


CMR INSTITUTE OF TECHNOLOGY			USN <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																 <small>CELEBRATING 25 YEARS</small> <small>CMR INSTITUTE OF TECHNOLOGY, BENGALURU.</small> <small>ACCREDITED WITH A++ GRADE BY NAAC</small>	
Internal Assessment Test - I																				
Sub:	Information Technology for Managers							Code:	22MBA302											
Date:		Duration:	90	Max Marks:	50	Sem:	III	Branch:	MBA											
SET- I																				
								Marks	OBE											
									CO	RBT										
Part A - Answer Any Two Full Questions (2* 20 = 40 marks)																				
1 (a)	List out benefits of MIS in Personal Management.							3	CO3	L1										
Answer: <ul style="list-style-type: none"> Improved Efficiency Better Decision-Making Enhanced Employee Satisfaction Cost Savings Regulatory Compliance 																				
(b)	"MIS can improve the production of an organization" Justify.							7	CO3	L5										
Answer: <ul style="list-style-type: none"> Production Planning and Scheduling Inventory Management Process Control and Monitoring Quality Control Maintenance Management Cost Control and Budgeting Supply Chain Management (SCM) Product Lifecycle Management (PLM) Resource Utilization and Efficiency Reporting and Analytics 																				
(c)	Demonstrate Key Steps to Create a Distinctive Service.							10	CO3	L3										
Answer: <ul style="list-style-type: none"> Understand Customer Needs and Expectations Develop a Unique Value Proposition (UVP) Invest in Exceptional Customer Service Offer Personalization and Customization Incorporate Innovation and Technology Focus on Service Quality Create Emotional Connections Offer Convenience and Accessibility Differentiate through Unique Features or Add-ons Continuously Improve and Evolve 																				
2 (a)	What is Data Processing?							3	CO2	L1										
Answer: The transformation of raw data into meaningful information through various methods.																				
(b)	Discuss types of network topology.							7	CO3	L2										

<p>Answer:</p> <p>Bus Topology – All devices share a single communication line.</p> <p>Star Topology – Devices connect to a central hub or switch.</p> <p>Ring Topology – Devices form a closed loop, passing data in one or both directions.</p> <p>Mesh Topology – Every device connects to every other device (Full Mesh) or some devices (Partial Mesh).</p> <p>Tree Topology – A hierarchical structure with multiple star networks.</p> <p>Hybrid Topology – A mix of two or more types of topology.</p>				
(c)	Identify issues of E Business and give solutions for it.	10	CO4	L4
<p>Answer:</p> <p>1. Data Breaches & Unauthorized Access</p> <p>Solution:</p> <ul style="list-style-type: none"> • Implement strong encryption (SSL/TLS, AES-256) for data transmission and storage. • Use multi-factor authentication (MFA) to protect user accounts. • Regularly update and patch software to fix vulnerabilities. • Restrict access using role-based access control (RBAC). <p>2. Phishing & Social Engineering Attacks</p> <p>Solution:</p> <ul style="list-style-type: none"> • Train employees and customers on identifying phishing emails. • Use email filtering and anti-phishing tools. • Implement DMARC, DKIM, and SPF to authenticate emails. <p>3. Malware & Ransomware</p> <p>Solution:</p> <ul style="list-style-type: none"> • Install antivirus and anti-malware software on all systems. • Keep backups of critical business data (cloud and offline storage). • Use firewalls and intrusion detection systems (IDS/IPS). <p>4. Payment Fraud & Identity Theft</p> <p>Solution:</p> <ul style="list-style-type: none"> • Use secure payment gateways (e.g., PayPal, Stripe) with PCI DSS compliance. • Implement tokenization and encryption for transactions. • Monitor transactions for suspicious activities using AI-driven fraud detection systems. <p>5. Denial-of-Service (DoS) & DDoS Attacks</p> <p>Solution:</p> <ul style="list-style-type: none"> • Use CDN services (e.g., Cloudflare, Akamai) to absorb attack traffic. • Implement rate limiting and firewall rules to filter malicious traffic. • Use load balancing to distribute traffic across servers. <p>6. Weak Passwords & Credential Stuffing</p> <p>Solution:</p> <ul style="list-style-type: none"> • Enforce strong password policies (long, complex passwords). • Use password managers and encourage users to change passwords regularly. • Implement account lockout mechanisms after multiple failed login attempts. <p>7. Insider Threats</p> <p>Solution:</p> <ul style="list-style-type: none"> • Monitor user activities with User Behavior Analytics (UBA). • Restrict sensitive information access based on user roles. • Implement strict termination procedures for employees leaving the company. <p>8. Lack of Compliance with Security Standards</p> <p>Solution:</p> <ul style="list-style-type: none"> • Ensure compliance with GDPR, PCI-DSS, ISO 27001, and other regulations. • Conduct regular security audits and penetration testing. • Maintain a privacy policy and ensure customers know how their data is handled. 				

3 (a)	What you meant by IoT?	3	CO4	L1
<p>Answer:</p> <p>A network of interconnected devices that communicate and share data over the internet. These devices can range from everyday household items to complex industrial machinery, all equipped with sensors and software to collect, analyze, and transmit data.</p>				
(b)	MR blends AR and VR, allowing users to interact with digital objects in real-world spaces in real-time. Discuss	7	CO4	L4
<p>Answer:</p> <p>Merges real & virtual environments</p> <p>Allows real-time interaction with digital objects</p> <p>Used in industrial training, healthcare, and design</p>				
(c)	Infer Application of AI in Education.	10	CO3	L4
<p>Answer:</p> <ol style="list-style-type: none"> 1. Personalized Learning 2. AI-Powered Tutors & Chatbots 3. Smart Content Creation 4. Automated Administrative Tasks 5. Intelligent Assessments & Feedback 6. AI-Powered Language Translation & Accessibility 7. Predictive Analytics for Student Success 8. Virtual Reality (VR) & Augmented Reality (AR) in Learning 9. Online Learning & Remote Education 10. AI for Teacher Support 				
4	<p>TechGear Solutions, a mid-sized electronics distributor, struggled with fragmented data and manual reporting, which led to delayed decision-making and operational inefficiencies. To overcome these challenges, the company implemented an integrated Management Information System (MIS). This system unified data from sales, inventory, procurement, and customer service, providing real-time insights into every business function. With the MIS, managers could monitor stock levels, identify sales trends, and allocate resources more efficiently. For instance, predictive analytics helped the company forecast demand, reducing overstock and stockouts. The MIS also streamlined communication across departments, enabling faster response times and more coordinated strategies. As a result, TechGear Solutions experienced a 20% increase in operational efficiency and a significant reduction in costs within the first year of implementation. The system's automated reporting features allowed executives to make data-driven decisions promptly, enhancing overall competitiveness. This case illustrates how an effective MIS can transform a business by integrating critical processes, optimizing resource allocation, and supporting strategic planning.</p> <p>Questions:</p> <ol style="list-style-type: none"> 1. How did the implementation of the MIS at TechGear Solutions improve operational efficiency and decision-making? 2. What potential challenges might a company face when transitioning to an integrated MIS system, and how can these be effectively addressed? 	10	CO4	L5
<p>Answer:</p> <p>Role of MIS in Business</p> <ul style="list-style-type: none"> • Decision Support – Provides real-time data and reports for informed decision-making. 				

- **Improved Efficiency** – Automates routine tasks, reducing manual effort and errors.
- **Data Management** – Collects, processes, and stores business information securely.
- **Enhanced Communication** – Facilitates seamless information sharing across departments.
- **Strategic Planning** – Helps in long-term business strategy formulation using analytics.
- **Customer Relationship Management (CRM)** – Supports better customer service and retention.
- **Performance Monitoring** – Tracks key performance indicators (KPIs) for business growth.
- **Resource Optimization** – Ensures efficient utilization of manpower, finances, and inventory.
- **Risk Management** – Identifies and mitigates potential business risks through data analysis.
- **Competitive Advantage** – Provides insights to stay ahead of competitors.

1. How did the implementation of the MIS at TechGear Solutions improve operational efficiency and decision-making?

- Integrated data from sales, inventory, procurement, and customer service for real-time insights.
- Enabled managers to monitor stock levels, identify sales trends, and allocate resources efficiently.
- Used predictive analytics to forecast demand, reducing overstock and stockouts.
- Automated reporting allowed faster, data-driven decision-making.
- Improved communication across departments led to quicker response times and better coordination.
- Resulted in a **20% increase in operational efficiency** and **cost reduction**.

2. What potential challenges might a company face when transitioning to an integrated MIS system, and how can these be effectively addressed?

- Employee Resistance to Change:** Addressed through training and change management strategies.
- Data Migration Issues:** Solved by conducting thorough data cleansing and validation.
- System Compatibility Problems:** Mitigated by selecting a scalable and customizable MIS.
- High Implementation Costs:** Managed through phased implementation to reduce financial and operational disruption.
- Adoption Challenges:** Ensuring ongoing monitoring, feedback loops, and gradual adaptation for smoother transition.

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Course Outcomes (COs)		PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1:	Understand the importance of Information technology for business									
CO2:	Develop insights into technology and investigate its impact on Business.			2a				2a		
CO3:	Understand Various Measures of Technology available in corporate world.				1a, 1b, 1c, 2b				1a, 1b, 1c, 2b	
CO4:	Understanding how creativity and innovative Technologies help to find a solution to problems		2c, 3a, 3b		3c, 4					2c, 3a, 3b, 3c, 4

Cognitive level	KEYWORDS
L1 - Remember	list, define, tell, describe, recite, recall, identify, show, label, tabulate, quote, name, who, when, where, etc.
L2 - Understand	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss
L3 - Apply	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify
L4 - Analyze	classify, outline, break down, categorize, analyze, diagram, illustrate, infer, select
L5 - Evaluate	asses, decide, choose, rank, grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate
L6 - Create	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate

PO1–Theoretical Knowledge; PO2–Foster Analytical and Critical Thinking Abilities for data based decision making; PO3– Develop Value Based Leadership; PO4 –Ability to Understand and communicate various business aspects to global; PO5 – Ability to lead themselves and others in the achievement of organizational goals contributing effectively to a team environment;
PSO1- Comprehend Contemporary features of Business Management Science and its administration
PSO2- Analyze and interpret the dynamic situations for making Business Management strategies
PSO3- Handle responsibility with the ethical values for all actions undertaken by them
PSO4- Adapt and focus on achieving the organizational goal and objectives with complete zeal and commitment.

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