



2018 III 13

1000

Seat No. :

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Time : 2½ Hours

GEOLOGY (New Pattern)

Subject Code

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Total No. of Questions : 5

(Printed Pages : 4)

Maximum Marks : 55

- INSTRUCTIONS:**
- All questions are **compulsory**.*
 - Answer **each** question on a fresh page.*
 - Figures to the **right** indicate full marks.*
 - Draw neat labelled diagrams **wherever** necessary.*
 - Answers to the questions carrying **1** mark should be written in **1 to 10** words.*
 - Answers to the questions carrying **2** marks should be written in about **50** words.*
 - Answer to the questions carrying **3** marks should be written in about **80** words.*
 - Answers to the questions carrying **4** marks should be written in about **120** words.*
 - Select the correct alternative for the multiple choice questions and rewrite the statement.*

1. A) Complete the following statement by choosing the alternative given below the statement and write the completed statement : [1]

The splitting and the northward drift of the Peninsular India from the Gondwana land occurred during _____

- Early Cretaceous
- Mid Miocene
- Late Permian
- Early Triassic

- B) State the landform formed when two continental plates diverge. [1]

- C) How are Residual mountains formed ? [2]



D) Explain in brief, how did Mariana islands originated. [2]

E) Write a note on magnitude of an earthquake. [2]

OR

Write a note on shadow zone of an earthquake. [2]

F) Explain the various types of central type of volcanoes. [3]

2. A) Complete the following statement by choosing the alternative given below the statement and write the completed statement : [1]

The rock surface showing displacement on either side is known as _____

- Step Zone
- Shear Zone
- Fault Zone
- Slickensides

B) State the symbolic form of the shale bed that strikes $N50^{\circ}W$ and dips 30° due NE. [1]

C) With neat labelled diagram explain the formation of disconformity. [2]

D) Write a note on genetic classification of Joints. [2]

E) Beds of sandstone, shale and limestone are underlain by granite. State and explain the structural geological feature formed above. [2]

F) With neat labelled diagram explain the following : [3]

- Throw and heave
- Fan fold

OR

With neat labelled diagram explain the following : [3]

- Horst and graben
- Symmetrical anticline.

3. A) Complete the following statement by choosing the alternative given below the statement and write the completed statement : [1]

The index mineral which is an indicative of high grade metamorphism is _____

- Biotite
- Talc
- Hypersthene
- Chlorite



- B) State the most abundant mineral found in ultramafic igneous rock. [1]
- C) How does the crystallisation of minerals occur from cooling magma as per Bowens Reaction Series ? [2]
- D) Write short notes on : [2]
- Clastic rocks
 - Carbonate rocks.
- E) Explain the role of temperature as an agent of metamorphism. [2]
- F) Explain the classification of sedimentary rocks based on their mode of accumulation. [3]

OR

Explain the classification of igneous rocks based on mineral composition. [3]

4. A) Complete the following statement by choosing the alternative given below the statement and write the completed statement : [1]
- The emergence of land plants occurred during _____
- Paleogene period
 - Cambrian period
 - Silurian period
 - Carboniferous period
- B) What is the term used in stratigraphy for matching the rock stratas with reference to their ages from different places ? [1]
- C) "Shale bed is overlain by Sandstone, and Limestone in a sedimentary basin and intruded by a pegmatite dyke". State and explain the principle of stratigraphy. [2]
- D) State the classification of Dharwar, Cuddapah and Vindhyan Supergroups. [3]
- E) Explain the various modes of preservation of fossils. [4]



5. A) Complete the following statement by choosing the alternative given below the statement and write the completed statement :

The metals that are mined from the Zawar area of Rajasthan are _____ [1]

- Fe and Al
- Cu and Zn
- Pb and Zn
- Fe and Mn

B) What is the term used for rocky material found in association with ores ? [1]

C) How is coal formed ? [2]

D) Explain the following : [3]

- Syngenetic deposits
- Fissure veins
- Saddle reefs.

E) Explain the following : [4]

- Magmatic segregations
- Indian distribution of chromium ores.

OR

Explain the following : [4]

- Magmatic disseminations
- Indian distribution of Aluminium ores.
