

- N.B** (1) Question no 1 is compulsory.  
 (2) Attempt any **four** questions out of remaining **six** questions.  
 (3) Answers to the questions should be **grouped** and written **together**.

1. (a) Write the distinguishing properties for the following pairs of minerals- 05 x 2 = 10  
 (i) Orthoclase and Plagioclase (ii) Quartz and Calcite  
 (iii) Gypsum and Baryte (iv) Rock salt and Rock crystal  
 (v) Hematite and Magnetite
- (b) Answer the following- 08  
 i) State relation between dip and strike.  
 ii) What is texture? Explain equigranular texture.  
 iii) What is recumbent fold? Explain with diagram.  
 iv) What do you mean by order of superposition?
- (c) Identify the following rocks with the help of given information's- 02  
 (i) Coarse grained metamorphic rock, strength-very high, mineral composition –  
 Quartz, feldspar, parent rock- sandstone  
 (ii) White in color, fine to coarse grained, granulose structure, interlocking grain boundaries,  
 takes good polish, composed of calcite.
2. Distinguish between the following pairs with suitable diagram- 5 x 4  
 i) Porphyritic texture and Poikilitic texture.  
 ii) Glacial valley and Hanging valley.  
 iii) Central eruption and fissure eruption  
 iv) Pot holes and Cirques  
 v) Confined aquifer and unconfined aquifer
3. (a) Write on major structures of sedimentary rocks with suitable diagrams. 10  
 (b) Explain concordant and discordant forms of igneous rocks. 10
4. (a) Describe the physiographical division of India. 05  
 (b) Describe the classification of Vindhyan system 05  
 (c) Write notes on formation of Moraines. 05  
 (d) What were the precautionary measures for building construction in earthquake zone? 05
5. (a) describe the various types of Landslides. 10  
 (b) What are the zones of Ground water? How perched water table is formed? 10
6. (a) Describe the suitable geological structures for construction of dam. 10  
 (b) What is lining of tunnel? How geology controls the necessity of lining in tunnel. 10
7. (a) What is unconformity ? Write the difference between angular unconformity and non-conformity 05  
 (b) What is core logging? What are the different parameters used for core logging? 05  
 (c) Describe seismic method of geological investigation in brief. 05  
 (d) Write the use of rocks formed by cooling of lava as building stones. 05