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- Drawing Instruments:-

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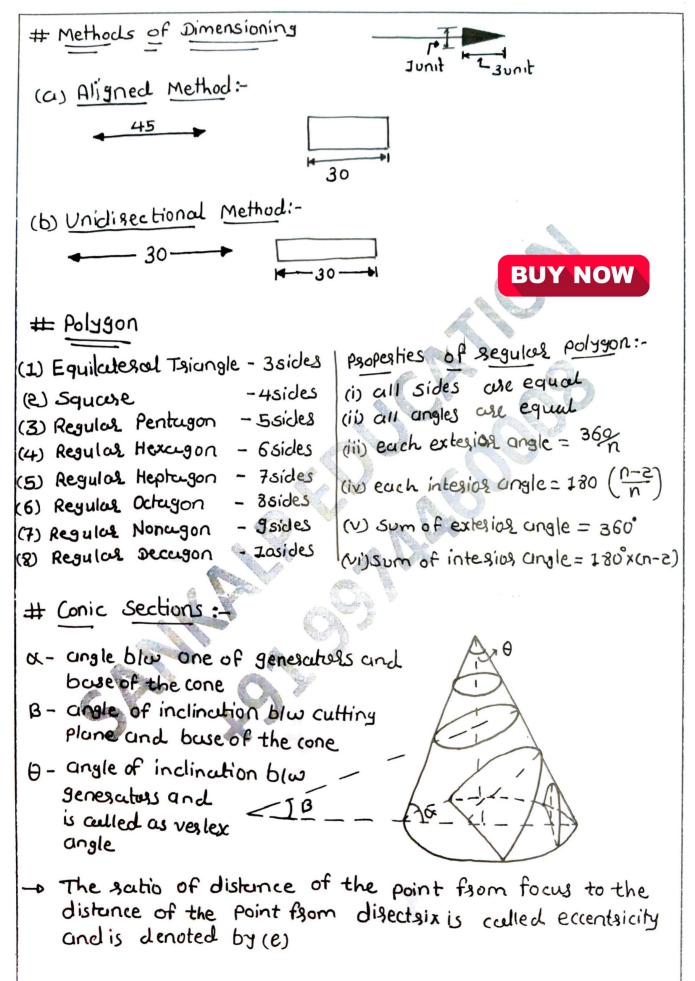
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Subject: Element of Electrical Engineering

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| 3 | Transformers |
| 4 | Electrical Machines |
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1.1. Define following terms

(a) Current

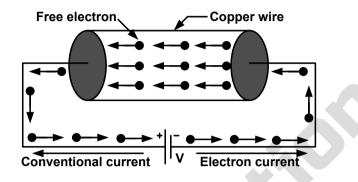


Figure 1.1Concept of electric current

- Flow of electron in closed circuit is called current.
- Amount of charge passing through the conductor in unit time also called current.
- Unit of current is charge/second or Ampere (A).

$$I = \frac{Q}{t}$$

Where, *I* = Current

Q = Charge

t = Time

(b) Potential or Voltage

- The capacity of a charged body to do work is called potential.
- Unit of potential is joule/coulomb or Volt (V).

$$V = \frac{W}{Q}$$

Where, V = Potential or Voltage

W= Workdone

(c) Potential difference



Figure 1. 1Potential differences

- The difference of electrical potential between two charged bodies is called potential difference.
- Unit of Potential Difference is Volt (V).
- If potential of body A is +12V and potential of body B is +7V then potential difference is +5V.

i.e. (+12V) - (+7V) = +5V

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1. D.C.Circuits

(d) Electro Motive Force (emf)

- The force is required to move electron from negative terminal to positive terminal of electrical source in electrical circuit is called emf.
- Unit of emf is volt (V).
- Emf is denoted as ε.

(e) Energy

- Ability to do work is called energy.
- Unit of energy is Joule or Watt-sec or Kilowatt-hour (KWh).
- 1KWh is equal to 1 Unit.

$$W = P \times t = VIt = I^2 Rt = \frac{V^2 t}{R}$$

Where, W=Energy P =Power

(f) Power

- Energy per unit in time is called power.
- Unit of Power is Joule/Second or Watt (W).

$$P = \frac{W}{t}$$

(g) Resistance

- Property of a material that opposes the flow of electron is called resistance.
- Unit of resistance is Ohm (Ω).

$$R = \frac{V}{I}$$

Where, R = Resistance

(h) Conductance

- Property of a material that allows flow of electron.
- It is reciprocal of resistance.
- Unit of conductance is (Ω^{-1}) or mho or Siemens(S).

$$G = \frac{1}{R}$$

Where, G = Conductance

(i) Resistivity or Specific Resistance

- Amount of resistance offered by 1m length of wire of 1m² cross-sectional area.
- Resistivity is denoted as a ρ.
- Unit of Resistivity is Ohm-meter (Ω-m).

$$R \propto \frac{l}{a}$$



$$R = \rho \frac{l}{a}$$

$$\rho = \frac{\pi}{l}$$

Where, R = Resistance

 ρ = Resistivity

l = Length of wire

a = Cross section area of wire

(j) Conductivity

• Ability of a material to allow flow of electron of a given material for 1 m length & 1 m^2 cross-sectional area is called conductivity. Unit of conductivity is $\Omega^{-1}m^{-1}$ or Siemens m⁻¹.

$$\sigma = \frac{1}{\rho}$$

Where, σ = Conductivity

1.2. Explain types of electrical energysource

• Electrical source is an element which supplies energy to networks. There are two types of electrical sources.

(a) Independent sources

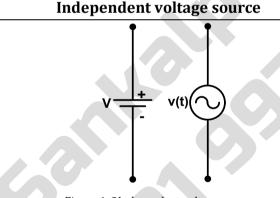


Figure 1. 2Independent voltage source

- It is a two terminal element that provide a specific voltage across its terminal.
- The value of this voltage at any instant is independent of value or direction of the current that flow through it.

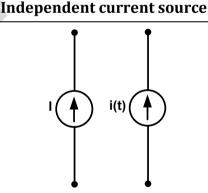


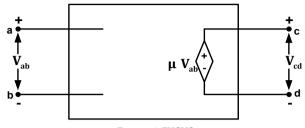
Figure 1. 3Independent current source

- It is two-terminal elements that provide a specific current across its terminal.
- The value and direction of this current at any instant is independent of value or direction of the voltage that appears across the terminal of source



(b) Dependent sources







 Voltage controlled voltage source is four terminal network components that established a voltage V_{cd} between twopoint c and d.

 $V_{cd} = \mu V_{ab}$

- The voltage V_{cd} depends upon the control voltage V_{ab} and μ is constant so it is dimensionless.
- μ is known as a voltage gain.

Current controlled voltage source (CCVS)

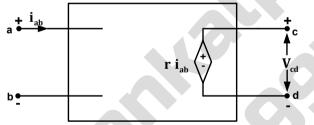
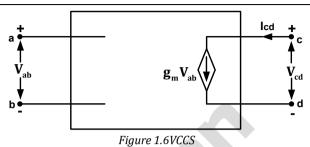


Figure 1.7CCVS

• Current controlled voltage source is four terminal network components that established a voltage V_{cd} between two-point c and d.

$$V_{cd} = ri_{ab}$$

- V_{cd} depends on only on the control current i_{ab} and constant r and r is called trans resistance or mutual resistance.
- Unit of transresistance is Volt/Ampere or Ohm (Ω).

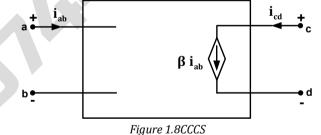


Voltage controlled current source is four terminal network components that established a current i_{cd} in the branch of circuit.

$$i_{cd} = g_m V_{ab}$$

- i_{cd} depends only on the control voltage V_{ab} and constant g_m , is called trans conductance or mutual conductance.
- Unit of transconductance is Ampere/Volt or Siemens(S).

(CCVS) Current controlled current source (CCCS)



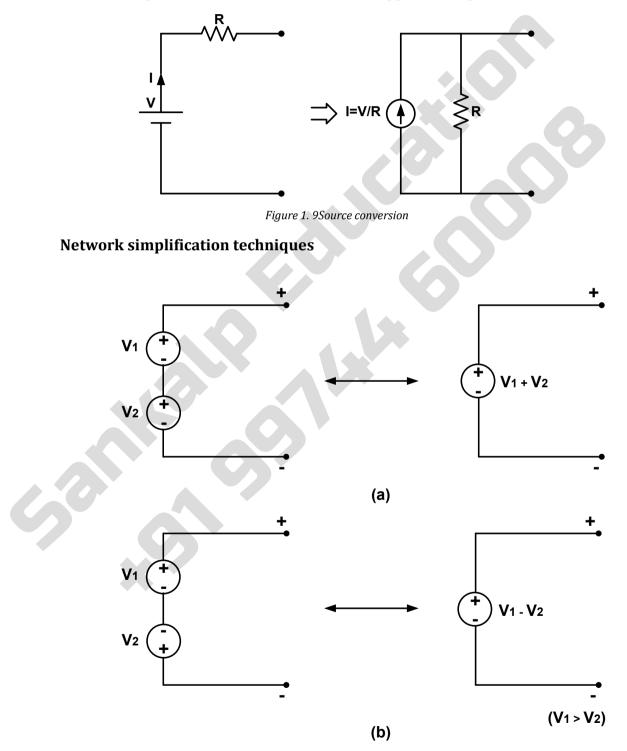
 Current controlled current source is four terminal network components that established a current I_{cd} in the branch of circuit.

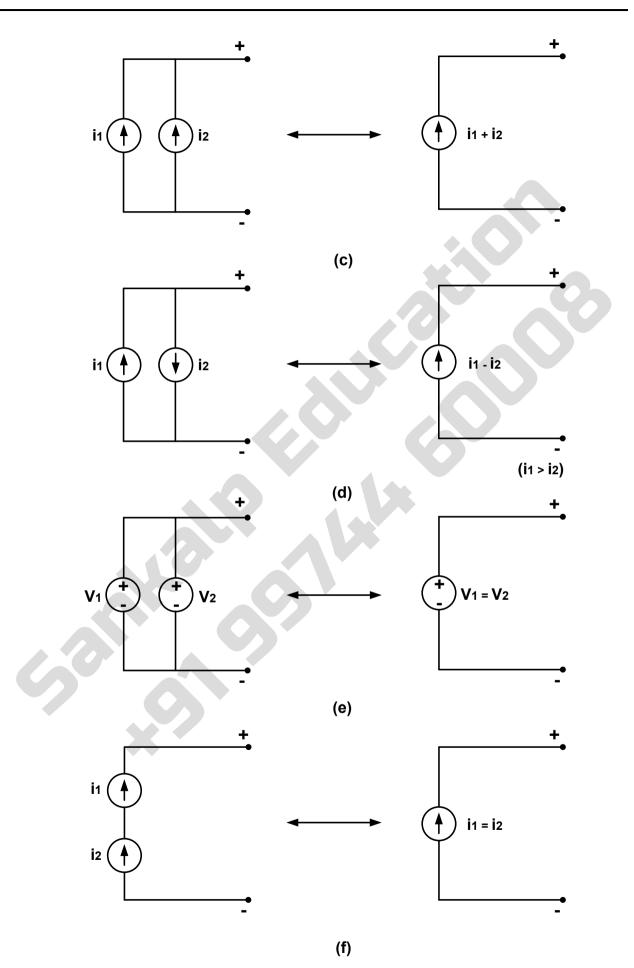
$$i_{cd} = \beta i_{ab}$$

- i_{cd} depends on only on the control current i_{ab} and constant β and β is called current gain. Current gain is constant.
- Current gain is dimensionless.

1.3. Explain source conversion

- A voltage source with a series resistor can be converted into an equivalent current source with a parallel resistor. Conversely, a current source with a parallel resistor can be converted into a voltage source with a series resistor.
- Open circuit voltages in both the circuits are equal and short circuit currents in both the circuit are equal.Source transformation can be applied to dependent source as well.





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ELEMENT OF ELECTRICAL ENGINEERING - MCQS

- Q.1 Which of the following theorems can be (B) Unity power factor and maximum applied to any network - linear or noncurrent (C) Unity power factor and minimum linear, active or passive, time-variant or time-invariant? current (A) Thevenin theorem (D) Zero power factor and minimum current (B) Norton theorem (C) Tellegen theorem **Q.8** The curve representing Ohm's law is (D) Superposition theorem (B) Hyperbolic (A) Linear (C) Parabolic (D) Triangular Q.2 Two heaters rated at 1000 W, 250 V each are connected in series across a 250 V, 50 Q.9 Specific resistance of a conductor depends Hz AC mains. The total power drawn from upon the supply would be (A) Dimension of the conductor (A) 1000 watt (B) 500 watt (B) Composition of conductor material (C) 250 watt (D) 2000 watt (C) Resistance of the conductor (D) Both (A) and (B) Q.3 Area of hysteresis loop represents (A) copper loss Q.10 Superposition theorem is essentially based (B) eddy current loss on the concept of (C) dielectric loss (A) Reciprocity (B) Linearity (D) Non-linearity (D) hysteresis loss (C) Duality Q.11 Two coupled coils with $L_1 = L_2 = 0.6$ H a The voltage across the various elements are **Q.4** have a coupling coefficient of K = 0.8. The masked, as shown in the figure given below. The input voltage is: turns $\frac{N_1}{N_1}$ of is N_{2} (B) 4 (B) 2 (D) 0.5 (C) 1 10VThe value of current I flowing in the 1Ω Q.5 resistor in the circuit shown in the figure below will be (B) 24 V (A) 27 V (C) 10 V (D) 5 V 1Ω †)5A Q.12 The ratio of resistances of a loo w, 220 V lamp to that of a loo W, 110 V lamp will be at respective voltages (A) 10 A (B) 6 A (A) 4 (B) 2 (C) 5 A (D) zero (C) (D) 2 Q.6 A circuit component that opposes the
 - **Q.13** If four $10\mu F$ capacitors are connected in parallel, then net capacitance is
 - (A) $2.5\mu F$ (B) $40\mu F$ (C) $20\mu F$ (D) $15\mu F$



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change in circuit voltage is

A series resonant circuit implies-

(A) Zero power factor and maximum

(B) Capacitance

(D) All the above

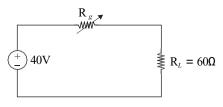
(A) Resistance

(C) Inductance

current

Q.7

- Q.14 A parallel R-L-C circuit resonates at 100 KHz. At frequency of 110 KHz, the circuit impedance will be
 (A) Capacitive
 (B) Inductive
 (C) Resistive
 (D) none of these
- **Q.15** If R_g in the circuit shown in figure is variable between 20 Ω and 80 Ω then maximum power transferred to the load R_L will be



| (A) 15 W | (B) 13.33 W |
|------------|-------------|
| (C) 6.67 W | (D) 2.4 W |

- **Q.16** A wire has a resistance 10Ω . It is stretched by one-tenth of its original length. Then its resistance will be (A) 10Ω (B) 12.1Ω
 - (C) 9 Ω (D) 11 Ω
- Q.17 In R-L-C circuits, the current at resonance is (A) maximum in parallel resonance and : minimum in series resonance.

(B) maximum in series resonance and minimum in parallel resonance.

(C) maximum in both series and parallel resonance,

(D) minimum in both series and parallel resonance.

- Q.18 A lossy capacitor with loss angle of 0.01 radian, draws a current of 0.5 A when supplied at 1000 V from a sinusoidal voltage source. The active power consumed by the capacitor is

 (A) 5W
 (B) 10W
 (C) 2W
 (D) 1W
- Q.19 A current wave starts at zero, rise instantaneously, then remains at a value of 20 A for 10 sec., then decreases instantaneously remaining at a value of -10 A for 20 sec., and then repeats this cycle. The rms value of the wave is (A) 22.36A (B) 17.32A

(C) 2.165A (D) 14.14A

- Q.20 Two incandescent bulbs of rating 230 V, 100 W and 230 V, 500 W are connected in parallel across the mains. As a result what will happen?
 (A) 100 W bulb will glow brighter
 (B) 500 W bulb will glow brighter
 (C) Both the bulbs will glow equally bright
 (D) Both the bulbs will glow dim
 - **Q.21** Given two coupled inductors L_1 and L_2 having their mutual inductance M. The relationship among them must satisfy.

(A)
$$M > \frac{L_1 + L_2}{2}$$
 (B) $M > L_1 L_2$
(C) $M \le \sqrt{L_1 L_2}$ (D) $M = L_1 L_2$

- Q.22 If the length of a bar of magnetic material is increased by 20% and the cross-sectional is decreased by 20% then the reluctance is (A) increased by 67%
 - (B) increased by 50%
 - (C) remaining same
 - (D) decreased by 33%
- Q.23 A coil with a certain number of turns has a specified time constant. If the number of turns is doubled, its time constant would (A) become doubled
 - (B) become four times
 - (C) get halved
 - (C) get harved
 - (D) remain unaffected
- Q.24 The mutual inductance between two closely coupled coils is 1 H. If the turns of one coil is decreased to half arid those of the other is doubled, the new value of the mutual inductance would be

- Q.25 The iron loss per unit frequency in a ferromagnetic core, when plotted against frequency, is a
 - (A) Constant
 - (B) Straight line with positive slope
 - (C) Straight line with negative slope
 - (D) Parabola

Answer Key:

6

| 1 | С | 2 | В | 3 | D | 4 | С | 5 | С |
|----|---|----|---|----|---|----|---|----|---|
| 6 | В | 7 | В | 8 | Α | 9 | В | 10 | В |
| 11 | D | 12 | Α | 13 | В | 14 | А | 15 | С |
| 16 | В | 17 | В | 18 | Α | 19 | D | 20 | В |
| 21 | С | 22 | В | 23 | В | 24 | С | 25 | В |

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Subject: Entrepreneurship Development

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1.1. Introduction

Entrepreneurship refers to all those activities which are to be carried out by person to establish and to run the business enterprises in accordance with the changing social, political and economic environments. Entrepreneurship includes activities relating to the anticipation of the consumers likes and dislikes, feelings and behaviours, tastes and fashions and the introduction of business ventures to meet out all these expectations of the consumers

1.2. Meaning

Entrepreneurship is considered as a 'new product' that would enable businessmen to develop new form of business organization and new business activities catering to the changing needs of the society. The liberalization of cultural rigidities is mainly due to this new product 'entrepreneurship'. Entrepreneurship is the ability of entrepreneurs to assess the risks and establish businesses which are risky but at the same time suits perfectly to the changing scenarios of the economy.

The 2 major factors determine the entrepreneurship developments are:

- 1. Risk taking ability of entrepreneurs
- 2. Power of achievement of entrepreneurs

The other factors are:

- The performance of speculative functions to gain edge over others.
- Considering new factors of production, time, technology and quality for success.
- Availing new sources of capital
- Performing functions of employer, master, merchant and undertaker.
- Supply goods and services which are hitherto unknown to consumers.
- Find a new market which is hitherto unexploited.
- Seizing new opportunities for exploitation.
- Developing the less developed countries and developing nations.
- Decision making under uncertain situations

Entrepreneurship development could be made through a collective approach of the qualified individuals and the entrepreneurial role played by the Government and other agencies. They strive for betterment and provide conducive infrastructure including the technology that is unheard and unthought-of so far.

The essential Elements of Entrepreneurship Development are given in the following exhibit.

Entrepreneur: The word Entrepreneur has been taken from the French word. It means Between Takers. Entrepreneur is another name of Risk Taker. An entrepreneur is an individual who takes moderate risks and brings innovation. Entrepreneur is a person who organizes/ manages the risks in his/her enterprise. "Entrepreneur is a individual who takes risks and starts something new.

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Background:

- » Richard Cantillon, an Irish-French economist, is often credited with being one of the earliest to use the term "entrepreneur" in the economic sense during the 18th century. He discussed the role of the entrepreneur as an agent who takes risks by buying goods at certain prices and selling them at uncertain prices in the future to make a profit. This concept laid foundational ideas for later economic thinkers and contributed to the development of economic theory regarding entrepreneurship.
- » Jean-Baptiste Say, a French economist, is believed to have coined the word "entrepreneur" in the 19th century he defined an entrepreneur as "one who undertakes an enterprise, especially a contractor, acting as intermediatory between capital and labour".
- "Innovation and Entrepreneurship: Practice and Principles" is a seminal book written by Peter F. Drucker. First published in 1985, it remains a classic in the field of entrepreneurship and innovation. Drucker, known as the father of modern management, explores various aspects of entrepreneurship and innovation in this book, offering insights and principles that are foundational for understanding how entrepreneurs and businesses can create and sustain competitive advantage through innovation.
- » Joseph Schumpeter, an Austrian economist, introduced the concept of "creative destruction" to describe how entrepreneurs drive economic growth and innovation by introducing new products, technologies, and business models that disrupt existing industries and create new ones. This process involves the continuous cycle of innovation, where old methods and businesses are replaced or transformed by new, more efficient ones.
- » Forrest B. Frantz, an influential American economist, made significant contributions to the study of entrepreneurship and economic theory primarily during the mid-20th century. He emphasized that entrepreneurs are not merely managers of resources but rather innovators and promoters who drive economic growth through their ability to introduce new products, processes, and business models.

1.3. Definition of Entrepreneur

- McClelland identifies two characteristics of entrepreneurship. Firstly, doing things in a new and better way (Schumpetrian's innovator). Secondly, decision making under uncertainty (Cantillon's entrepreneur). McClelland emphasized that entrepreneurial manager should have a high need for influencing other (need for power), a low need to establish emotional relationships (low need for affiliation) and a high capacity to discipline one's own self (inhibition). In other words, entrepreneurship means the function of creating something new, organizing and co-ordinating and undertaking risk and handing economic uncertainty
- An entrepreneur is one of the important segments of economic growth. Basically, an entrepreneur is a person who is responsible for setting up a business or an enterprise. In fact, he is one who has the initiative, skill for innovation and looks for high achievements. He is a catalytic agent of change and works for the welfare of people.

"Creative destruction is the essential fact about capitalism."

- Joseph Schumpeter

"The entrepreneur is more than a manager. He or She is an Innovator and promoter as well" - Forrest Frantz

1.4. Definition of Entrepreneurship

• In a changing environment, the entrepreneurship development activities are getting multiplied. Since the dawn of industrial revolution to till date, we encountered certain drastic changes in the economic activities. Thus, it is not an easy task to give a comprehensive definition for the word 'entrepreneurship'. Despite that, relevant definitions of entrepreneurship are listed here.

"Entrepreneurship is meant the function of seeing investment and production opportunity, organizing an enterprise to undertake a new production process, rising capital, hiring labour, arranging for supply of raw materials and selecting top managers for day to day operations of the enterprise".

- Higgins

"Entrepreneurship is the purposeful activity of an individual or a group of associated individuals, undertaken to initiate, maintain or organize a profit-oriented business unit for the production or distribution of economic goods and services".

- A. H. Cole

"Entrepreneurship is that form of social decision making which is performed by economic innovators". - Robert K. Lamb

"Entrepreneurship connotes innovativeness, an urge to take risk in face of uncertainties, and an intuition, i.e. a capacity of seeing things in a way which afterwards proves to be true".

- V.R. Gaikwad

"Entrepreneurship is neither a science nor an art. It is a practice. It has a knowledge base. Knowledge in entrepreneurship is a means to an end. Indeed, what constitutes knowledge in practice is largely defined by the ends, that is, by the practice".

- Peter F. Drucker

1.5. Entrepreneurship Development

- Entrepreneurship development is the means of enhancing the knowledge and skill of entrepreneurs through several classroom coaching and programs, and training. The main point of the development process is to strengthen and increase the number of entrepreneurs.
- This entrepreneur development process helps new firms or ventures get better in achieving their goals, improve business and the nation's economy. Another essential factor of this process is to improve the capacity to manage, develop, and build a business enterprise keeping in mind the risks related to it.
- In simple words, the entrepreneurship development process is about supporting entrepreneurs to advance their skills with the help of training and coaching classes. It encourages them to make better judgments and take a sensible decision for all business activities.

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- » The Entrepreneurship Development Institute of India is an autonomous body and not-for-profit institute located Ahmedabad, Gujarat, India. Established in 1983.
- » A venture capitalist is a professional who manages a pool of equity capital from various investors (often called a venture capital fund) and invests this capital in startup companies or small businesses that have high growth potential. They typically take equity stakes in these businesses in exchange for funding and provide expertise, network connections, and strategic advice to help the companies grow rapidly. The goal is to achieve a high rate of return on their investments through successful exits, such as initial public offerings (IPOs) or acquisitions by larger companies.

Some facts about entrepreneurs and entrepreneurship:

E: Examine needs, wants, and problems to see how they can improve the way needs and wants are met and problems overcome.

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- ✓ N: Narrow the possible opportunities to one specific "best" opportunity.
- T: Think of innovative ideas and narrow them to the "best" idea.
- ✓ R: Research the opportunity and idea thoroughly.
- ✓ E: Enlist the best sources of advice and assistance that they can find.
- ✓ P: Plan their ventures and look for possible problems that might arise.
- ✓ R: Rank the risks and the possible rewards.
- \checkmark E: Evaluate the risks and possible rewards and make their decision to act or not to act.
- N: Never hang on to an idea, no matter how much they may love it, if research shows it won't work.
- ✓ E: Employ the resources necessary for the venture to succeed.
- \checkmark U: Understand that they will have to work long and hard to make their venture succeed.
- R: Realize a sense of accomplishment from their successful ventures and learn from their failures to help them achieve success in the future.

1.6. Importance of Entrepreneurship Development

- The word 'Entrepreneurship' is very often confused with the word Entrepreneur'. They look alike but carry different meanings. Entrepreneurship is nothing but all those activities which are to be undertaken by an entrepreneur. The prevailing socio, political and economic activities act as a propelling force for the aspiring personalities to become entrepreneurs. Entrepreneurship development is the outcome of the entrepreneurs. In other words, the entrepreneurs give birth to entrepreneurship. This statement is partially true because certain activities of the entrepreneurs are due to the existing policies and programmes of the Central as well as the state governments and not only by the entrepreneurs themselves.
- Under such circumstances, it is not the entrepreneurs who give birth to entrepreneurship. Instead, it is the existing entrepreneurship development programmes that give birth to entrepreneurs. The emergence of entrepreneurs and the level of entrepreneurship development are also the far reaching changes that are taking place in the social and political activities rather than changes taking place in the economic activities.
- Entrepreneur cannot emerge from the vacuum. Entrepreneurship development depends upon the environment (both external and internal) within which the entrepreneurs have to do their business. Entrepreneurs are closely associated with the existing as well as the past entrepreneurial activities of the society. Business opportunities are identified from the social, political and economic crisis and in turn these crisis become the favourable climate for the entrepreneurs to innovate new business ventures. From this perspective, it is true that entrepreneurial activities are the resultant efforts of the prevailing entrepreneurship development programmes.
- On the other hand, entrepreneurs keenly observe the society and its economic activities and try to elicit innovative business opportunities. They try to make use of the modern technology and manufacture new products which are hitherto unknown to the market and induce the consumers to buy them and thereby improving their standard of living. It is possible for entrepreneurs to find new market, new product and introduce a new form of organization. Therefore, the entrepreneurship development is due to the innovative thoughts and actions of the entrepreneurs. Thus the term entrepreneur and entrepreneurship are different and complementary with each other. Let us see the need and scope of entrepreneurship development in the forthcoming pages.

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1.7. Functions of an Entrepreneur

An entrepreneur is expected to perform the following functions.

1. Risk Absorption

The entrepreneur assumes all possible risks of business. A business risk also involves the risk due to the possibility of changes in the tastes of consumers, techniques of consumers, techniques of production and new inventions. Such risks are not insurable. If they materialize, the entrepreneur has to bear the loss himself. Thus, Risk-bearing or uncertainty-bearing still remains the most function of an entrepreneur. An entrepreneur tries to reduce the uncertainties by his initiative, skill and good judgment.

2. Formulate Strategic Business Decisions

The entrepreneur has to decide the nature and type of goods to be produced. He enters the particular industry which offers from the best prospects and produces whatever commodities he thinks will pay him the most employs those methods of production which seem to him the most profitable. He effects suitable changes in the size of the business, its location techniques of production and does everything that is needed for the development of his business.

3. Execute Managerial Functions

The entrepreneur performs the managerial functions though the managerial functions are different from entrepreneurial functions. He formulates production plans, arranges finance, purchased, raw material, provides, production facilities, organizes sales an assumes the task of personnel management. In a large establishment these management functions are delegated to the paid managerial personnel.

4. Adopt Innovation Function

- » An important function of an entrepreneur is "Innovation". He conceives the idea for the improvement in the quality of production line. He considers the economic inability and technological feasibility in bringing about improve quality. The introduction of different kinds of Electronic gadgets is an example of such and innovation of new products. Innovation is an ongoing function rather than once for all, or possibly intermittent activity.
- » Pivoting in business refers to making a fundamental change in the business strategy or direction in response to feedback from the market, changes in the competitive landscape, or other external factors. It involves adjusting the product, target market, technology, or even the entire business model to better meet the needs of customers or take advantage of emerging opportunities. Pivoting is a strategic decision aimed at improving the business's chances of success and growth.

1.8. Qualities of Entrepreneur

Being an entrepreneur is about more than just starting a business or two, it is about having attitude and the drive to succeed in business. All successful Entrepreneurs have a similar way of thinking and posses several key personal qualities that make them so successful in business. Successful entrepreneurs like the ambitious Richard Branson have an inner drive to succeed & grow their business, rather than having a Harvard Business degree or technical knowledge in a particular field.

All successful entrepreneurs have the following qualities:

1. Inner Drive to Succeed

Entrepreneurs are driven to succeed and expand their business. They see the bigger picture and are often very ambitious. Entrepreneurs set massive goals for themselves and stay committed to achieving them regardless of the obstacles that get in the way.

2. Strong Belief in themselves

Successful entrepreneurs have a healthy opinion of them and often have a strong and assertive personality. They are focused and determined to achieve their goals and believe completely in their ability to achieve them. Their self optimism can often been seen by others as flamboyance or arrogance but entrepreneurs are just too focused to spend too much time thinking about unconstructive criticism.

3. Search for New Ideas and Innovation

All entrepreneurs have a passionate desire to do things better and to improve their products or service. They are constantly looking for ways to improve. They're creative, innovative and resourceful.

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4. Openness to Change

If something is not working for them they simply change. Entrepreneurs know the importance of keeping on top of their industry and the only way to being number one is to evolve and change with the times. They're up to date with the latest technology or service techniques and are always ready to change if they see a new opportunity arise.

5. Competitive by Nature

Successful entrepreneurs thrive on competition. The only way to reach their goals and live up to their self-imposed high standards is to compete with other successful businesses.

6. Highly Motivated and Energetic

Entrepreneurs are always on the move, full of energy and highly motivated. They are driven to succeed and have an abundance of self-motivation. The high standards and ambition of many entrepreneurs demand that they have to be motivated!

7. Accepting of Constructive Criticism and Rejection

Innovative entrepreneurs are often at the forefront of their industry so they hear the words "it can't be done" quite a bit. They readjust their path if the criticism is constructive and useful to their overall plan, otherwise they will simply disregard the comments as pessimism. Also, the best entrepreneurs know that rejection and obstacles are a part of any leading business and they deal with them appropriately.

True entrepreneurs are resourceful, passionate and driven to succeed and improve. They're pioneers and are comfortable fighting on the frontline The great ones are ready to be laughed at and criticized in the beginning because they can see their path ahead and are too busy working towards their dream.

1.9. Nature of Entrepreneur

1. Facilitating Character

An entrepreneur must build a team, keep it motivated, and provide an environment for individual growth and career development.

2. Self-Confidence

Entrepreneurs must have belief in themselves and the ability to achieve their goals.

3. Work with Vision and Mission

An entrepreneur must be committed to the project with a time horizon of five to seven years. No ninety-day wonders are allowed.

4. High Degree of Endurance

Success of an entrepreneur demands the ability to work long hours for sustained period of time.

5. Trouble Shooting Nature

An entrepreneur must have an intense desire to complete task or solve a problem. Creativity is an essential ingredient.

6. Initiative and Enterprising Personality

An entrepreneur must have initiative, accepting personal responsibility for actions, and above all make good use of resources.

7. Goal Setter

An entrepreneur must be able to set challenging but realistic goals.

8. Calculated Risk

Taking Ability An entrepreneur must be a moderate risk-taker and learn from any failures.

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