Assignment 02

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-02-13, 23:59 IST.

1) If a composite is used in an acidic environment, then which of the following fibers may be suitable. 1 point

- R-glass
- C-glass
- D-glass
- E-glass

No, the answer is incorrect.
Score: 0
Accepted Answers: C-glass

2) Which of the following statements are true? 1 point

1. Properties of the glass fiber are the same along the fiber and across the fiber.
2. Glass has a crystalline structure.

- only 1
- only 2
- Both 1 and 2
- Neither 1 nor 2

No, the answer is incorrect.
Score: 0
Accepted Answers: only 1

3) Assertion (A): As compared to carbon fiber, glass fiber has less elongation before breaking. 1 point

Reason (R): Viscosity plays an important role in the manufacturing of glass fibers.
No, the answer is incorrect.
Score: 0
Accepted Answers:
R is true but A is false

4) Which of the following statements are true for the glass fiber?
1 point

1. Glass fibers are useful thermal insulators.
2. Glass fiber has a high ratio of surface area to weight.
3. Humidity is an important factor influencing the tensile strength of glass fibers.

- 1 and 2
- 2 and 3
- only 2
- all

No, the answer is incorrect.
Score: 0
Accepted Answers:

5) Assertion (A): Carbon fiber has seen limited success in metal matrix composite applications.
Reason (R): The atomic structure of carbon fiber is similar to that of graphite, consisting of sheets of carbon atoms arranged in a regular hexagonal pattern.

- Both A and R are true and R is the correct explanation of A
- Both A and R are true but R is NOT the correct explanation of A
- A is true but R is false
- A is false but R is true

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both A and R are true but R is NOT the correct explanation of A

6) Which of the following statement is correct for the carbon fiber?
1 point

- Graphite is an amorphous material while carbon is a crystalline material.
- Graphite is a crystalline material while carbon is an amorphous material.
- Both carbon and graphite are crystalline materials.
- Both carbon and graphite are amorphous materials.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Graphite is a crystalline material while carbon is an amorphous material.

7) Arrange the following events in their order of occurrence.
1 point

- Graphitization - Melt spinning - Oxidization - Carbonization
- Melt spinning - Carbonization - Oxidization - Graphitization
- Melt spinning - Oxidization - Carbonization - Graphitization
- Carbonization - Oxidization - Melt spinning - Graphitization

No, the answer is incorrect.
Score: 0
8) During the production of carbon fibers, carbonization is used to............ 1 point

- improve the alignment and orientation of the crystalline regions along the fiber direction
- cross-link the fibers
- removing all non-organic elements
- None of these

No, the answer is incorrect.
Score: 0

9) Assertion (A): In carbon fiber production process, oxidization is also known as stabilization process.
Reason (R): It produces fibers that are stable at the high temperatures of carbonization and graphitization

- Both A and R are true and R is the correct explanation of A
- Both A and R are true but R is NOT the correct explanation of A
- A is true but R is false
- A is false but R is true

No, the answer is incorrect.
Score: 0

10) 1 point

- a-2,b-1,c-5,d-3,e-4
- a-2,b-5,c-3,d-1,e-4
- a-4,b-3,c-1,d-5,e-2
- a-4,b-3,c-2,d-5,e-1

No, the answer is incorrect.
Score: 0
Accepted Answers:
a-4,b-3,c-2,d-5,e-1