated	120	40	160
Total	238	62	300

Find the value of the chi-square test statistic.



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M.B.A. End Semester Examination
AY 2024-25
Semester: I



Course Code: GM04

Total Marks: 50

Course Name: Business Analytics

Time: 2 hrs. 30 mins

Instructions:

1. All questions are compulsory
2. Use of non-programmable calculator is allowed

Question No. 1:

Calculate the arithmetic mean and the median of the frequency distribution given below. Hence calculate the mode using the empirical relation between the two: [10 Marks]

Height (in cms.)	No. of students
130-134	5
135-139	15
140-144	28
150-154	17
155-159	10
160-164	1

Question No. 2: Calculate the correlation coefficient between price and sales from the following data [10 Marks]

Price(Rs)	100	90	85	92	90	84	88	90
Sales('00)	5	6	7	6	7	8	8	7

Question No. 3: Solve any Two of below (15 marks each) [30 Marks]

I A] A bag contains 20 tickets marked with numbers 1 to 20. One ticket is drawn at random. Find the probability that it will be a multiple of

- (i) 2 or 5
- (ii) 3 or 5

I B] The mean height of 50 male students who showed above average participation in college athletics was 68.2 inches with a standard deviation of 2.5 inches, while 50 male students who showed no interest in such participation had a mean height of 67.5 inches with a standard deviation of 2.8 inches. Test the hypothesis that male students who participate in college athletics are taller than other male students. ($z_{\text{tab}} = 1.96$)

I C] Calculate the Chi-square value for the following data of incidences of water-borne diseases in three tropical regions. (Chi Square $\text{tab}(5\%) = 9.488$)

	India	Equator	South Africa	Sum
Cholera	31	45	14	90
Typhoid	2	53	5	60
Diarrhea	53	45	2	100
Sum	86	64	100	250

II A] Three bags contain 3 red, 7 black; 8 red, 2 black, and 4 red & 6 black balls respectively. 1 of the bags is selected at random and a ball is drawn from it. If the ball drawn is red, find the probability that it is drawn from the third bag.

regulatory compliance, fostering trust among users, and differentiating its offerings in a competitive market.

Questions:

1. How can DigitalPro effectively differentiate its B2C e-tailing platform and ensure the adoption of its virtual mall concept by small retailers and customers?
2. What strategies should DigitalPro adopt to ensure the security and user trust required for its fintech solutions, particularly in virtual banking and mobile finance applications?

B) Wanderlust Voyages, a new online travel and tourism platform, is entering a highly competitive market dominated by established players like MakeMyTrip. The company plans to offer a variety of services such as flight and hotel bookings, customizable holiday packages, and curated local experiences. Despite its innovative approach, Wanderlust Voyages faces several challenges, including competing with well-established brands, ensuring a seamless user experience, building strong partnerships with travel providers, and addressing digital payment security concerns. To succeed, Wanderlust Voyages must focus on differentiating itself through technology, creating unique customer experiences, and developing cost-effective marketing strategies.

Questions:

1. What innovative strategies can Wanderlust Voyages implement to effectively differentiate itself from competitors like MakeMyTrip, particularly in terms of customer experience, service offerings, and marketing?
2. How should Wanderlust Voyages address challenges related to building a secure and user-friendly digital platform, ensuring seamless payment options, and maintaining customer trust in the face of privacy and security concerns?

C) FreshMart, a leading online grocery retailer, aims to revolutionize its digital business ecosystem by integrating advanced technologies and innovative customer-centric strategies. The company operates a website and an electronic mall, offering a wide range of products from fresh produce to household goods. To remain competitive, FreshMart focuses on improving its online purchasing process, enhancing its supply chain, and adopting secure and diverse digital payment solutions. FreshMart's website simplifies the customer shopping experience by providing intuitive navigation, personalized recommendations, and multiple payment options. To expand its reach, the company partners with web portals and e-marketplaces, increasing visibility and customer engagement. FreshMart's supply chain has been optimized to meet the growing demands of mass customization and make-to-order (MTO) processes. The company collaborates with local farmers and suppliers, leveraging outsourcing logistics to streamline order fulfillment. A robust EC order fulfillment process ensures on-time delivery and reduces operational inefficiencies. Advanced inventory management systems supported by real-time tracking provide transparency across the supply chain.



Institute of Management & Career Courses, Pune (Autonomous)

End Term Question Paper

AY 2024-25

Semester: I

Course Code: GM05

Total Marks: 50

Course Name: Digital Business

Time: 2hrs 30mins



[GORA-2.12] In Cycle 1

Instructions:

- i. Read all questions carefully. First 2 questions are compulsory.
- ii. All questions have different marking schemes.
- iii. Relevant examples with flowcharts will be an add on for marking scheme.

Question No. 1: Describe the key drivers of Web 2.0 technology and their role in shaping emerging e-commerce platforms. How do these technologies enhance the functionality and appeal of virtual communities? [10 Marks]

Question No. 2: You are a marketing manager for an FMCG company planning to expand its mobile commerce presence. Design a mobile marketing campaign that leverages mobile shopping and advertising to boost customer engagement and sales. [10 Marks]

Question No. 3: Solve any Two of below (15 marks each) [30 Marks]

A) DigitalPro Solutions, a growing enterprise, aims to solidify its position in the evolving digital ecosystem by entering various digital business domains. It envisions building a robust presence in electronic retailing, fintech, e-government, e-learning, and e-employment. To tap into the e-retailing market, DigitalPro plans to launch a B2C platform incorporating direct-to-consumer models and virtual malls offering shared services for small retailers. In fintech, it seeks to introduce a pure virtual bank, mobile banking solutions, and integrated platforms for insurance and stock trading. Recognizing need for government digitization, DigitalPro proposes e-governance solutions emphasizing citizen engagement and mobile government platforms. Additionally, the company intends to create an e-learning system tailored for online universities and corporate training, leveraging social networks and advanced management systems. Lastly, it plans to develop a social network-based job market platform featuring virtual job fairs and social recruiting to modernize the hiring process. Despite its ambitions, DigitalPro faces challenges like ensuring data security, meeting

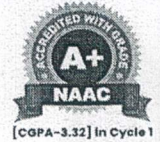
To cater to diverse customer preferences, FreshMart offers multiple digital payment options, including smart cards, mobile payments, and payment gateways. Recognizing the growing trend of virtual currencies, the company pilots cryptocurrency payments, ensuring transactions are secure and compliant with ethical and legal standards. FreshMart also educates customers on privacy and security measures to build trust. Despite its efforts, FreshMart faces challenges such as ensuring data privacy, managing logistics during peak demand, and addressing customer concerns regarding virtual currency payments.

Questions:

1. What innovative strategies can FreshMart adopt to improve its supply chain structure and EC order fulfillment process, especially for MTO and mass customization?
2. Considering the ethical, legal, and security challenges, propose solutions for FreshMart to expand its digital payment options, including virtual currencies, while maintaining customer trust.



Maharashtra Education Society
Institute of Management & Career Courses, Pune (Autonomous)
End Term Question Paper
AY 2024-25
Semester: I



Course Code: GM 06
Total Marks: 50

Course Name: Decision Science
Time: 2 hrs 30 mins

Instructions:

1. Every rightful step with heading & formulae carries importance & marks.
2. Please read the problems carefully.
3. Use of only simple calculator is allowed

Question No. 1: Solve the game. Identify Value of game. [10 Marks]

		Player B	
		B ₁	B ₂
Player A	A ₁	28	0
	A ₂	2	12
	A ₃	4	7

Question No. 2: [10 Marks]

The activities of a project and estimated time in days for each activity are given below:

Activity	(1-2)	(1-3)	(1-4)	(2-3)	(2-6)	(3-5)	(4-5)	(4-6)	(5-6)
Duration (In Days)	8	10	8	10	16	17	18	14	9

1. Draw a PERT network for this project.
2. Find the critical path.
3. What is the minimum time of the completion for the project?
4. Prepare activity schedule showing the ES, EF, LS, LF and total and free float for the non critical activities.
5. Will the critical path change if the activity (3-5) takes
 - (i) 20 days instead of 17
 - (ii) 14 days instead of 17

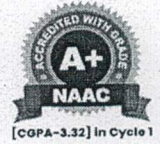
Question No. 3: Solve any Two of below (15 marks each) [30 Marks]

1. A company has four sales representative who are to be assigned to four different sales territories. The monthly sales increase estimated for each sales representative for different sales territories (in lakhs of rupees) are shown below

Sales Representative	Sales territories			
	I	II	III	IV
A	200	150	170	220



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End Term Question Paper
AY 2024-25
Semester: I



B	160	120	150	140
C	190	195	190	200
D	180	175	160	190

Suggest optimal Assignment and total maximum sales increase per month

2. Solve the following transportation problem using *VAM* to find initial feasible solution if required use *MODI* method

(15 marks)

	I	II	III	IV	Supply
A	4	6	8	13	50
B	13	11	10	8	70
C	14	4	10	13	30
D	9	11	13	8	50
Demand	25	35	105	20	

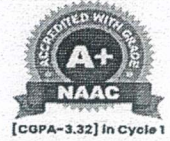
3. Case let: Fertilizer Allocation for Millet Production

(15 marks)

Rajesh, a progressive farmer from Nashik, is striving to increase the productivity of millets on his 15-acre farm. To achieve this, he consulted experts at the Agricultural Research Institute, who recommended spreading at least 4800 kg of special phosphate fertilizers and no less than 7200 kg of special nitrogen fertilizers across his fields. Based on their advice, Rajesh needs to procure fertilizers that meet these requirements at the lowest possible cost. Rajesh has identified two fertilizer mixtures, Mixture A and Mixture B, available from a local supplier. Each bag of these mixtures weighs 100 kg and they cost Rs. 40 and Rs. 24 respectively. Mixture A contains phosphate and nitrogen in equivalent of 20 kg and 80 kg respectively while mixture B contains these ingredients equivalent of 50 kgs each type. Mixture A is a premium-grade fertilizer often used for high-yield crops. It ensures consistent nutrient distribution but comes at a higher cost. Mixture B is a balanced fertilizer, widely preferred by farmers due to its affordability and ease of availability. Rajesh has a limited budget and needs to plan carefully to meet the nutritional requirements without overspending. *Formulate the Linear Programming Model and graphically determine how many bags of each type should the farmer buy in order to obtain the required minimum cost.*



Maharashtra Education Society
Institute of Management & Career Courses, Pune (Autonomous)
End Term Question Paper
AY 2024-25
MBA Semester: I



Course Code: GM03

Course Name: Fundamentals of Marketing

Total Marks: 50

Time: 2 hours 30 minutes

Instructions:

- i. All questions are Compulsory.
- ii. Make suitable assumptions wherever necessary.

Question No. 1: Solve any One

[10 Marks]

a) A clothing retailer known for stylish and affordable clothing is targeting youth market. Identify various segmentation variables for the same.

OR

b) A consumer is researching a new product online. Discuss various sources of information that will help in decision-making process with special reference to 'Zero Moment Of Truth' (ZMOT)?

Question No. 2: Solve any One

[10 Marks]

a) A skincare brand is entering a market with established competitors offering natural and organic products. Conduct a macro environmental analysis for the same for Indian market.

OR

b) Indian online travel portal market has various competitors offering both domestic and international flight bookings. Analyze the buying decision process for a traveler in choosing a vacation package on the leading online travel portal. Highlight key factors at each stage.

Question No. 3: Solve any Two (15 marks each)

[30 Marks]

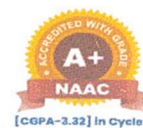
A) The potentials for meta market in India's travel sector is significantly driven by rapidly growing online travel market. Online travel agency offering vacation packages is planning to create a meta-market. Design a suitable strategy for the agency by considering various components of meta-markets.

B) A consumer recently purchased a high-priced electronic gadget Play station 5. Write down the steps involved in buying process. How can the company minimize post-purchase dissonance and ensure customer satisfaction?

C) India's online retail market size is expected to reach USD 325 billion by 2030 largely due to rapid expansion of e-commerce. Illustrate how online retailers like Amazon and Flipkart create, communicate and deliver value to be relevant in the market.



Maharashtra Education Society
Institute of Management & Career Courses, Pune (Autonomous)
End Term Question Paper
AY 2024-25
Semester: I



Course Code: GM02
Total Marks: 50

Course Name: Financial Statement Analysis
Time: 2 hrs 30 mins

Instructions:

All the question are compulsory

Use of Digital Calculator is allowed

Question No. 1:

[10 Marks]

There are two firms Reliance India Ltd and Aditya Birla Ltd. Both the firms are in the consumer goods manufacturing and selling. For the year 2024 Mr. Ashok want to invest in the any of the company on the bases of the comparative study of both the companies.

The balance sheet for the two companies are as follows.

Liabilities	Reliance	Aditya	Assets	Reliance	Aditya
Preference capital	120000	160000	Land & Building	80000	123000
Equity capital	120000	400000	Plant & Machinery	334000	600000
Reserve & Surplus	14000	18000	Short Term Investment	1000	40000
Long term loan	115000	130000	Inventories	10000	25000
Bills payable	32000	Nil	Book Debts	4000	8000
Sundry creditors	12000	4000	Prepaid Expenses	1000	2000
Outstanding expenses	15000	6000	Cash & Bank Balance	8000	10000
Proposed Dividend	10000	90000			
	438000	808000		438000	808000

Question No. 2:

[10 Marks]

The Alok Industries Ltd. are working in the FMCG industry from last 2 years. But the company had not appointed any expert from the finance domain for the preparation of the accounting statements for the company. The basic account was done by the administrative staff of the account section. You need to prepare the final account by creating Trading account, P & L Account and Balance sheet. And suggest the company about the financial situation of the company for Year 2024.

Particulars	Amount (Rs. in lakh)	Particulars	Amount (Rs. in lakh)
Drawings	5000	Capital	30000
Debtors	20000	Creditors	10000
Interest on loan	300	Loan from Bank	9500
Cash in hand	2000	Provision for Bad Debts	700
Stock on 1 st April 2023	6800	Sales	110000
Vehicle	10000	Return outward	1500
Cash at bank	3500	Discount	800
Land & Building	12000	Bills Payable	2000

Purchases	66000	Rent Received	Nil
Return Inward	8000		
Carriage Outward	2500		
Carriage Inward	3000		
Salaries	9000		
Rent & Insurance	3000		
General Expenses	6900		
Bad Debts	500		
Bills Receivable	6000		
	164500		164500

Additional Information:

- Stock on 31st March 2024 Rs. 7000
- Depreciation on Land & Building is 10% and Vehicle @ 20% per annum.

Question No. 3: Solve any Two of below (15 marks each)

[30 Marks]

- The ABC Ltd. having the following ratios for the year 2024. You need to prepare the Balance sheet from the Ratios below.

Particulars	Amount Rs.
Gross Profit	54000
Share Holders Fund	600000
Gross Margine	20%
Credit Sales to total sales	80%
Total assets turnover	0.3 Times
Inventory turnover	4 Times
Average Collection Period (360 days in a year)	20 Days
Current Ratio	1.8 Times
Long Term Debts to Equity	40%

- Camlin India Ltd. is having the following Balance sheet. The company need to find out the cash management of the company. And also, at the end of the year the management want to analyze the financial situation of the company. The company need to compare, analyze and interpret the impact on cash flow on the ratios of the companies. (Calculate only current ratios)

Liabilities	2023	2024	Assets	2023	2024
Equity share capital	300000	400000	Fixed assets	400000	550000
Bank loan	100000	75000	Stock	200000	225000
Accumulated depreciation	80000	135000	Bills Receivable	80000	110000
Profit and loss account	85000	110000	Debtors	210000	190000
Creditors	310000	295000	Bank Balance	30000	Nil
Proposed dividend	45000	60000			
	920000	1075000		920000	1075000

Adjustments:

A piece o machine costing Rs. 60000 was sold for Rs. 30000 on which depreciation was charged of Rs. 15000 till date.

3. The company need to analyses the financial statement on the bases of Common size statement, Comparative statement & Trend analysis for last 5 years interpret the result with proper justification. All the amounts are in Laksh (Rs)

(21-22) - (22-23)

Particulars	2019	2020	2021	2022	2023
Share Capital	10	13	16	19	22
Reserve & Surplus	10	10	13	16	19
Loan Fund	70	75	78	81	84
	90	98	107	116	125
Fixed Assets	30	35	49	52	75
Current Assets					
Stocks	20	25	28	29	33
Debtors	30	35	38	41	44
Cash and Bank Balance	20	25	28	31	34
Other Current Assets	10	15	18	21	24
	80	100	112	122	135
(-) Current Liabilities	-20	-37	-54	-58	-85
Net working capital	60	63	58	66	81
Total Assets	110	135	161	174	210
Sales	270	345	445	352	505

***** All the Best*****

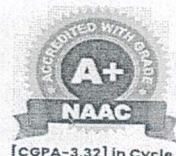


Maharashtra Education Society
Institute of Management & Career Courses, Pune (Autonomous)

End Term Question Paper

AY 2024-25

Semester: I



Course Code – GM 01

Course Name : Organisational Behavior

Total Marks: 50

Time: 2 hrs 30 min

Instructions:

- i. i. Q.1 & Q 2 are compulsory.
- ii. From Q.3 solve any 2
- iii. Draw suitable diagrams wherever necessary.

Question No. 1:

[10 Marks]

A new employee is late for a meeting. The person moderating the meeting answers the questions briefly and returns to where the meeting left off. The new employee later comes to the moderator and tells him that what he did was rude. The moderator explains to the new employee that he may have appeared rude because he started the meeting on time for those who needed it.

1. Explain all the quadrants of Johari window.
2. Identify which quadrant of Johari window is evident in the above incident. Justify your answer.

Question No. 2:

[10 Marks]

Sobha Limited is a Real Estate company. They have been working on an accounting software named Zero but now due to extended business they want to upgrade to SAP Ariba to maintain their accounting records. They have also provided the employees with training so that they can adapt to the change but few employees are resistant to change as they want to follow the old accounting application.

1. According to you in general what are the various reasons for resistance to change ?
2. What are ways through which the employee's resistance to change can be handled in the above situation ?

Question No. 3: Solve any Two of below (15 marks each)

[30 Marks]

- (A) Two company's X and Y producing 40 count cotton yarns with similar levels of investment, size, and labour force have been competing with each other. All their costs, such as raw materials, power, wages, administrative, sales, interest, and depreciation expenses, have been the same. Company X has been earning around 1.2 times of the net profit level when compared to the net profit earned by company Y. The management of company Y appointed a taskforce to find out the reasons for the same. On detailed analysis carried over by the task force, it was found that the motivation level of

employees of company X was relatively far higher than that of company Y. It was mainly on account of certain facilities provided to company X such as environment on the shop floor in terms of space for movement, lighting arrangements, canteen facilities, pickup and drop facility from home to company and back and a free membership of a local club. It was also found that emphasis of company X had free access to top management and every month employee's achievements used to be recognized by giving them token prizes; handed over to them by the top management in person in a function organized by the company.

Questions:

1. What is your understanding of the concept motivation. Elaborate the Hertzberg's two factor theory.
2. Elaborate the benefits provided by company X as per the Hertzberg's two factor theory. And the impact of the provisions provided by company X on the performance of employees and more returns for company X.

(B) Krishnamurthy, plant manager of frame manufacturing company, is the chairperson of the ad hoc committee for space utilization. The committee is made up of various departmental heads of the company. The general manager of the company has given Krishnamurthy the responsibility for seeing whether the various office, operations and warehouse facilities of the company are being optimally utilized. The company is beset by rising costs and the need for more space.

However, before Okaying an expensive addition to the plant, the General Manager wants to be sure that the currently available space is being utilized properly. Krishnamurthy opened up the first committee meeting by reiterating the charge of the committee. Then Krishnamurthy asked the members if they had any initial observations to make. The first to speak was the office manager. He stated "Well I Know we are using every possible inch of room that we have available to us. But when I walk out into the plant I see lot of open spaces. We have people piled on top of one another, but out in the plant there seems to be plenty of room." the production manager quickly replied, "We do not have a lot of space. Your office people have the luxury facilities. My supervisors don't even have room for descend a file cabinet. I have repeatedly told the plant manager we need more space. After all, our operation determines whether this plant succeeds or fails, not like you people in the front office pushing paper around." Krishnamurthy interrupted at this point and said, "Obviously we have different interpretations of the space utilization around here. Before Further discussion I think it would be best if we have some objective facts to work with. I am going to ask the industrial engineer to provide us with some statistics on plant and office layouts before our next meeting. Today's meeting is adjourned.

Questions:

1. Which concept of perception is evident in this case?
2. Do you think that Krishnamurthy's approach to getting "objective facts" from statistics on plant and office layout will affect the perceptions of the office and production managers?
3. If you were in Krishnamurthy's position, how would you have handled the situation?

(C) The new CEO, Mr. Prashnat has been hired by the board of directors of 'Fitme', a large national sporting goods retailer, which has been battling economic and internal issues over the previous years. Mr. Prashnat has experience at the helm of large companies. 'Fitme' is in need of profound strategic and structural change. In his new position at Fitme, Prashant has been facing strong disagreements related to strategic decisions with executives who are unhappy with his hiring and threatened by his accolades.

To complicate matters, there is a rumour that decision to hire Prashnat was not unanimous. Because other top management aspirants were competing for control in the company. They were waiting for a chance to fill the power vacuum if Prashant leaves the position of CEO.

After two weeks with the company, Mr. Prashant is called before the board of directors to report on the progress made and how he plans to return Fitme to its former glory.

1. What are the various bases of power in the organization? Discuss the various types of power Mr. Prashant possesses being the CEO of Fitme.
2. Discuss the behavior of other top management members in the light of power & politics in the organization.

