

**B.Sc. Part—I (Semester—II) Examination**

**GEOLOGY (New)**

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) ALL questions are compulsory.

(2) Draw well labelled diagram wherever necessary.

1. (A) Fill in the blanks :

(i) Study of rocks is known as \_\_\_\_\_.

(ii) Phase rule is  $P+F=$  \_\_\_\_\_.

(iii) \_\_\_\_\_, \_\_\_\_\_ are the agents of metamorphic.

(iv) Bowen's reaction series is divided into \_\_\_\_\_ and \_\_\_\_\_ series.

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(B) Choose the correct alternatives :

(i) Plutonic igneous rocks are formed :

(a) At great depth

(b) At intermediate depth

(c) On the surface

(d) All of the above

(ii) In one component system of augite, the rate of crystallization is rapid is termed as :

(a) Labile region

(b) Metastable region

(c) Uniform region

(d) None of the above

(iii) Cataclastic metamorphism is due to :

- (a) Temperature
- (b) Lateral pressure
- (c) Temperature and pressure
- (d) None of the above

(iv) The sedimentary rock which shows rounded grains cemented together is called as :

- (a) Breccia
- (b) Conglomerate
- (c) Shale
- (d) Schistose rock

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(C) Answer the following in one or two sentences :

- (i) What are schistose structures ?
- (ii) What is phenocryst ?
- (iii) What is plutonic metamorphism ?
- (iv) What are meanders ?

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2. Explain the following :

- (a) Magma and its composition.
- (b) Discordant forms of igneous rock.
- (c) Blocky and pillow lava.

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**OR**

- (p) Equigranular texture.
- (q) Extrusive forms of igneous rock.
- (r) Directive and intergrowth texture

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3. Describe the following :
- (a) Mineralogical classification of igneous rock. 4
  - (b) Characteristic of basic igneous rock. 4
  - (c) Continuous reaction series. 4
- OR**
- (p) C.I.P.W. classification. 4
  - (q) Characters of acidic igneous rock. 4
  - (r) Discontinuous reaction series. 4
4. Describe in detail one component system of Quartz. 12
- OR**
- Describe in detail two component system of plagioclase feldspar, solid solution series. 12
5. What are sedimentary rocks ? Describe in detail the formation of sedimentary rocks. 12
- OR**
- What are textures ? Describe the various textures in sedimentary rock. 12
6. Explain the following :
- (a) Structure of metamorphic rock 4
  - (b) Non-foliated rock 4
  - (c) Thermal metamorphism 4
- OR**
- (p) Foliated sedimentary rock 4
  - (q) Cataclastic metamorphism 4
  - (r) Agents of metamorphism. 4
7. Describe the following :
- (a) Deposits of organic origin 4
  - (b) Metasomatism 4
  - (c) Limestone 4
- OR**
- (p) Autometamorphism 4
  - (q) Phosphatic deposits 4
  - (r) Marble. 4

