

PART-A

- 1) d) All of the above
- 2) d) language
- 3) a) True
- 4) Application ontology
- 5) a) Technology is found in nature
- 6) d) Adopting
- 7) a) All of the above
- 8) b) Collecting data
- 9) a) Society
- 10) b) environment conditions
- 11) d) Investigative
- 12) d) doers
- 13) b) Artistic
- 14) a) True
- 15) a) The theory of knowledge
- 16) b) subjective truth
- 17) A) Priori knowledge
- 18) c) the phenomenal world
- 19) a) identify the problem
- 20) a) Engineering design Process

PART-B

Q21

The Product life cycle is an assumption that every product in market goes through. There are four phases of Product life cycle i.e. introduction, growth, maturity, decline. As the product spends more time in the market and it makes its way through the cycle, its sales increases. Each products life cycle is different in terms of duration and length of scope.

Stage 1: (Introduction):

The product is newly introduced in market after all the research and development by a company. There is a risk of not making it out of this phase. However companies should prepare strategies so that product is successful in the market.

Stage 2: (Growth)

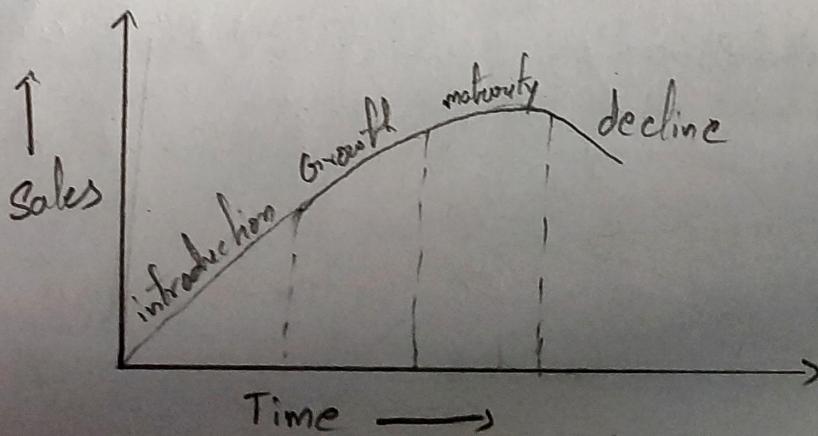
At this stage the product is manufactured, marketed and released into the masses. As sales increases, demand and competition in the market also increases.

Stage 3: (Maturity)

During this stage, the product is widely known to the masses and it is widely available. Advertising further does not increase the sales of the product.

Stage 4: (Decline)

The product is losing market share or becoming obsolete. It is well past its highest demand point and it is losing demand, sales.



Q22

In the 1950s, John Holland theorized that personality and work environment are measurable and that two should be math-matched in order to find a satisfying career. In John Holland's model, one of dominant type out 6 types of basic personality types is used to match an individual's personality with their career. Now a day there are many online tools which can be used to detect the dominant personality traits. Holland's 6 types of basic personality are:

1) Realistic

People who like to work with things. They tend to be assertive and competitive and are interested in activities requiring motor coordination skill and strength. Their interest tend to focus on scientific or mechanical rather than aesthetic areas. Some careers include:- ~~Designer~~, Agricultural Engineer

2) Investigative

People who prefer to work with data. They like to think and observe than to act, to organise and understand information ~~rather~~ rather than to persuade. Some careers include lawyers, Teachers, Scientist, Professor

3) Artistic

People who like to work with ideas and things. They tend to be creative open, perceptive, sensitive and emotional. They rebel against structures and rules. Some careers include:- Photographer, fashion designer, Graphic designer

4) Social

People who like to work with people and satisfy their needs by teaching or helping situations. They tend to be drawn more to seek close relationships. Some careers include:- Teacher, Community health worker, NGO's.

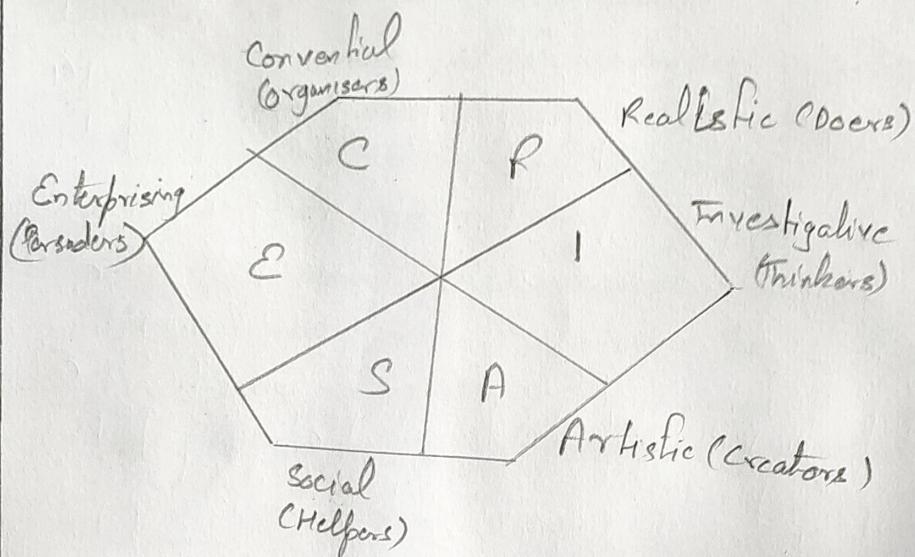
Enterprising

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People who like to work with data and people. They tend to be good talkers and use this to persuade others. They value, reputation, status and money. Some careers include - Entrepreneur, Agent.

Conventional

People who like to work with data and who likes rules and regulations and emphasizes self control. Some careers include :- office administration, Pharmacist



Q23

i)

Reference Ontology

- 1) It establishes consensus about meaning of terms
- 2) It provides maximum coverage
- 3) It fits need of a large community
- 4) It is designed according to strict principles

Application Ontology

- 1) It offers terminology services for semantic access, checking constraints between terms
- 2) It provides minimal terminological structures
- 3) It fits needs of a specific community
- 4) It is designed in accordance to viewpoint of end-user.

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ii) Four dimension of Engineering

1) Engineer as scientist (Basic Sciences)

The dimension is inspired by the basic science view of Engineering as application of natural and exact sciences, seeing knowledge as produced through analysis and experimentation.

2) Engineer as Sociologist (Social Sciences)

The social dimension of Engineering sees Engineers not as technologists but also as social experts, as their ability to recognize social nature of world they act upon and the social complexity of the teams they belong to.

3) Engineers as doer (Practical Realisation)

This dimension of Engineering views as the art of getting things done, valuing the ability to change the world and overcoming complexity with flexibility and persistence

4) Engineers as designer (Design)

The design dimension sees Engineering as the art of design. It values system thinking much more than the analytical thinking that characterises traditional science. Its practice is founded on contextual and integrated visions of world, rather than on fixed visions.

Social Sciences	Basic Sciences
Engineer as Sociologist	Engineer as scientist
Design	Practical Realisation
Engineer as designer	Engineer as doer