



**2019/TDC/ODD/SEM/GELDSC/
GELGE-301T/215**

TDC (CBCS) Odd Semester Exam., 2019

GEOLOGY

(3rd Semester)

Course No. : GELDSC/GELGE-301T

(Petrology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any three of the following : $1 \times 3 = 3$

- (a) Which volcanic rocks contain the highest percentage of silica?
- (b) Write the principal phase components of magma.
- (c) What is the striking feature of Bowen's reaction series?
- (d) If larger grains are surrounded by small grains, then that structure is called _____.

(Fill in the blank)



2. Write short note on any one of the following : 2

- (a) Magmatic differentiation
- (b) Assimilation

3. Write explanatory note on any one of the following : 5

- (a) Forms of igneous rocks
- (b) Types and mode of origin of igneous rocks

UNIT—II

4. Answer any three of the following : 1×3=3

- (a) Write the principal mineral composition of gabbro.
- (b) Name two volcanic rocks.
- (c) Granite is characterised by _____ type of feldspar.

(Fill in the blank)

- (d) On what basis igneous rocks are classified?

5. Write short note on any one of the following : 2

- (a) Granite
- (b) Rhyolite

6. Write explanatory note on any one of the following : 5

- (a) Mineralogical classification of igneous rocks
- (b) Detailed petrographic description of gabbro

UNIT—III

7. Answer any three of the following : 1×3=3

- (a) What is the metamorphic product of sandstone?
- (b) Write the difference between weathering and erosion.
- (c) Name two rudaceous sedimentary rocks.
- (d) According to Wentworth's scale, particles having a diameter between $\frac{1}{16}$ mm to 2 mm are described as _____.

(Fill in the blank)

8. Write short note on any one of the following : 2

- (a) Conglomerate
- (b) Sandstone



(4)

(5)

9. Write explanatory note on any one of the following : 5

- (a) Classification of sedimentary rocks
- (b) Various structures of sedimentary rocks

UNIT—IV

10. Answer any three of the following : 1×3=3

- (a) Define the term 'metamorphism' as applied to rocks.
- (b) Name the agents of metamorphism.
- (c) What is the metamorphic product of limestone?
- (d) Metamorphism involving substantial addition or removal of materials is generally termed as _____.

(Fill in the blank)

11. Write short note on any one of the following : 2

- (a) Zones of metamorphism
- (b) Grade of metamorphism

12. Write explanatory note on any one of the following : 5

- (a) Different types of metamorphism
- (b) Various textures of metamorphic rocks with neat sketches

UNIT—V

13. Answer any three of the following : 1×3=3

- (a) How do schists differ from phyllite?
- (b) Write the mineral composition of quartzite.
- (c) Name the typical texture of marble.
- (d) Write the possible mode of occurrence of gneiss.

14. Write short note on any one of the following : 2

- (a) Slate
- (b) Phyllite

15. Write petrographic detail on any one of the following : 5

- (a) Schist
- (b) Gneiss
