



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 6th Semester Examination, 2022



**CEMADSE05T-CHEMISTRY (DSE3/4)**  
**INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**Answer any *three* questions taking *one* from each group**

**GROUP-A**

**(Unit 1 and 2)**

1. (a) What is CAN fertilizer? Write down its method of preparation, two properties and two uses. 1+2+2+2
- (b) Write down the structure and two uses of carbon fibres. 2+1
- (c) Give a brief description on coloured glass and photosensitive glass. 2+2
2. (a) What is mixed fertilizer? Write down its advantages. 1+2
- (b) Discuss about the three general properties of ceramics. 2
- (c) Write a short note on carbon nanotubes. 3
- (d) Write down the main ingredients of cement with their functions. 2+4

**GROUP-B**

**(Unit 3, 4 and 5)**

3. (a) What are the main objectives of coating surfaces? 3
- (b) Briefly describe the processes of eco-friendly and plastic paintings. 4
- (c) What are enamels and emulsifying agents? 4
- (d) Briefly describe the process metal spraying and anodizing. 3
- (e) What are the differences between water and oil paints? 2
4. (a) How will you define primary and secondary batteries? 4
- (b) Write down the working functions of fuel cell and solar cell. 4

- (c) What are ferrous and non-ferrous alloys? 4
- (d) Write down the composition and properties of different types of steel. 4

**GROUP-C**  
**(Unit 6 and 7)**

5. (a) Discuss the elementary steps for heterogeneous catalysis. 3
- (b) Negative catalysts are not catalysts — Comment. 2
- (c) Organic nitro-compounds are very often explosive in nature — Explain. 2
- (d) Give an example of secondary explosive. How is it prepared? 3
6. (a) Give an example of each of solid and liquid propellant. 2
- (b) Discuss the industrial applications of catalysts. 3
- (c) Discuss the preparation of lead azide. How is it stored? 3
- (d) What do you mean by deactivation of catalysts? 2

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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