

UNIT 7 – ACTIVITY 1 – QUIZ

The continuous phase of a composite material is known as the ?

- A. dispersed phase
- B. surrounding phase
- C. matrix phase
- D. fibre phase

ANSWER: C

Composites can be classified based on?

- A. matrix type
- B. reinforcement constituent
- C. matrix type & reinforcement constituent
- D. neither on matrix type nor on reinforcement constituent type

ANSWER: C

The classification of fibres made up of very thin crystals is known as?

- A. Whisker
- B. Fibre
- C. Wires
- D. Matrix

ANSWER: A

Which of the following materials are common for whiskers?

- A. Graphite, silicon carbide
- B. Glass, boron
- C. Steel, tungsten
- D. Polymers, ceramics

ANSWER: A

Sandwich structures fall under which category?

- A. Fiber reinforced composites
- B. Laminar composites
- C. Particulate composites
- D. none of the above

ANSWER: B

Single crystals grown with nearly zero defects are termed as?

- A. whiskers
- B. fabric particles
- C. fibers
- D. none of the above

ANSWER: A

Which of the following is not a desired property of a matrix in composites?

- A. Increased moisture absorption
- B. Low shrinkage
- C. Dimensional stability

D. Low temperature capability

ANSWER: A

Fiberglass materials have a usable temperature up to?

A. 50°C

B. 100°C

C. 200°C

D. 500°C

ANSWER: C

Which of the following has a greater impact on the longitudinal strength of reinforced composites?

A. Fibre orientation

B. Fibre strength

C. Fibre length

D. Fibre diameter

ANSWER: B

Which of the following may alter the mechanical properties of reinforced composites?

A. Constituent properties

B. Fibre length

C. Fibre orientation

D. All of the mentioned

ANSWER: D

Which of the following does not combine with fibre to give composites?

A. Metals

B. Ceramics

C. Non-metals

D. Polymers

ANSWER: C

Manufacturing of components having continuous lengths and constant cross-sectional shape is done by?

A. Roving

B. Pultrusion

C. Curing

D. Pulling

ANSWER: B

Which of the following is an open mould process?

A. Reaction injection moulding

B. Hand lay-up

C. Transfer moulding

D. Injection moulding

ANSWER: B

In which process it's a challenge to control the fibre volume fraction?

A. Hand lay-up

B. Injection moulding

- C. Pultrusion
- D. Spray lay-up

ANSWER: D

The working principle of pultrusion is almost similar in nature to which one of the following?

- A. Blow moulding
- B. Extrusion
- C. Injection moulding
- D. Thermoforming

ANSWER: B

The controlling parameter(s) in compression moulding process includes?

- A. mould cooling rate
- B. curing time
- C. compression rate
- D. all of the above

ANSWER: D

What is the CORRECT sequence during the injection moulding cycle?

- A. Mould close - Fill - Hold -Cool - Mould open - Part ejection
- B. Mould close - Fill - Hold - Mould open - Cool - Part ejection
- C. Mould open - Fill - Hold -Cool – Mould close- Part ejection
- D. Mould close - Fill - Cool- Hold - Mould open - Part ejection

ANSWER: A

In which of the following process, the fibre volume fraction is difficult to control?

- A. Compression moulding
- B. Spray lay-up
- C. Pultrusion
- D. Injection moulding

ANSWER: B

What is the primary purpose of Vacuum Bagging in autoclave processing?

- A. It helps in removing the air from the interfaces
- B. It helps to make the size smaller
- C. In autoclave processing Vacuum Bagging is not used
- D. None of the mentioned

ANSWER: A

What fibre orientation is predominantly used in Hand lay-up process?

- A. unidirectional fibres
- B. bidirectional fibres
- C. multidirectional fibres
- D. none of the above.

ANSWER: B

About Filament winding, it is?

- A. used to produce cylindrical surfaces only

- B. used to produce curvature surfaces only
- C. a process in which resin-impregnated fibres are wound over a rotating mandrel at the desired angle
- D. none of the mentioned

ANSWER: C

Which process is used to fabricate large axi-symmetric hollow cylindrical PMC parts?

- A. Resin transfer moulding
- B. Injection moulding
- C. Autoclave technique
- D. Filament winding

ANSWER: D

In the resin transfer moulding process, the uniformity of resin flow can be enhanced by using?

- A. air
- B. vacuum
- C. air and vacuum
- D. none of the above

ANSWER: B

In the filament winding process of polymer matrix composites, fiber tension depends on?

- A. type of fiber
- B. fiber geometry
- C. winding pattern
- D. all of the above

ANSWER: D

Resin transfer moulding is also known as?

- A. solid transfer moulding
- B. liquid transfer moulding
- C. gas transfer moulding
- D. none of the above

ANSWER: B

What are the controlling parameter (s) during the resin transfer moulding process?

- A. resin viscosity
- B. injection time
- C. temperature in mould
- D. all of the above

ANSWER: D

Production of components having continuous lengths and the constant cross-sectional shape is done by?

- A. roving
- B. pultrusion
- C. curing
- D. pulling

ANSWER: B