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BRAINWARE UNIVERSITY

Term End Examination 2025-2026
Programme – B.Sc.(BT)-Hons-2023
Course Name – Bioentrepreneurship
Course Code - BBT60208
(Semester VI)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) The primary purpose of feasibility assessment in a new biotech venture is to determine whether the proposed idea is technologically, financially, and commercially viable.

a) To increase laboratory research output
b) To evaluate viability of the business idea
c) To secure patents automatically
d) To reduce employee costs

(ii) Capital expenditure in a bioentrepreneurial venture generally includes investment in laboratory equipment, infrastructure, and technology setup.

a) Electricity bills
b) Microbial culture media
c) Research assistant salary
d) Equipment purchase

(iii) Which financial statement shows assets, liabilities, and owner's equity at a specific point in time?

a) Trial balance
b) Balance sheet
c) Ledger account
d) P&L account

(iv) Market segmentation in biotechnology is important because:

a) It reduces overall marketing costs
b) Different segments have identical regulatory requirements
c) Each segment has distinct customer needs and market dynamics
d) It eliminates the need for competitive analysis

(v) Predicting market changes in biotechnology requires monitoring:

a) Only competitor product launches
b) Multiple indicators including scientific discoveries and regulatory shifts
c) Stock market trends exclusively
d) Consumer fashion trends

(vi) Which methodology is useful for identifying customer needs?

a) Random sampling only
b) Customer interviews and ethnographic research
c) Competitor financial analysis
d) Patent counting

(vii) Electronic laboratory notebooks differ from paper notebooks by offering:

a) Searchable databases and multimedia integration

b) Less legal protection

c) Reduced documentation capability

d) Lower reliability

(viii) Portfolio management capabilities help biotechnology ventures:

a) Eliminate innovation entirely

b) Run all projects regardless of value

c) Avoid making any decisions

d) Prioritize research projects based on strategic alignment and resources

(ix) Mobile responsiveness in e-commerce ensures:

a) Sites only work on desktop computers

b) Functionality across devices as mobile usage grows

c) Reduced accessibility

d) Limited customer reach

(x) Integration capabilities between software systems:

a) Increase error rates

b) Require separate databases

c) Create more manual work

d) Avoid duplicate data entry and maintain consistency

(xi) Team diversity enhances innovation by

a) Bringing different viewpoints that challenge assumptions

b) Eliminating all disagreement

c) Creating easy consensus

d) Slowing all decision-making

(xii) Managerial skills complement leadership by focusing on

a) Avoiding all operational details

b) Only inspiring vision

c) Strategic direction exclusively

d) Implementing plans efficiently through systematic processes

(xiii) University-industry research partnerships provide

a) Companies access to cutting-edge science and specialized expertise

b) No cultural challenges

c) Guaranteed commercial success

d) Elimination of all intellectual property concerns

(xiv) Tacit knowledge transfer requires

a) Direct interaction through site visits and hands-on training

b) Only written documentation

c) Patent reading exclusively

d) No personal contact

(xv) Sponsored research agreements with universities involve

a) No company financial contribution

b) Complete company control of academic researchers

c) No intellectual property considerations

d) Companies funding academic research addressing specific questions

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Define working capital in the context of a biotechnology startup. (3)
3. Discuss how regulatory requirements influence marketing communications strategies in the pharmaceutical biotechnology sector. (3)
4. Compare the requirements for e-commerce platforms selling biotechnology research products versus platforms offering testing services to customers. (3)
5. Discuss the financial management software capabilities particularly important for biotechnology companies managing multiple grant-funded research projects. (3)
6. Describe the complementary relationship between leadership skills and managerial skills and explain why both are essential for bioentrepreneurship success. (3)

OR

Analyze the factors that should guide decisions about when to restructure organizations and discuss the change management considerations in organizational restructuring. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Evaluate the application of artificial intelligence and machine learning technologies in biotechnology business operations. (5)
8. Analyze the ecosystem requirements for successful biotechnology entrepreneurship in a regional biotech cluster. (5)
9. Evaluate different sources of financial assistance available for biotechnology startups with suitable examples. (5)
10. Analyze the relationship between financial risk, regulatory uncertainty, and innovation investment in bioenterprises. (5)
11. Create a financial management system implementation plan for a growing biotechnology company. (5)
12. Design a comprehensive market research plan for identifying unmet needs in the immunotherapy market. (5)

OR

Create a services marketing strategy for a biotech company offering CRISPR-based gene editing services. (5)

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