PART 1 – PART MANUFACTURE

Superplastic forming (not sure, p116)

B – Excessive cavitation render material useless

Rubber forming

B – Rubber forming ideal flanged parts

Heat treatment

D - Stiffness not affected due heat treatment (April 2017, Q6)

Blank holder

D – Lubrication

Deep drawing

C – Equal

Explosive forming

B - Anywhere in the world

Superplastic forming

A – Very large deformations (April 2016, Q6)

Spring back

B- First true, second false (Jan 2010, Q6)

Forming of FRTP

D – Hand layup knife (Jan 2010, Q7)

Heat treatment micro structure

D – Extra cost (June 2012, Q3)

Spring back and residual

C – Spring back & Res stress complementary (June 2012, Q6)

Multiple forming principles

B – Plastic deformation based on same principle (June 2011, Q1)

Explosive forming

A – Which is only applicable to small product series (June 2012, Q8)

Impregnation

D - Low viscosity required

Advantages of thermoplastic matrix materials

A – Are tough, have high impact resistance (not sure)

Which casting process uses a model to

A – Die casting

Which is a separation process

A – Punching

Which statements about machining

C – Rake angle smaller than 0 degrees

Forging

C – Allowable deformations

PART 2 – ASSEMBLY & JOINING METHODS

<u>Assembly</u>

B - Size - different materials

Adhesive bonding

C – Curing process critical step (September 2015, Q7)

Batches

C – Larger batches, required storage (September 2015, Q10)

Adhesive bonding

C – Priming after anodizing + cleaning first (reader)

Pre-deformation of lug holes

C – Crack initiation (internet)

Integral part and assembled sub-structure

C – Statement 1 is false; 2 is true

Different joining techniques

AC - Liquid air tight & not different materials

<u>Bolt</u>

C – Increase fatigue life

Welding

B – Change in microstructures

Manufacturing division

A – Equally sized work packages

Learning curve

A – Shows man hours

<u>Rivet</u>

D – Increased shear is increased rivet pitch

Hole to hole

A – Smaller parts more difficult (April 2017)

Welding

B – Expensive

<u>Adhesive</u>

C – Edges higher (not sure)

Mounting

B – Manu parts / assemble parts

Assembly line

A – Travel along

Learning curve

B – Line 2 (April 2017)

Riveted and bolted joints

B – Load transfer

PART 3 – MISSCALENOUS TOPICS

NDI Techniques

C – Dye Pent inside materials (July 2013)

<u>Safety</u>

A – Safe life

<u>NDT</u>

D – One surface one sub-surface

Value stream

A – Vale stream mapping all

<u>Waste</u>

C – Not contribute to value

Break Even Point

A – Aircraft number

<u>NDT</u>

D – Voids

Manufacture composites

D – Quality control NDT

<u>Sustainability</u>

C – Cradle to cradle

Product series

B – Optimum not related

<u>Trinity</u>

A – Typical machining