

(3 Hours)

(Total marks: 80)

**NB: (1) question No 1 is compulsory**

**(2) Attempt any three questions from remaining five questions**

**(3) Figures to the right indicates full marks**

**(4) Draw neat sketches wherever necessary**

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| 1 | <p><b>(a)</b> Name the following mineral with the help of given properties <span style="float: right;">5</span></p> <p>(i) Fine grained (aphanitic texture) igneous rock ,black or greyish green with conchoidal fracture</p> <p>(ii) Metamorphic rock with siliceous composition formed by the metamorphism of sandstone</p> <p>(iii) Clastic sedimentary rock with rounded pebbles held together by cementing matrix</p> <p>(iv) Mineral most resistant to the weathering, absence of cleavage, vitreous lusture</p> <p>(v) Extremely soft mineral, ability to absorb oil and grease, foliated form , hardness one</p> <p><b>(b)</b> Explain following with diagram <span style="float: right;">10</span></p> <p>(i) Delta</p> <p>(ii) Pedestal rocks</p> <p>(iii) Barchan Dunes</p> <p>(iv) Crag and tail</p> <p>(v) River meandering</p> <p><b>(c)</b> Differentiate between following <span style="float: right;">5</span></p> <p>(i) Similar and parallel fold</p> <p>(ii) Conglomerate and breccias</p> <p>(iii) Sill and dyke</p> <p>(iv) Vesicular basalt and amygdaloidal basalt</p> <p>(v) Dip and strike</p> |
| 2 | <p>(a) Describe erosional and depositional features created by geological action of wind. <span style="float: right;">10</span></p> <p>(b) Write classification of Igneous rocks on the basis of mineral constituents and texture. <span style="float: right;">6</span></p> <p>(c) Explain internal structure of earth revealed by seismic waves. <span style="float: right;">4</span></p>   |
| 3 | <p>(a) Describe classification of fold on the basis of position of axial plane <span style="float: right;">6</span></p> <p>(b) How rocks are get faulted? Describe various parts and fault. <span style="float: right;">8</span></p> <p>(c) Explain structure and economic importance of Deccan traps <span style="float: right;">6</span></p>   |

- 4 (a) What are the forces acting on a dam? Describe lithological and structural consideration for site selection of dam. 10
- (b) With the help of diagrams explain role of geology in the successful tunnelling. 10
- 5 (a) Describe seismic reflection method of subsurface investigation. 5
- (b) Explain the characteristic properties of good building stones with suitable examples. 5
- (c) What is the difference between confined and unconfined aquifer? Explain various geological factors which influence the movement of ground water. 10
- 6 Write short notes on **(any five)** (04x5)
- (i) Laws of stratigraphy
  - (ii) Types of metamorphism
  - (iii) Texture of sedimentary rocks
  - (iv) Unconformity
  - (v) Seismic division of India.
  - (vi) Types of volcanism
  - (vii) Earthquake zones of India