

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)

Branch - BIOTECHNOLOGY

BUSINESS BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which agency implements the National Biotechnology Development Strategy in India? (i) BIRAC (ii) DBT (iii) BA (iv) BCIL	K1	CO1
	2	Bioincubators primarily support _____. (i) Large-scale manufacturing (ii) Early-stage start-ups (iii) Only academic research (iv) Regulatory authorities	K2	CO1
2	3	A written document that describes a proposed biotech venture, its objectives and financial needs is called _____. (i) Project report (ii) Feasibility certificate (iii) Project proposal (iv) Memorandum of association	K1	CO2
	4	Which one is a common source of venture capital support for biotechnology enterprises? (i) Local panchayat (ii) Commercial banks only (iii) Angel investors and VC firms (iv) School education funds	K2	CO2
3	5	The term "gestation period" of a project refers to _____. (i) Time taken for product delivery (ii) Time between project start and commencement of returns (iii) Time taken for regulatory approval only (iv) Time for staff recruitment	K1	CO3
	6	Product "payback period" means _____. (i) Time to recover initial investment from net cash inflows (ii) Time to obtain patents (iii) Total marketing duration (iv) Time to file tax returns	K2	CO3
4	7	E-business primarily relies on _____. (i) Door-to-door selling (ii) Direct cash collection only (iii) Internet-based transactions and communication (iv) Printed catalogues alone	K1	CO4
	8	Organizational behaviour mainly focuses on _____. (i) Molecular interactions (ii) Employee behaviour in organizations (iii) Soil-plant relationships (iv) Microbial consortia only	K2	CO4
5	9	Functional foods are best described as foods that _____. (i) Provide only calories (ii) Are used only as pharmaceuticals (iii) Offer health benefits beyond basic nutrition (iv) Contain no bioactive components	K1	CO5

Cont...

5	10	Marine biotechnology products are predominantly obtained from _____. (i) Desert plants (ii) Oceanic and coastal organisms (iii) Mountain soil only (iv) Freshwater algae alone	K1	CO5
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SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the major biotechnology promotional agencies in India and their roles in nurturing entrepreneurial opportunities.	K2	CO1
		(OR)		
	11.b.	Discuss the significance of biotechnology parks and bioincubators in supporting biotech start-ups and small enterprises.		
2	12.a.	Describe the key steps involved in project planning for a commercially successful biotech product.	K2	CO2
		(OR)		
	12.b.	Explain the different sources of financial assistance (state/central, grants, subsidies and venture capital) available for establishing a biotech enterprise.		
3	13.a.	Explain project management in a biotech enterprise with reference to technology source, cash flow and labour management.	K2	CO3
		(OR)		
	13.b.	Discuss in detail the marketing strategies for a biotech product, including product positioning, pricing and test marketing.		
4	14.a.	Describe the scope and major sectors for entrepreneurial ventures in biotechnology in India.	K2	CO3
		(OR)		
	14.b.	Explain the role of IT and e-business in improving business performance in biotechnology enterprises.		
5	15.a.	Discuss value addition to biotechnology products with suitable examples from functional foods and nutraceuticals.	K2	CO3
		(OR)		
	15.b.	Explain the significance of microbial consortia in environmental biotechnology industries and their industrial applications.		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Critically evaluate the role of DBT, BIRAC and other national agencies in shaping the biotechnology entrepreneurial ecosystem in India.	K5	CO1
2	17	Prepare a detailed project proposal outline for launching a new biotechnology product, highlighting statutory approvals, budgeting and fund flow.	K6	CO2
3	18	Analyse the impact of product quality control, IRR and benefit-cost ratio on long-term sustainability of a biotechnology business.	K5	CO3
4	19	Discuss managerial decision making and organizational behaviour concepts that are crucial for successful operation of a biotechnology enterprise.	K5	CO3
5	20	Design a business plan for a start-up focusing on marine biotechnology-based nutraceuticals, emphasizing product development, quality standards and marketing research.	K6	CO3

Z-Z-Z

END