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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

TEST 1

Sem & AY: Odd Sem. 2019-20

Date: 01.10.2019

Course Code: MGT 113

Time: 11:00AM to 12:00PM

Course Name: DIGITAL ENTREPRENEURSHIP

Max Marks: 40

Program & Sem: B.Tech (ECE/MEC/ PET) & V

Weightage: 20%

Instructions:

- (i) *Be Specific and to the Point. Draw the Diagrams Wherever Necessary.*

Part A (Memory Recall Questions)

Answer all the Questions. Each Question carries five marks.

(3Qx5M=15M)

1. Draw the Conceptual Diagram of Lasting Value Creation Zone. (C.O.NO.1) [Knowledge]
2. Draw the Conceptual Diagram of Human Centric Creative Pursuit. (C.O.NO.1) [Knowledge]
3. List the 5 Steps of Design Thinking. (C.O.NO.1) [Knowledge]

Part B (Thought Provoking Questions)

Answer all the Questions. Each Question carries five marks.

(3Qx5M=15M)

4. According to the Article "What Makes Entrepreneurs-Entrepreneurial":
Explain the differences between causal and effectual reasoning? (Bullet Points and Diagrams)
(C.O.NO.2) [Comprehension]
5. According to the HBR Article "What Entrepreneurs Get Wrong?" (C.O.NO.2) [Comprehension]
Outline at least 5 common mistakes that most entrepreneurs do. (Bullet Points only)
6. According to the HBR Article "The Global Entrepreneur": (C.O.NO.1) [Knowledge]
Outline the key Competencies of a Global Entrepreneur? (Bullet Points only)

Part C (Problem Solving Questions)

Answer the Question. The Question carries ten marks.

(1Qx10M=10M)

7. Draw the Lifecycle Model Diagram of Digital Entrepreneurship. (C.O.NO.2) [Application]

*** Good Luck ***



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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

TEST – 2

Sem & AY: Odd Sem 2019-20

Course Code: MGT 113

Course Name: DIGITAL ENTREPRENEURSHIP

Program & Sem: B.Tech (ECE,EEE,MEC,PET) & V

Date: 19.11.2019

Time: 11.00 AM to 12.00 PM

Max Marks: 40

Weightage: 20%

Instructions:

- (i) *Be Specific and to the Point. Draw the Diagrams Wherever Necessary.*

Part A [Memory Recall Questions]

Answer all the Questions. Each Question carries five marks.

(3Qx5M=15M)

1. Name the 5 Emerging Technology that has significant Entrepreneurial Opportunity.
2. List any 5 Sustainable Development Goals (SDGs), which Digital Technology can Play Critical Role for their accomplishments.
3. List 5 Prerequisites of Financial Support to any Venture.

C.O. # 3 [Knowledge]

C.O. # 3 [Knowledge]

C.O. # 2 [Knowledge]

Part B (Thought Provoking Questions)

Answer all the Questions. Each Question carries four marks.

(3Qx4M=12M)

4. According to the Article "Startups That Last".
Outline 4 critical activities for successful scaling up any startup venture (Bullet Points Only)
5. According to the HBR Article "How to Negotiate with VCs":
Discuss the 4 Maxims that help to Maximize Long-Term Values while Negotiating with VCs. (Discuss and Explain Briefly)
6. According to the HBR Article "How to Launch Your Digital Platform"
Outline 4 important common characteristics of Successful Digital Platforms (Bullet Points only)

C.O. # 2 [Comprehension]

C.O. # 4 [Comprehension]

C.O. # 3 [Comprehension]

Part C (Problem Solving Questions)

Answer the Question.

(4+4+5=13M)

7. A Venture: Govt. of India has banned use of Single Plastic. It is causing constrains to Drinking Water Bottling Industry. You have developed a non-breakable transparent Food-Grade Silicon bottle, which can be used for multiple refill of water from drinking water Dispensers.

The quick market research reveals the followings:

- Target Market Size = 40% of 1.35 billion Indian Customers (Mainly Residents of Cities and Towns, Av. Family size = 5)
- Every Indian Family Needs at least three Silicon Bottles to Carry Drinking Water to either schools, colleges or work /Year= Q
- Price of one 1 Liter Silicon Bottle = ₹ 20 = P1
- Price of Pack of 3 Silicon Bottle = ₹ 50 = P2
- Market Research suggests that 60% of Indian Families will buy at least 1 Pack in every year and 40% is likely to buy 1 Single Bottle in every Six Months (Frequency of Purchase)
- Planned Target Market Share = 10% of Market = F_D
- Expected Gross Profit / Pack of 3 = ₹ 5.0 and for Single = ₹ 2.0/ Bottle = M_D

a) Calculate the **Market Size (Q_A)** of Silicon Water Bottle in **Quantity** as well as in ₹ based at given Price.

C.O. # 4 [Application]

b) Calculate Size of **Your Market Share** for Silicon Water Bottle in ₹ (V_A).

C.O. # 4 [Application]

c) Calculate Your Expected **Yearly EBITDA for ₹ 1.00 Margin** for 1 Litre Bottle (after 50% discount for single pack and 40% for a Pack of 3 to the retailers, which comes to ₹ 1.00 Margin per bottle)

C.O. # 4 [Application]

Note 1: EBITDA = Earnings before interest, tax, depreciation and amortization;

Note 2: MRP = Retail Markup Price and MRP = P_A



SCHOOL OF ENGINEERING

Semester: V Semester
 Course Code: MGT 113
 Course Name: DE

Date: 19/11/2019
 Time: 1 HOUR
 Max Marks: 40
 Weightage: 20%

Extract of question distribution [outcome wise & level wise]

Q.NO	C.O.NO	Unit/Module Number/Unit /Module Title	Memory recall type			Thought provoking type			Problem Solving type			Total Marks
			[Marks allotted]	Bloom's Levels		[Marks allotted]	Bloom's Levels		[Marks allotted]	Bloom's Levels		
				K			C			A		
1	3	4		5								5
2	3	4		5								5
3	2	4	5									5
4	2	4				5						5
5	4	4					5					5
6	3	4				5						5
7	4	5						13				13
	Total Marks											40

K = Knowledge Level C = Comprehension Level, A = Application Level

Note: While setting all types of questions the general guideline is that about 60%

Of the questions must be such that even a below average students must be able to attempt, About 20% of the questions must be such that only above average students must be able to attempt and finally 20% of the questions must be such that only the bright students must be able to attempt.

Annexure- II: Format of Answer Scheme



SCHOOL OF ENGINEERING





SOLUTION

Semester: V Semester
 Course Code: MGT 113
 Course Name: DE

Date: 01/10/2019
 Time: 1 HOUR
 Max Marks: 40
 Weightage: 20%

Part A

(3Q x 5M = 15Marks)

Q No	Solution	Scher of Marki
1	<p style="text-align: center;">Emerging Technologies and Entrepreneurial Opportunities</p> <div style="display: flex; justify-content: space-around; align-items: center;">     </div> <ol style="list-style-type: none"> 1. Artificial Intelligence #AI /Machine Learning / Deep Learning 2. Internet of Things #IOT / #IIOT & Sensors & Wearables 3. Blockchain—Distributed Ledger Systems, Crypto Currencies, DAOs (decentralized Autonomous Organizations), Dapps (Decentralized Applications) 4. Big Data—Apps, Infrastructure & Predictive Analytics 6. Robots incl. Drones & Autonomous Vehicles— Consumer/Commercial/Industrial Robots and Robotics 7. 3D Printing—Additive Manufacturing and Rapid Prototyping 	5

2		5
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3	<p style="text-align: center;">5 Prerequisites of Support</p> <ol style="list-style-type: none"> 1. Disruptive/ innovative Power of the Idea 2. Execution Ability of the Entrepreneur to Transform the Idea into a 'Hot Product' 3. Size of the Market and Future Potentials 4. Goodness of the Business Plan 5. Probability of Success. <div style="text-align: center;"> </div>	5
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Part B

(3Q x 5M = 15Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
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4	<h2 style="text-align: center;">Salient Points of Article 7</h2> <p>4 Activities that are Critical for Successful Scaling a Venture:</p> <ol style="list-style-type: none"> 1. Hire Functional Experts and Delegate Tasks and Responsibilities 2. Add Management Structure for the organization 3. Build Planning and Forecasting Capabilities. 4. Spell out and Reinforce Cultural Values. 	5	5
5	<h2 style="text-align: center;">Salient Points of Article 11</h2> <p>This Article Discusses 4 Maxims to Maximize Values while Negotiating with VCs:</p> <ol style="list-style-type: none"> 1. Understand your Leverage: Access Your options, strengths and values that you can bring on the table, which VCs care about while negotiating. 2. Maximize Trust: Focus on long-term relationship and operational prospects rather on agreeing with something that you are not really comfortable with. 3. Focus on Value (Not just Valuation): Decide how much control you want to sacrifice. What would be VCs role vis-à-vis your operational autonomy. 4. Strive for Understanding: How much money you will eventually see. VCs proposal can help you to understand its unspoken concerns and assessments of the Start-up's future. 	5	5 Min

6	<h2 style="margin: 0;">5 Questions of Article 12</h2> <p style="margin: 10px 0;">5 Important Common Characteristics of Successful Digital Platforms:</p> <ol style="list-style-type: none"> 1. Platform that Attracts Large Group of Users at once. 2. Platform that Offer Stand-Alone Value. 3. Platform that Build Credibility with Customers. 4. Platform that Charges Users reasonably. 5. Platform that is Compatible with Legacy Systems. 	5	5 Min
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Part C High level Comprehension

1Q x 13M = 13Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
7	<p><u>Data Sets for Market Size Calculation</u> are as follows: B = Billion = 10^9, Cr = 10^7, L = Lakhs = 10^5</p> <p>Indian Population Size = $1.35 * 10^9 = 1.35$ Billion</p> <p>Total Indian Families (Family Size = 5) = $1.35 \div 5 * 10^9 = 0.27$ Billion = 27 Cr</p> <p>TM = Target Market (40% of Indian Population) = $(1.35 * 0.4 \div 5) * 10^9 = 27 * 0.4$ Cr = 10.8 Cr Families</p> <p>Q = Demand for Bottles Per Year for TM = At Least 1 Pack of 3 = $TM * 3 = 10.8 * 3 = 32.4$ Cr ≈ 32 Cr. Bottles</p> <p>\therefore Market Size of Silicon Bottle in Qty. = 32 Cr Bottles / Year (Maximum Possible)</p> <p>60% of TM = 10.8 Cr * 0.6 = 6.48 Cr ≈ 6.5 Cr families (Most Likely)</p> <p>40% of TM = 10.8 Cr * 0.4 = 4.32 Cr ≈ 4.0 Cr families (Most Likely)</p> <p>60% Buys 1 Pack of 3 = $6.5 * 3 = 19.5$ Cr ≈ 20 Cr Bottles and Spends in ₹ = $6.5 * 50 = 325$ Cr/ Yr.</p> <p>40% Buys 1 Single Pack Bottle Twice a Yr. = $4 * 2 = 8$ Cr Bottles/ Yr. and Spends in ₹ = $8 * 20 = 160$ Cr/ Yr.</p> <p>\therefore Market Size of Silicon Bottle in ₹ = $(325 + 160) = 485$ Cr / Year</p>	13	13

<p>Your Target Market Share is 10% of the Total Market per Year</p> <p>∴ Market Share of Silicon Bottle in ₹ = $485 * 0.1 = 48.5$ Cr / Year = Yearly Revenue Target</p> <p>∴ Total No. of Bottles Can be Sold/ Yr. = $20 + 8 = 28$ Cr Bottles / Yr.</p> <p>∴ Your Expected Yearly EBITDA (10% of Total Market) = $28 * 0.1 = 2.8$ Cr Bottles * ₹ = ₹ 2.8 Cr</p> <p>(Your EBITA Per Bottle after Discount = ₹ 1). This is a SME Project.</p>		
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**PRESIDENCY UNIVERSITY
BENGALURU**
SCHOOL OF ENGINEERING
END TERM FINAL EXAMINATION

Semester: Odd Semester: 2019 - 20

Course Code: MGT 113

Course Name: DIGITAL ENTREPRENEURSHIP

Program & SEM: B.Tech (ECE, MEC, EEE, PET) & V

Date: 27 December 2019

Time: 9:30 AM to 12:30 PM

Max Marks: 80

Weightage: 40%

Instructions:

- (i) *Be Specific and to the Point. Draw the Diagrams Wherever Necessary.*
- (ii) *Attempt the Questions in Proper Sequence- Section wise*

Part A [Memory Recall Questions]

Answer all the Questions. Each Question carries 5 marks. (6Qx5M=30M)

1. Explain by Drawing the Diagram that Depicts the Correlation between Finding Funds and Crossing the Death Valley of Entrepreneurship (C.O.No.1) [Knowledge]
2. Name the 5 Key Abilities of Successful Entrepreneurship. (C.O.No.2) [Knowledge]
3. Draw the Diagram that Depicts the 5 Steps of Entrepreneurial Innovation Process. (C.O.No.3) [Knowledge]
4. Identify 5 Essentials for Evaluation of the Prospects of Proposed Venture. (C.O.No.4) [Knowledge]
5. Identify the 5 Key Question of Digital Entrepreneurship. (C.O.No.4) [Knowledge]
6. List 5 of the 6 Revenue Options of Digital Business. (C.O.No.5) [Knowledge]

Part-B (Thought Provoking Questions)

Answer all the Questions. Each Question carries 4 marks. (5Qx4M=20M)

This section is application of the concept of Business Model Canvas (Building Blocks for the Proposed Venture).

Next paragraph describe a real venture - a startup.

- a) Calculate the Market Size (QA) of “Superbike – C” and Superbike – T in Quantity & ₹ based on given Price? (C.O.No.5) [Application]
- b) Calculate the present Size of Your Market Share in ₹ (VA) for Superbike – C and Superbike – T? (C.O.No.5) [Comprehension]
- c) Calculate Your Expected Yearly EBITDA for ₹ 3000 Margin per Unit of Superbike – C and 2000 Margin per Unit of Superbike – T after the 20% of dealers’ discount on the MRP of Superbike. (C.O.No.5) [Comprehension]

Note 1: EBITDA = Earnings before interest, tax, depreciation and amortization;

Note 2: MRP = Retail Markup Price and MRP = PA

13. IdeaSprings.Com (ISC) a start-up company is seeking A-Series funding from Value Ventures (VV) - a venture capitalist. studying their crystal ball, the Mr. Naganand Doraswamy, founders of ISC expect to be able to sell the company for \$50 million in four years, but they need to raise \$5 million. Value Ventures considers this business is not free from risks and wants to apply a discount rate of 50% to be adequately compensated for the risk they will undertake. Mr. Doraswamy feels that VV’s risk assessment and discount rate of 50% was on higher side, discount rate of 40% is a balanced assessment. ISC feels they need to negotiate and under any situation ISC wanted to own 1 million shares, whatever valuation they would get. [20 Marks]

- Note the variables for the key assumptions of the given problem.
 - V = terminal value (at time of exit) = \$50 million (in four years)
 - t = time to exit event = 4 years
 - I = amount of investment = \$5 million
 - r_1 = discount return used by investors = 50 %
 - r_2 = discount rate acceptable by JanSeva = 40%
 - x = number of existing shares (owned by the entrepreneurs)

- A. Determine the post-money valuation for 50% & 40% (2M+2M=4M)
(C.O.No.5) [Comprehension]
- B. Determine the pre-money valuation for 50% & 40% (2M+2M=4M)
(C.O.No.5) [Comprehension]
- C. Determine the ownership fraction for 50% & 40% (2M+2M=4M)
(C.O.No.5) [Comprehension]
- D. Calculate the number of shares of VV for 50% & 40% (2M+2M=4M)
(C.O.No.5) [Comprehension]
- E. Determine the price of Value Venture’s shares for 50% (4M)
(C.O.No.5) [Comprehension]



SCHOOL OF ENGINEERING

END TERM FINAL EXAMINATION

Extract of question distribution [outcome wise & level wise]

Q.NO.	C.O.NO (% age of CO)	Unit/Module Number/Unit /Module Title	Memory recall type [Marks allotted] Bloom's Levels	Thought provoking type [Marks allotted] Bloom's Levels	Problem Solving type [Marks allotted]	Total Mark s
			K	C	A	
PART A Q. NO1 TO Q. NO6	CO 01 -10% CO 02- 10% CO 03-15% CO 04- 10% CO 05- 10%	All the modules	30 [5+5+5+5+5+5]			30
PART B Q.NO.7	CO 03- 20%	MODULE 6		05	-	05
PART B Q.NO.8	CO 03-30%	MODULE 6		05	-	05
PART B Q.NO.9	CO 04	MODULE 6		05	-	05
PART B Q.NO.10	CO 04	MODULE 6		05	-	05
PART C Q.NO.11	CO 05	MODULE 7			10	10
PARTC Q.NO.12	CO 05	MODULE 7			20	20
Total Marks			30	20	30	80

K = Knowledge Level C = Comprehension Level, A = Application Level

2	<h3>7 Essential Abilities of Entrepreneurship</h3> <ol style="list-style-type: none"> 1. Identify an opportunity 2. Evaluate an idea and assess the market 3. Appreciate the risks and rewards of entrepreneurship 4. Leverage experiments to validate your idea and refine your business strategy 5. Discover the key financial decisions any entrepreneur must make in the early stages of a new venture 6. Understand the process of raising capital and how to speak to investors 7. Learn from successful entrepreneurs and leading venture capitalists, as well as peers <p style="font-size: small;">12.11.2019 Dr. S. K. Majumdar, SJM</p>	5
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(0Q x 0M = 0 Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
3	<p style="text-align: center;">5 Steps of Entrepreneurial Innovation Process Imagine Possible New Ends by Using New Means</p> <p style="font-size: x-small;">December 11, 2019 Dr. S. K. Majumdar</p>		5
4	<p style="text-align: center;">5 Essentials for Evaluation of the Prospects of Proposed Venture</p> <ol style="list-style-type: none"> 1. Quantification of Target Market Size 2. Size of Desired Market Share? 3. Desired Margin? 4. Expected EBITDA 5. Probability of Success? <p style="font-size: x-small;">EBITDA = Earnings before interest, tax, depreciation and amortization December 11, 2019 Dr. S. K. Majumdar</p>		5
5	<p style="text-align: center;">5 Key Questions of Entrepreneurship</p> <ol style="list-style-type: none"> 1. What is your mission? <ul style="list-style-type: none"> - What are your challenges? What are your opportunities? Does the mission need to be revisited? 2. Who is your customer? <ul style="list-style-type: none"> - Who is your primary customer? Who are your supporting customers? How will your customers change? 3. What does the customer value? <ul style="list-style-type: none"> - What do you believe your primary and supporting customers' value? What knowledge do you need to gain from your customers? How will you participate in gaining this knowledge? 4. What are your results? <ul style="list-style-type: none"> - How do you define results? Are you successful? How should you define results? What must you strengthen or abandon? 5. What is your business plan? <ul style="list-style-type: none"> - Should the mission be changed? What are your goals? <p style="font-size: x-small;">December 12, 2019 Dr. S. K. Majumdar</p>		5
6	<p style="text-align: center;">7 REVENUE OPTIONS OF DIGITAL BUSINESS</p> <p style="font-size: x-small;">SR = Source of Revenue; ASP = Application Service Provider December 12, 2019 Professor S. K. Majumdar</p>		5

CYP = City Young Population (40% of City Population) No. = $1.3 * 0.3 * 0.4 * 10^9 = 0.156$ Billion

CYWB = City Young Willing Buyers (30% of CYP) = $1.3 * 0.3 * 0.4 * 0.3 * 10^9 = 0.0468$ 10^9

City Young **Willing & Can** (Affordable) **Buy** (50% CYWB) = $0.0468 * 0.5 * 10^9 = 0.0234$ 10^9

M_C = **Total Urban Market Size for SuperBike** = 0.0234 B = **234 Lakhs** (A)

Town Population (40% of Total Population) = $1.3 * 0.4$ 10^9

TYP = Town Young Population (40% Young Population) = $1.3 * 0.4 * 0.4$ 10^9

TYWB = Town Young Willing Buyers (50% CYWP) = $1.3 * 0.4 * 0.4 * 0.5$ 10^9

Town Young **Willing & Can** (Affordable) **Buy** (30% TYWB) = $1.3 * 0.4 * 0.4 * 0.5 * 0.3$ $10^9 = 0.0312$ Billion

M_T = **Total Rural Market Size for SuperBike** = $0.0312 * 10^9 = 312 * 10^5 = 312$ Lakhs (B)

Ans. of Q A: Total Market Size for SuperBike in Qty. (Q_A)
 = $(M_C + M_T) = (234 + 312) = 546$ Lakhs

Market Size in ₹ = $(M_C * P_C + M_T * P_T) = 234 L * 35 K + 312 L * 30K = (8190 + 9360) * 10^8 = 1755$ Billion

Data sets for calculation of Market Share:

Your City Market **Target in Qty.** = 30% of **M_C** = $234 * 0.3 * 10^5$
 = $70.2 * 10^5 \approx 70$ Lakhs (X)

Your Rural Market **Target in Qty.** = 50% of **M_T** = $312 * 10^5 * 0.5 = 156 * 10^5 = 156$ Lakhs (Y)

C = City Market Target in ₹ = $70 * 10^5 * 35 * 10^3 = 245 * 10^9 = 245$ Billion (C)

D = Rural (Town) Market Target in ₹ = $156 * 10^5 * 30 * 10^3 = 468 * 10^9 = 468$ Billion (D)

T = Total Target Market (City + Town) in ₹ = $(C + D) = (245 + 468) * 10^9 = 713 * 10^9 = 1287$ Billion

Ans. For B: Market Share of SuperBike – C = $C \div T * 100$
 = $245/713 * 100 \approx 34.4\%$

Ans. For B: Market Share of SuperBike – T = $D \div T * 100$
 = $468/713 * 100 \approx 65.6\%$

Data sets for calculation of Yearly EBITDA:

Margin for **SuperBike – C** per Unit = ₹ 3000 (To be Sold in Cities)

Margin for **SuperBike – T** per Unit = ₹ 2000 (To be Sold in Towns)

Your Yearly Target for City (20%) in Qty. = $70 * 10^5 * 0.2 = 14 * 10^5 = 14$ Lakhs