Date of Examination: 20.09.2024 Session: (FN/AN) Duration: 2 Hrs Full Marks: 100 Subject No.: EP61201 Subject: Entrepreneurship Essentials Department/Center/School: Rajendra Mishra School of Engineering Entrepreneurship Specific charts, graph paper, log book etc., required: Nil Special Instructions (if any): NIL



INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Mid-Autumn Semester Examination 2024-25

**Answer all questions. Answer precisely. Do not reproduce questions in the answer script.**

**Leave some space at the left margin. Do not use the same numbering system for listed answers and multi-level lists to avoid confusion.**

Please read the story below and answer the four questions following it: Answer in a bulleted list or numbered list. If you mention several points in one paragraph, it will only be treated as one point.

**The Story of Aryan's Entrepreneurial Journey: TrendFlick**

Aryan was a young, enthusiastic graduate with a passion for fashion. During his time at IIT Kharagpur, he often received compliments for his unique sense of style, and he even won several competitions. This led him to believe that he had a natural talent for clothing design. Additionally, a group of his friends had successfully run a T-shirt business during their college days, further inspiring Aryan to pursue his own venture. Upon graduation, Aryan decided to launch his own apparel brand, **TrendFlick**, with the vision of revolutionizing the fashion industry. Fuelled by ambition, Aryan eagerly began preparing his business plan.

Aryan's idea for **TrendFlick** was ambitious. He envisioned a line of high-end, luxury streetwear aimed at teenagers and young adults. He believed the younger generation was eager for the kinds of designs he had in mind, assuming his personal style would resonate with everyone. Without conducting thorough market research, Aryan registered a private limited company with his brother-in-law, Sameer, as a co-founder, holding a 60:40 share split, respectively. Aryan focused on designing the clothes based on his taste and experiences, while he and Sameer managed the operations and marketing. Early recruits joined to handle sales and logistics, and Aryan's long-time friend, a software engineer, helped with the brand’s IT needs.

Aryan and Sameer quickly exhausted their personal savings and maxed out their credit cards. To sustain the business, they borrowed money from friends and relatives. As investor funding took longer than expected, they turned to a bank loan to install essential infrastructure and cover working capital needs. Confident that the business would grow rapidly, they began acquiring customers and hired more workers in anticipation of increased demand. Unfortunately, they spent a significant portion of the borrowed money on renting an expensive storefront in an upscale shopping district and splurging on high-end fabrics for Aryan’s designs. Aryan believed his passion alone would guarantee success.

In the early stages, Aryan designed the brand logo himself, without seeking professional help. He set up a paid Instagram page for **TrendFlick**, relying heavily on social media marketing. He regularly posted photos of his designs, which helped create some awareness and convert a few followers into customers. Aryan attempted to maximize customer engagement by responding to suggestions and complaints, emphasizing his unique designs and the quality of his fabrics in hopes of attracting more buyers. However, the apparel market is fast-changing, and companies need to anticipate trends to align with customer aspirations. Aryan did not factor this into his strategy.

A turning point came when **TrendFlick** received $1 million in funding from an angel investor. The funds allowed Aryan to build the brand and hire new talent. He recruited several employees from his school campus to manage the store, handle inventory, and provide customer service. Despite this, Aryan soon realized that in the fashion industry, brand recognition was key, even more so than quality or design. To counter competitors, Aryan implemented a two-pronged strategy. First, he offered a 20% discount on his products, which resulted in increased sales. At the same time, he hired social media influencers with large and diverse followings to promote the brand.

Soon, Aryan faced another challenge—he realized that he had been selling his products at a price far below the cost of production. To recover from this mistake, he raised prices by 20%, which led to a drastic decline in sales. In an attempt to cut costs, Aryan turned to cheaper suppliers, but due to the small size of his operations, suppliers were unwilling to cooperate.

As an alternative, Aryan expanded into online sales by listing **TrendFlick** on e-commerce platforms like Amazon and Flipkart. Although these platforms took a significant portion of the revenue, it helped generate appreciable sales. To avoid sharing profits with these platforms, Aryan decided to develop **TrendFlick**'s own online store. He invested in Google AdWords to drive traffic to the site. While the number of visitors increased, very few stayed long enough to make a purchase. On a friend’s advice, Aryan conducted an A/B test to optimize the website’s theme, which led to some improvement in sales.

In addition to direct sales, **TrendFlick** began supplying its apparel to other companies, which sold the items under their own brand names. This helped Aryan make use of his spare production capacity. With these positive developments, **TrendFlick** seemed on its way to becoming a sustainable and profitable business. The company started attracting customers from the early majority segment, signalling growth potential.

However, Aryan had not prepared the factory for the extra workload, leading to production delays. Other operational issues also arose, and sales began to plummet. The company's burn rate increased rapidly, and Aryan found himself unable to sustain the high costs. Eventually, **TrendFlick** ran out of cash, and Aryan was forced to close the business.

What started as a passionate dream turned into a costly failure. Aryan realized that he had made numerous mistakes throughout his journey. The company's debt, which started with a modest bank loan, had ballooned to ₹50 lakh due to accumulating interest. The bank filed a case to recover its dues. The salvage value of the company was estimated at ₹15 lakh, while Aryan’s personal net worth was ₹1 lakh and Sameer's ₹100 lakh.

1. Identify at least 10 mistakes or flaws committed by Aryan and TrendFlick. For each, suggest the corrective actions that should have been taken to avoid these mistakes. [10]
   * 1. *It was a serious mistake for Aryan to assume that his personal style would resonate with everyone. He should have done a market research before launching the brand.*
     2. *Company registration is expensive and one should delay it until absolutely necessary. Aryan should have waited to register a private limited company until approaching investors for funding.*
     3. *Ideally, co-founders should be selected based on complementary skills. It is unclear what skills his brother-in-law contributed.*
     4. *Some freshers were handling key areas such as sales and marketing, which requires deep expertise. The company should have hired experienced persons.*
     5. *Bank loan is expensive, and a startup should avoid raising loan. TrendFlick should have waited and explored other avenues before taking bank loan.*
     6. *Leasing expensive storefront in an upscale shopping district is appropriate only after adequate brand awareness. TrendFlick should have explore other sales channels first and invest in such stores later.*
     7. *Aryan believed that his passion alone would guarantee success. He should have taken customer feedback and hired professional designers to meet changing fashions trends and customers’ aspirations.*
     8. *Early recruits, particularly those fresh out of school, are too inexperienced to handle inventory management and customer service. The company must have hired professionals to lead these areas of operation.*
     9. *Offering a 20% discount without any estimation of affordability is naïve. They should have estimated their costs, affordable losses, and the sustainability of such discounts.*
     10. *Similarly, abruptly raising prices by 20% is a significant mistake. Proper market research is necessary to determine whether customers are willing to pay the higher price.*
     11. *Using cheaper inputs would lead to compromising on quality and dilution of brand values. The company should have tried to cut process and marketing costs instead.*
2. (i) At what point did the business encounter “the Chasm", and how could it have been avoided? (ii) Write the complete revenue model for TrendFlick. (iii) Also, estimate how much money the bank will eventually be able to recover.

[10]

1. *The chasm was encountered when the company began its growth journey and started attracting customers from the early majority part. To avoid falling into the chasm, actions like hiring a professionals including a CEO, raising funds proactively, and setting up the necessary infrastructure were indispensables.*
2. *The four revenue streams are: a. direct sales through retailers; b. sales through third-party e-commerce sites such as Amazon; c. own e-commerce platform; d. unbranded sales to vendors.*
3. *The bank can recover only the salvage value of the company, estimated at ₹15 lakh. Since TrendFlick is a private limited company, the bank can’t recover any money out of the personal assets of owners of the business.*
4. (i) Analyze TrendFlick's competitive position using Porter’s Five Forces framework. Provide a detailed explanation along with a diagram. (ii) Additionally, explain what an A/B test is, using the story as an example. [10]

Bargaining power of suppliers – medium, since there are many buyers and sellers

Threat of substitute – is high, since fashion industry is ever evolving

Barriers to new entrants – low, since any startup can start a business without much resistance

Bargaining power of buyers – high, since the brand is yet to be popular

Competitive rivalry – high since the market has many existing brands

*An A/B test is a form of market research to determine which of the two or more options is preferred by the target audience. For example,* ***TrendFlick*** *conducted an A/B test to determine the most desired theme for its e-commerce portal, aligning it with the preferences of potential customers.*

1. Write an elevator pitch for TrendFlick that could have been presented to the angel investor. Assume that TrendFlick hired you as a consultant to design a winning value proposition for it. Present it with the help of a value proposition canvas. [10]

*We at* ***TrendFlick*** *are a cutting-edge fashion brand specializing in high-end, luxury streetwear for teenagers and young adults. Led by established designer from IIT Kharagpur, our futuristic designs combine bold, unique styles with premium fabrics, as we aim to revolutionize the fashion industry. Partnering with social media influencers has led to a 25% increase in foot traffic and a 30% boost in customer conversions, reflecting growing brand awareness. With a turnover of ₹XXX, our goal is to capture 10% of the target market over the next two years, achieving a net profit of ₹5 million. We are offering a $1 million investment opportunity to expand our infrastructure, with the potential for a 5X return for investors within two years.*

Value Proposition Canvas:

*High-end, luxury streetwear designed for the bold and fashion-forward youth.*

*Great contemporary and future-proof designs.*

*Best quality.*

*Reasonable price.*

*Many choices*

*Multichannel availability for buying.*

*Easy return policy.*

*Frequent restocking aligned with the latest fashion trends.*

*Loyalty points*

*Lack of good quality.*

*Lack of contemporary designs.*

*High price*

*More convenience.*

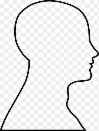
*More choices.*

*High price*

*Buying trendy garments.*

*Need to visit multiple stores.*

*High price, inconvenience*



---------

1. What is the key lesson you learn from the journeys of the following entrepreneurs and businesses (one each): Gautam Adani, Zepto, Vaibhav Agarwal, Kalpana Saroj, Elizabeth Holmes, Sophia Amoruso, Iridium, Blake Mycoskie, Byju Raveendran, and Aerion? [10]

***Gautam Adani****: Entrepreneurs are not born. To be successful, one must have an eye for identifying opportunities and have the customers’ best interests in mind.*

***Zepto****: It is possible to successfully compete with established players by solving a critical customer pain point through business plan innovation.*

***Vaibhav Agarwal****: It is possible to convert a small business into an entrepreneurial venture by creating customer convenience and embracing basic management tools.*

***Kalpana Saroj****: Entrepreneurs are not born. Anybody can dream big. All that is necessary are ambition, hard work, networking, planning, and a focus on customer satisfaction.*

***Elizabeth Holmes****: You can fool some people sometimes, but not all the people all the time. One must not build a business on falsehood. Sooner or later, it will crash under its own weight.*

***Sophia Amoruso****: Entrepreneurs are not born. Anybody who can fulfill customers’ urgent needs can become an entrepreneur without much capital. However, starting may be easy, but growing is difficult without the professional knowledge of a CEO.*

***Iridium****: Market research to know customers’ needs, affordability, and readiness to buy the product or service is a must before starting a company.*

***Blake Mycoskie****: It is possible to create a successful venture by solving a significant social problem unrelated to the target customers. One must identify a chronic issue affecting a section of society, come up with a story to solve it while offering value to customers to build a loyal customer base and achieve success in business.*

***Byju Raveendran****: Do not adopt unfair means to promote a business. You will eventually get caught, with disastrous consequences.*

***Aerion****: Regularly preparing cash flow projection to know when you are likely to run out of cash, and preemptively connecting with investors to avoid it is very important.*

1. Provided below the operational expenses for the year 2023-24, some balance sheet data as of 31.03.2024 (Table - 1), and the balance sheet as on 31.03.2023 (Table - 2). Please prepare/estimate the following:
   1. Gross profit, operating profit, net profit, EBITDA, and cash profit for the year 2023-24. [20]
   2. Balance sheet as of 31.03.2024. [10]
   3. Cash flow statement for the year 2023-24. [10]
   4. (i) Present your views on the overall health of the company, (ii) comment separately for the three cash flows from three different activities of the company, (iii) show with data if the operating cycle has deteriorated during the year. [10]

Table - 1

|  |  |
| --- | --- |
| Internet expenses | 60 |
| Advertisement expense | 120 |
| Purchase of equipment | 8,500 |
| Transportation expense | 300 |
| Insurance | 120 |
| Fuel cost | 450 |
| Web hosting | 130 |
| Employees benefits | 1,200 |
| Purchase of land | 3,120 |
| Closing stock | 750 |
| Salary | 2,300 |
| Maintenance | 100 |
| Legal expense | 50 |
| Payment of rent | 120 |
| License and registration fees | 50 |
| Repayment of bank loan | 1,400 |
| Purchase of goods | 26,000 |
| Construction of factory shed | 3,000 |
| Purchase of a truck | 7,500 |
| Trade Receivables | 1,600 |
| Amortization of capitalized preliminary & preoperative expenses | 500 |
| Purchase of computer | 250 |
| Audit fees | 100 |
| Telephone bill payment | 75 |
| Purchase of telephone | 150 |
| Electricity bill payment | 200 |
| Sale of old machine (book value: 560) | 560 |
| Interest on bank loan | 1,200 |
| Sale of goods | 40,000 |
| Company pays income tax @ 20% |  |
| Outstanding in short term loan | 7,500 |
| Postage | 25 |
| Fresh long term loan raised | 7,000 |
| Trade Payables | 1,750 |
| Traveling expenses | 230 |
| Stationeries | 46 |
| Company pays dividend during the year | 1,500 |
| Founders contribute to new equity capital | 2,000 |
| Depreciation rate for building | 5% |
| Depreciation rate for machinery | @10% |
| Sale of land (Book value: 1000) | 1,000 |
| Sale of building (Book value: 1500) | 1,500 |

Table - 2

Format for cash flow statement

|  |  |  |
| --- | --- | --- |
| Balance sheet as of | 31.3.2023 |  |
| Current Assets |  |  | Format for cash flow |
| Cash | 3,650 |  | **From operating activities** |
| Inventory/Stock of goods | 650 |  | Net profit |
| Trade receivables | 1,300 |  | Depreciation |
| Total current assets |  |  | Amortization |
|  |  |  | Change in inventory |
| **Fixed assets** |  |  | Change in receivables |
| Land | 6,000 |  | Change in payable |
| Building | 2,500 |  |  |
| Plant & Machinery | 7,500 |  | **From investment activities** |
| Preliminary & Preoperative expenses to the extent not amortized | 5,000 |  | Purchase of land |
| **Total assets** | **26,600** |  | Sale of land |
|  |  |  | Purchase of Building |
| **Equity and Liabilities** |  |  | Sale of building |
|  |  |  | Purchase of machinery |
| Fully paid-up equity share capital | 13,500 |  | Sale of machinery |
| Reserves and Surplus/Retained earnings | 3,080 |  |  |
| **Total of Owners' Equity** |  |  | **From financing activities** |
|  |  |  | Contribution to Equity |
| **Short term liabilities** |  |  | Fresh long-term loan |
| Trade Payables/ Sundry Creditors | 1,870 |  | Repayment of loan |
| Short-term loan from the bank | 3,400 |  | Change in short term loan |
| Long term liabilities |  |  | Dividend |
| Long term loan | 4,750 |  | **Subtotal** |
| **Subtotal of liabilities** |  |  | Total cash flow during the year |
| **Total Equity & liabilities** | **26,600** |  | Cash balance |

Solution:

6.a 6.b

|  |  |
| --- | --- |
| CoGS | 25,900 |
| GROSS PROFIT | 14,100 |
| GP% | 35% |
|  |  |
| Depreciation |  |
| Building |  |
| Previous year's value | 2,500 |
| Purchase during the year | 3,000 |
| Sold during the year | 1,500 |
| Total depreciable assets | 4,000 |
| Depreciation @5% | 200 |
| Book value | 3,800 |
|  |  |
| Machinery |  |
| Last year's value | 7,500 |
| Purchase during the year | 16,400 |
| Sold old machine | 560 |
| Total depreciable value | 23,340 |
| Depreciation | 2,334 |
| Book value | 21,006 |
| **TOTAL DEPRECIATION** | **2,534** |
| Operating expenses | 8,710 |
| Operating profit | 5,390 |
| Operating margin | 13% |
| Interest payment | 1,200 |
| Profit before tax | 4,190 |
| PBT margin | 10% |
| Income tax | 838 |
| Net profit | 3,352 |
| Retained profit | 1,852 |
| EBITDA | 8,224 |

|  |  |  |
| --- | --- | --- |
| Balance sheet as of | 31.3.2023 | 31.3.2024 |
| Current Assets |  |  |
| Cash | 3,650 | 256 |
| Inventory/Stock of goods | 650 | 750 |
| Trade receivables | 1,300 | 1,600 |
| Total current assets |  |  |
|  |  |  |
| **Fixed assets** |  |  |
| Land | 6,000 | 8,120 |
| Building | 2,500 | 3,800 |
| Plant & Machinery | 7,500 | 21,006 |
| Prelim & Preop expenses | 5,000 | 4,500 |
| **Total assets** | **26,600** | **40,032** |
|  |  |  |
| **Equity and Liabilities** |  |  |
|  |  |  |
| Fully paid up equity capital | 13,500 | 15,500 |
| Reserves and Surplus | 3,080 | 4,932 |
| **Total of Owners' Equity** |  |  |
|  |  |  |
| **Short term liabilities** |  |  |
| Trade Payables | 1,870 | 1,750 |
| Short term loan from bank | 3,400 | 7,500 |
| Long term liabilities |  |  |
| Long term loan | 4,750 | 10,350 |
| **Sub total of liabilities** |  |  |
| **Total Equity & liabilities** | **26,600** | **40,032** |

Solution 6.c

|  |  |
| --- | --- |
| Cash flow statement for the year 2023-24 | |
| Format for cash flow |  |
| **From operating activities** |  |
| Net profit | 3,352 |
| Depreciation | 2,534 |
| Amortization | 500 |
| Change in inventory | -100 |
| Change in receivables | -300 |
| Change in payable | -120 |
|  | **5,866** |
| **From investment activities** |  |
| Purchase of land | -3,120 |
| Sale of land | 1,000 |
| Purchase of Building | -3,000 |
| Sale of building | 1,500 |
| Purchase machinery | -16,400 |
| Sale of machinery | 560 |
|  | **-19,460** |
| **From financing activities** |  |
| Contribution to equity | 2,000 |
| Fresh long term loan | 7,000 |
| Repayment of loan | -1,400 |
| Change in short term loan | 4,100 |
| Dividend | -1,500 |
| **Sub total** | **10,200** |
| Total cash flow during the year | -3,394 |
| Cash balance | 256 |

6.d: i. Though the company has made profit and paid dividends during the year, but it is not managing the inventory, receivables and payables efficiently leading to negative cash flow on these accounts.

ii. The cash flow from operating activities is appreciable, although there is still considerable room for improvement.

The company has been heavily investing in infrastructure resulting in negative cash flow from investment activities.

The company has been funding most of its infrastructure and working capital through debt, which does not bode well for its future. Though the founders have contributed ₹2,000 to equity capital, they withdrew ₹1,500 as dividends.

1. The operating cycle for the two years is as follows:

2022-23: 650 + 1300 – 1870 = 80 (expressed in ₹ in absence of data on equivalent days / holding periods)

2023-24: 750 +1600 – 1750 = 600 (expressed in ₹ in absence of data on holding period)

The operating cycle has significantly deteriorated during the current year.