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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

January / February 2025 Semester End Main Examinations

Programme: B.E.

Semester: VII

Branch: Medical Electronics Engineering

Duration: 3 hrs.

Course Code: 22MD7HSBPF

Max Marks: 100

Course: Biomedical Project Management and Finance

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT - I			CO	PO	Marks
Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	List and explain the important characteristics of a project.			<i>CO1</i>	<i>PO2</i>	10
		b)	Ethical principle is essential for a successful leader in project management. Justify.			<i>CO2</i>	<i>PO2,8</i>	10
OR								
	2	a)	What are roles and responsibility of project manager? Explain.			<i>CO1</i>	<i>PO2,9</i>	10
		b)	Explain the different phases of Project Life Cycle with the help of a diagram.			<i>CO2</i>	<i>PO2,4</i>	10
UNIT - II								
	3	a)	Assume you are tasked to come up with a feasibility report for a Project to set up Preliminary Health Care in your locality for Emergency Services during the lockdown, discuss on all items with suitable justification that you would include in the report.			<i>CO4</i>	<i>PO6,10</i>	10
		b)	Outline the different types of cost estimates and highlight the accuracy of each type depending on the information availability.			<i>CO1</i>	<i>PO2</i>	10
OR								
	4	a)	Analyze how the finalization of project implementation schedule is made on the Basis of Time Estimate with relevant equations.			<i>CO2</i>	<i>PO2</i>	10
		b)	Assess the economic viability of the project with respect to following methods: 1. Net present Value (NPV) 2. Benefit Cost Ratio (BCR)			<i>CO1</i>	<i>PO2</i>	10

UNIT - III						
5	a)	Enumerate on the unique characteristics of Biomedical products.	<i>CO1</i>	<i>PO2</i>	10	
	b)	What are the key reasons to use a project manager instead of a functional manager for the BMI project? Explain.	<i>CO1</i>	<i>PO2,11</i>	10	
OR						
6	a)	Describe how Project Management is used in BMI companies.	<i>CO1</i>	<i>PO2</i>	10	
	b)	Identify key stakeholders involved with biomedical products and explain it with corresponding diagram.	<i>CO3</i>	<i>PO2</i>	10	
UNIT - IV						
7	a)	Explain about Basic Phase-Gate development model with a corresponding figure.	<i>CO1</i>	<i>PO2</i>	10	
	b)	What is a Medical Device? Diagrammatically show the conceptualization of system interface consideration that can be found with a Left Ventricular Assist Device (LVAD) system.	<i>CO1</i>	<i>PO2</i>	10	
OR						
8	a)	Explain typical invitro diagnostics product development process with necessary diagram.	<i>CO1</i>	<i>PO2</i>	10	
	b)	How does the Project Manager deal with all the groups that need to work together nearly simultaneously? Illustrate with diagram showing the interfaces between the groups: Interdependent Players and the Project Manager.	<i>CO2</i>	<i>PO2, 9,10</i>	10	
UNIT - V						
9	a)	Differentiate between equity and debt. Describe the key factors that determine the Debt-Equity ratio.	<i>CO1</i>	<i>PO2</i>	10	
	b)	What are internal accruals? Mention the advantages and disadvantages of internal accruals.	<i>CO3</i>	<i>PO2</i>	10	
OR						
10	a)	Explain the procedure associated with a term loan.	<i>CO1</i>	<i>PO2</i>	10	
	b)	Interpret the concept of working capital advance by commercial banks for financing current assets.	<i>CO3</i>	<i>PO2</i>	10	
