

Q=QUESTION question_description

A=ANSWER answer_description

These are sample MCQs to indicate pattern, may or may not appear in examination

Q From following, the alternative name for RP is _____.

A Additive Manufacturing

A Fast Manufacturing

A Rapid tooling

A Subtractive manufacturing

Q In the _____ process, one starts with block of raw material and then various machining operations are performed to get final finished product.

A Subtractive process

A Additive process

A Formative process

A Casting process

Q Which of the following is not subtractive process?

A Milling

A Stereo-lithography

A Sawing

A EDM

Q Full form of STL is _____.

A Straight-lithography

A Streto-lithography

A Stereo-lithography

A Straight-lipsography

Q Selling price of product is determined by_____.

A Cost of product Engineering + Actual manufacturing cost + Overheads

A Cost of product Engineering + Actual manufacturing cost+ Sales related expenses + Profit

A Cost of product sold – Profit

A Cost of product Engineering + Actual manufacturing cost+ Sales related expenses

Q Which of the following is post processing method for RP cycle

A Cleaning and finishing

A Preparing CAD model

A Layer by layer printing

A Support generation

Q Which of the following method uses powder form as raw material for RP?

A SGC

A FDM

A LOM

A SLS

Q STL file formats divides solid objects into

_____.

A Quads

A Triangles

A Hexagons

A Rectangles

Q Which phase of the Product life cycle is a sales values grows exponentially?

A Introduction

A Maturity

A Growth

A Decline

Q Which one is NOT related to rapid prototyping definition?

A Layer by layer

A Physical model

A Supports generation

A Automation line

Q Which CAD software cannot be used to create data for the prototyping machine?

A CATIA

A Autodesk Inventor

A Adobe premium

A Creo

Q Which of the following is not a format for the prototyping machine file?

A .prt

A .stl

A .obj

A .3MF

Q What is following is a format for the prototyping machine file?

A .prt

A .stl

A .asm

A .dxf

Q Number of Design changes in concurrent engineering is

A Highest in initial stage

A Lowest in initial stage

A No such specific pattern

A Distributed evenly in product development cycle

Q Self-driving cars can be classified in which stage, with reference to the stages of product life cycle.

A Introduction

A Growth

A Maturity

A Decline

Q Which of the following is not classified under virtual prototyping?

A CNC models

A Geometric modelling

A Augmented reality

A Finite element analysis

Q Which of the process is available in colors?

A SLA

A FDM

A MJM

A 3D Printer

Q What is the full name of SLS?

A Selective Laser Simulator

A Sintering Laser Simulator

A Selective Laser Sintering

A Stereolithography Laser Sintering

Q What is the other name of Multi Jet Modeling?

A FDM

A Poly Jet

A 3D Printer

A Extrusion

Q Which of the following is one of the design process steps?

A Build

A Concept
A Pre-processing
A Transfer to machine
Q Which file format is used for the
prototyping machine?
A .prt
A .slt
A .stl
A .iges
Q From the following, in which process, the
input material is in solid form?
A SLA
A SLS
A FDM
A MJM
Q Which of the process, the input material is
in liquid form?
A LOM
A SLS
A FDM
A MJM
Q Which of the process, the input material is
in powder form?
A LOM
A SLS
A FDM
A MJM
Q Which one of the following processes is
NOT using a laser?
A LOM
A SLA
A SLS
A FDM

Q Which of the following is not a construction element of LOM?

A Paper sheet

A Laser

A Extruder

A Hot roller

Q This type of rapid prototyping system uses a laser to fuse powdered metals, plastics, or Ceramics:

A Fused deposition modeling

A Stereolithography apparatus

A Solid ground curing

A Selective laser sintering

Q Which of the following post processing step is required for SLA?

A Cleaning

A Finishing

A Postcuring

A Support removal

Q In Fused Deposition Modelling, the raw material is used in the form of _____.

A Wax

A Wire

A Powder

A Liquid

Q Which of the following methods create thin walls for every part?

A Fused-deposition modeling

A Laminated-Object Manufacturing

A 3d printing

A Stereolithography

Q Select false statement of the following related to support generation

A Supports are an integral part of the model.

A Supports can be avoided by changing orientation.

A Redesigning models can be an option to reduce support.

A Supports makes complex structures possible to manufacture

Q Which of the following methods of RP don't need supports building?

A SLS

A SLA

A FDM

A DLP

Q Which one of the following RP technologies uses solid sheet stock as the starting material?

A Droplet deposition manufacturing

A Fused-deposition modeling

A Laminated-Object Manufacturing

A Selective Laser Sintering

Q Working principle of SLS is_____.

A Sintering using CO2 laser beams resulting in practical bonding.

A Melting of wire form material to form layer by layer structure

A LASER is used to cut profile of each layer

A LASER is used to solidify raisin material after contact

Q Fused deposition modeling process works on a principle

A LASER is used to solidify resin material after contact

A Melting of wire form material to form layer by layer structure using nozzle

A Sintering using CO2 laser beams resulting in practical bonding.

A Melting of wire form material to form layer by layer structure.

Q In construction selective laser sintering (SLS) role of build piston is

A Move down after each layer sintering operations

A Move up after each layer sintering operation

A Fixed at one location

A Move sideways to take next layer

Q Rapid tooling is defined as the _____.

A Technique to produce fast non metallic tooling

A Technique to produce fast tooling through the prototypes made using RP process.

A Technique to produce fast prototype

A Technique to produce fast non metallic tooling through the prototypes made using RP process.

Q What is direct tooling process?

A It creates tools directly using rapid prototyping process

A It creates tools using master patten
created using rapid prototyping process

A It creates prototype using rapid
prototyping process

A It creates master pattern using rapid
prototyping process

Q Which material is used in cast kirksite
tooling process?

A Aluminum

A Stainless steel

A Carbon Steel

A Zinc Aluminium Alloy

Because of _____ in metal

Q deposition tooling process, RP models can
soften and distort.

A Low temperature

A High pressure

A High temperature

A Low pressure

Q What is indirect tooling process?

A It creates tools directly using rapid
prototyping process

A It creates tools using master pattern
created by rapid prototyping process

A It creates prototype using rapid
prototyping process

A It creates master pattern using rapid
prototyping process

Q _____ Process produces economic tooling shells with good reproduction and dimensional qualities and also with low mechanical strength and high porosity.

A Silicon Rubber Molding

A Metal spraying

A Cast Kirksite Tooling

A Quick cast

Q Vacuum casting is used in _____ process.

A Quick cast

A Metal spraying

A Cast Kirksite Tooling

A Silicon Rubber Molding

Q In _____ process, silicon rubber is placed in a box and a proprietary mixture of metal particles is poured around it.

A 3D keltool

A Quick cast

A Metal spraying

A Cast Kirksite Tooling

Q Wax patterns are created using _____ process.

A Silicon Rubber Molding

A Metal spraying

A Cast Kirksite Tooling

A Quick cast

Q Which of the following is direct tooling process _____?

A Silicon Rubber Molding

A Metal spraying
A Investment casting
A Epoxy moulding
Q First step in silicon rubber tooling process is to have _____.
A RTV Moulding
A RP pattern
A Silicon slurry
A Cutting of RTV mould
Q Which RP process does not uses Powder-Based Materials?
A SLS
A 3DP
A LENS
A SGC
Q UV light curing is used mostly in _____.
A Solid Based RP System
A Liquid Based RP System
A Powder Based RP System
A Gas Based RP System
Q Which RP process does not uses Liquid-Based Materials?
A SLA
A SGC
A 3DP
A Polyjet from Objet
Q Irradiation medium in SGC is_____
A High power laser
A High power UV lamp
A Low power laser
A LED

- Q SGC Stands for _____.
- A Solid ground conditioning
- A Selective ground curing
- A Solid ground curing
- A Selective Gravity Curing
- Q From given options which RP process does not uses Powder-Based Materials?
- A SLS
- A 3DP
- A LENS
- A Polyjet from Objet
- Q In three dimensional printing process _____ is used to bind the material.
- A Laser
- A Liquid adhesive
- A Welding
- A Soldering
- Q Ionographic process is used in _____ RP process for producing mask.
- A Laminated object manufacturing
- A Selective laser sintering
- A Solid ground curing
- A Objet
- Q Solid Ground Curing process includes _____.
- A laser cutting
- A Compacting
- A Photo curing
- A Sintering

Q Disadvantage of Solid Ground Curing process is _____.

A Self-supporting

A Requires large physical space

A Minimum shrinkage effect

A High structural strength and stability

Q Demerit associated with Solid Ground

Curing process _____.

A Self-supporting

A Minimum shrinkage effect

A Waste material produced

A High structural strength and stability

Q Advantage of Solid Ground Curing

process _____.

A Requires large physical space

A Self-supporting

A Wax gets stuck in corners and crevices

A Waste material produced

Q Four colour binders are used to produce multi-coloured parts in _____.

A 3DP

A LOM

A SLS

A SLA

Q Vacuum is used to remove loose powder in _____.

A FDM

A SLA

A SLS

A 3DP

Q Solid ground curing process have environmental as well as health benefit in the form of _____.

A Waste material produced

A Wax gets stuck in corners and crevices

A No hazardous odors are generated

A Requires large physical space

Q Advantage of Three-Dimensional Printing (3DP) process is _____.

A Poor surface finish

A Limited functional parts

A Limited materials

A High speed

Q Disadvantage of Three-Dimensional Printing (3DP) process is _____.

A Enables complex color schemes

A Limited functional parts

A High speed

A No wastage of materials

Q Milling process is used in _____ RP process to obtain desired thickness and finish after each curing.

A SGC

A SLA

A SLS

A Objet

Q SGC process can produce minimum thickness upto _____ mm.

A 1

A 1.2

A 0.06

A 0.02

Q 3D printing is mostly preferred for building_____.

A End Products

A Conceptual models

A Rapid tools

A Rapid products

Q 3D printing begins with_____.

A The powder supply being raised by a piston

A The powder supply being lowered by a piston

A The powder supply being maintained by a piston

A The powder supply being maintained by crank

Q Which technology is not the part of 3D printing techniques?

A Inkjet printing

A Fused deposition modeling

A Polymer jetting

A Electron beam melting

Q First step in Solid Ground curing process is_____.

A Spraying of additives on the flat work surface.

A Spraying of metal particle on the flat work surface.

A Spraying of photosensitive resin on the flat work surface.

A Spraying of binders on the flat work surface.

Q Components with flexibility can be created using _____.

A SCG

A Polyjet

A FDM

A SLA

Q 3DP uses _____ material.

A Solid sheets

A Powder based

A Liquid based

A Oil based

Q What is Bad characteristic of PLA material for RP application?

A Variety of colors

A No harmful fumes during printing

A Environmentally friendly

A Brittle in nature

Q At what temperature the Polycarbonate materials extrusion process acts?

A 150 degree celsius or above

A 200 degree celsius or above

A 260 degree celsius or above

A 360 degree celsius or above

Q The reason for material shrinkage error is;

A Poor resin properties

A Bed weather conditions

A Poor calibration of the machine

A Error in cad file

Q Which of the following is the reason for generation of post processing error?

- A Poor machine setup
- A Bad weather condition
- A Internal residual stresses
- A Resin properties

Q Which of the following material is efficiently used as a support material?

- A ABS
- A PLA
- A Nylon
- A PVA

Q Which of the following material has property to produce quality surface finish in RP?

- A ABS
- A PLA
- A Nylon
- A PVA

Q Which of the following material has highest melting temperature?

- A ABS
- A PLA
- A Nylon
- A INF

Q Which of the following statement is correct for polymers?

- A High melting temperature
- A Corrosive to environment
- A High weight to strength ratio
- A High density

Q What is the maximum temperature of ceramic powder bed require to reduce thermal stresses?

A 1000°C

A 1600°C

A 1900°C

A 1200°C

Q Determination of powder adsorbant is necessary for _____.

A Thermal Development

A Melt

A Cure

A Pressure

Q ABS filaments are added with fibres and nano fibres to improve the _____ of the parts built using FDM.

A Chemical properties

A Mechanical properties

A Conductive properties

A Radioactive properties

Q A composite mixed non-uniformly and inhomogeneous compound is similar to;

A Functionally graded materials

A Uniform composite

A Solid Composite

A Non metals

Q Which of the following material has capacity to produce both "direct" and "indirect" products?

A Ceramic

A Composite

A Mechanical

A Fused

Q In Reverse Engineering, Which of the following process is effectively used to produce a CAD model?

A Point Cloud scanned data

A Feature based data

A Stastical data

A Curve fitted data

Q Reverse Engineering is having following disdvantages;

A High accuracy

A Low costs

A Insensitivity to color or transparency

A Complex data gathering algorithm

Q Contact scanners can not be used with;

A Hard material

A Soft materials

A Very small size job (Nano-microns)

A Non metal

Q Reverse Engineering is also defined as the process of obtaining a geometric CAD model from;

A 3-D models acquired by copying parts/products

A 3-D points acquired by scanning/digitizing existing parts/products

A 2 D images acquired by photo printed parts/products

A 2D imaging

Q In which of the following condition the reverse engineering technique is not applicable?

A The original product design documentation has been lost or never existed

A Creating data to refurbish or manufacture a part for which there are no CAD data

A The original manufacturer of a product no longer produces the product.

A All information about product is available in the form of data

Q Which of the following is associated with Virtual Reality (VR)?

A 3D Animation with effects

A 3D interactive Computer-generated reality

A 3D images

A Hologram

Q The important function to be carried out by VR is;

A Physically execute a task

A Actual touch feels experiences

A Virtually execute a task

A Real part generation

Q Combination of real space with Virtual space integration can be known as _____.

A Virtual Reality

A Augmented Reality

A Agile Environment

A Real environment

Q The AR and VR can be distinguished with following point.

A

In AR the tasks executed remain virtual,
whereas in VR they are real

A

In VR the tasks executed remain virtual,
whereas in AR they are real

A

In VR the tasks represented in animation
form, whereas in AR they are real

A

VR and AR produces same results