

U.S.N.

# 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.

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.			<b>UNIT - I</b>	<b>CO</b>	<b>PO</b>	<b>Marks</b>
	1	a)	List and explain the important characteristics of a project.	CO1	PO2	10
		b)	Ethical principle is essential for a successful leader in project management. Justify.	CO2	PO2,8	10
			<b>OR</b>			
	2	a)	What are roles and responsibility of project manager? Explain.	CO1	PO2,9	10
		b)	Explain the different phases of Project Life Cycle with the help of a diagram.	CO2	PO2,4	10
			<b>UNIT - II</b>			
	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.	CO4	PO6,10	10
		b)	Outline the different types of cost estimates and highlight the accuracy of each type depending on the information availability.	CO1	PO2	10
			<b>OR</b>			
	4	a)	Analyze how the finalization of project implementation schedule is made on the Basis of Time Estimate with relevant equations.	CO2	PO2	10
		b)	Assess the economic viability of the project with respect to following methods:  1. Net present Value (NPV) 2. Benefit Cost Ratio (BCR)	CO1	PO2	10

			<b>UNIT - III</b>			
	5	a)	Enumerate on the unique characteristics of Biomedical products.	CO1	PO2	10
		b)	What are the key reasons to use a project manager instead of a functional manager for the BMI project? Explain.	CO1	PO2,11	10
			<b>OR</b>			
	6	a)	Describe how Project Management is used in BMI companies.	CO1	PO2	10
		b)	Identify key stakeholders involved with biomedical products and explain it with corresponding diagram.	CO3	PO2	10
			<b>UNIT - IV</b>			
	7	a)	Explain about Basic Phase-Gate development model with a corresponding figure.	CO1	PO2	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.	CO1	PO2	10
			<b>OR</b>			
	8	a)	Explain typical invitro diagnostics product development process with necessary diagram.	CO1	PO2	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.	CO2	PO2, 9,10	10
			<b>UNIT - V</b>			
	9	a)	Differentiate between equity and debt. Describe the key factors that determine the Debt-Equity ratio.	CO1	PO2	10
		b)	What are internal accruals? Mention the advantages and disadvantages of internal accruals.	CO3	PO2	10
			<b>OR</b>			
	10	a)	Explain the procedure associated with a term loan.	CO1	PO2	10
		b)	Interpret the concept of working capital advance by commercial banks for financing current assets.	CO3	PO2	10

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