

## Question Bank B.Sc. –I General Science Semester II Examination,

### Special Materials (BMST201)

Define following terms/ Answer in one sentence [2 Marks]

1. A combination of two or more materials of distinctly different chemical or physical characteristic is called as
2. The general chemical formula of glass is
3. Give an example of ceramic material.
4. The general refractive index of glass is .....
5. Give an example of Ferroelectric material.
6. Rigidity of any material is called as.....
7. Is Glass Crystalline material or Amorphous material?
8. The starting material for the preparation of styrene is .....
9. Give an example of Piezoelectric material.
10. The bonding in ceramic material is .....
11. Polymer Matrix Composite consists of ..... matrix combined with a fibrous reinforcing material.
12. The general refractive index of glass is ...
13. The starting material for the preparation of polyvinyl chloride (PVC) is .....
14. Give an example of Pyroelectric material.
15. The melting point of sand or silica glass is ....
16. Is Copper Crystalline material or Amorphous material?
17. Is Iron Crystalline material or Amorphous material?
18. The general refractive index of air is ...
19. The boiling point of water is ....
20. Which type of bond is present in Diamond?
21. Which type of bond is present in NaCl?
22. Define Pyroelectric effect.
23. Define Pizoelectric effect.
24. Define Ferroelectric effect.
25. The Pyroelectric effect is related to .....

**Q.2 Attempt any one of the following**

**[10 Marks ]**

1. Give the brief classification composites.
2. Explain the role of oxides in glasses..
3. Give the structure of ceramic and explain the ceramic processing.
4. Explain Polymer Matrix Composites (PMC) and Metal Matrix Composites (MMC).
5. Write a note on types of glasses.
6. Classify the ferroelectric materials with examples in details.
7. Explain in brief the role of oxides in glasses.
8. What is piezoelectric effect? Give the applications of piezoelectric materials.
9. Explain Polymer Matrix Composites (PMC) and Ceramic Matrix Composites (CMC).
10. What is Pyroelectric effect? Give the applications of Pyroelectric materials.

**Q.3 Attempt any one of the following**

**[05 Marks ]**

1. Write a short note on Polymer Matrix Composites (PMC).
2. What is glass transition temperature?
3. Give the applications of polymer material.
4. Write a short note on BaTiO<sub>3</sub>
5. Explain the need of composites.
6. Write a note on optical properties of glass.
7. How you will enhance the properties of composites?
8. Write a note on electrical properties of glass.
9. Write a short note on polyvinylchloride (PVC).
10. What are the chief characteristics of Ferroelectric materials.
11. Give the classification of Ceramics.
12. Write a short note on Piezoelectric effect.
13. Explain the need of composites.
14. Write a note on electrical properties of glass.
15. Give the properties of Ceramics.
16. Give the properties of Rochelle salt.
17. What is glass transition temperature?
18. Write a short note on BaTiO<sub>3</sub> .
19. Explain the electrical properties of glass.
20. Explain the electrical properties of glass.

**Question Bank B.Sc. –I General Science Semester II Examination,  
Polymers and Applications (BMST202)**

**Define following terms/ Answer in one sentence [2 Marks]**

1. Write names of any two natural polymers.
2. Write names of any two inorganic polymers.
3. Write names of any two polymers used in electronic industries.
4. Write names of any two polymers used as adhesives.
5. What are the branched polymers?
6. What are isotactic polymers.
7. Write names of any two polymers used for tyres.
8. Write names of any two polymers used fibres.
9. Write names of any two polymers used as adhesives.
10. Describe Cross-linked Polymers.
11. Write names of any two natural polymers.
12. Write names of any two polymers used for tyres.
13. Write names of any two polymers used fibres.
14. Write names of any two polymers used as adhesives.
15. What are the branched polymers?

**Q.2 Attempt any one of the following**

**[10 Marks]**

1. Describe in detail mechanisms of Polymerization.
2. Describe in detail polymers in fiber industry and adhesives.
3. Write a note on electric and dielectric properties of polymers.
4. Describe in detail mechanisms of polymerization.
5. Describe in detail polymers used in optical media and storage devices.
6. Write a note on electric and dielectric properties of polymers.
7. Describe in detail mechanisms of polymerization.
8. Describe in detail polymers in paint technology.
9. Write a note on electric and dielectric properties of polymers.

**Q.3 Attempt any one of the following**

**[05 Marks]**

1. Describe Thermoplastic and Thermosetting polymers.
2. Describe method to determine molecular weight of polymers.
3. Describe the type of polymers based on their Tacticity.
4. Write a note on Polymers for paints and coatings.
5. Write a note on piezo and pyroelectric polymers.
6. Write a note on polymers used in optical media and storage devices.
7. Describe Thermoplastic and Thermosetting polymers.
8. Describe method to determine molecular weight of polymers.
9. Describe the type of polymers based on their Tacticity.
10. Write a note on Polymers in tyre industry.
11. Write a note on piezo and pyroelectric polymers.
12. Write a note on polymers used in fiber industry and adhesives.
13. Describe Thermoplastic and Thermosetting polymers.
14. Describe method to determine molecular weight of polymers.
15. Describe the type of polymers based on their Tacticity.
16. Write a note on Polymers in tyre industry.
17. Write a note on polymers used in IT technology.
18. Write a note on polymers as adhesives.