DAY — 14 SEAT NUMBER | | | | | | |

2025	III	01	1100	J-352	(E)

GEOLOGY (41)

Time : 3 Hrs. **(4 Pages)** **Max. Marks : 70**

***General Instructions* :**

There are four sections in this question paper.

(1) Section-A : *Q. No. 1 - Contains Ten multiple choice type of questions carrying ONE mark each.*

Q. No. 2 - Contains Eight very short answer type of questions carrying ONE mark each.

(2) Section-B : *Q. No. 3 to Q. No. 14 are Twelve short answer type of questions carrying TWO marks each.*

(3) Section-C : *Q. No. 15 to Q. No. 26 are Twelve short answer type of questions carrying THREE marks each.*

(4) Section-D : *Q. No. 27 to Q. No. 31 are Five long answer type of questions carrying FOUR marks each.*

(5) Draw neat and labelled diagrams wherever necessary.

(6) All sections are compulsory.

(7) Figures to the right indicate full marks.

SECTION-A

Q. 1. Choose the correct alternative and write the answers : **[10]**

(1) Thermal metamorphism of sandstone results in the formation of _____.

(a) Marble (b) Slate

(c) Quartzite (d) Mica-schist

(2) (a) Iron ore mineral is Galena.
(b) Iron ore mineral is Psilomelane
(c) Iron ore mineral is Hematite
(d) Iron ore mineral is Chalcopyrite

(3) One of the structures exhibited by sedimentary rocks is _____.
(a) Granitic (b) Schistose
(c) Clastic (d) Cross bedding

(4) In an asymmetrical syncline the two limbs_____.
(a) dip towards each other by the same angle.
(b) dip away from each other by the same angle.
(c) dip towards each other by different angle.
(d) dip away from each other by different angle.

(5) Dharwar supergroup of rocks have_____.
(a) evidence of life (b) evidence of no life
(c) fish (d) reptiles

(6) The chemical composition of Zircon mineral is _____
(a) $ZrSiO_4$ (b) SiO_2
(c) PbS (d) Al_2SiO_5

(7) The Himalayan mountains are classified as_____ mountains.
(a) fold (b) fault
(c) relict (d) volcanic

(8) The capacity of water bearing formation to transmit water is called_____.
(a) Porosity (b) Permeability
(c) Aquitard (d) Transmissivity

(9) Most remote sensing satellites cannot collect data during _____.
(a) an earthquake (b) tsunami
(c) night (d) resource mapping

(10) Downslope movement of rock debris in response to gravitational stress is called _____ .

(a) faulting (b) slip

(c) thrusting (d) landslide

Q. 2. Answer the following questions : **[8]**

(i) Which era is known as age of mammals?

(ii) Name the zone between ground surface and the top of capillary fringe.

(iii) Which rock shows slaty cleavages?

(iv) Name the waves whose velocity is faster than (S) waves.

(v) In which fold the axial plane is essentially vertical?

(vi) What is the thickness of mantle?

(vii) Name the satellite launched in LEO.

(viii) Galena exhibits how many sets of cleavages?

SECTION-B

Answer the following questions (Any EIGHT) : **[16]**

Q. 3. What is Pan chromatic imagery?

Q. 4. How are volcanic rocks formed?

Q. 5. How are fault-block mountain formed?

Q. 6. Explain step fault.

Q. 7. What is management of groundwater?

Q. 8. Write a note on Granitic texture.

Q. 9. What is tenor of ore?

Q. 10. Give the uses of ceramics.

Q. 11. What are imprints?

Q. 12. Explain focus and epicenter.

Q. 13. What is strike joint?

Q. 14. Give the uses of fossils.

SECTION-C

Answer the following questions (Any EIGHT) : **[24]**

Q. 15. Classify the sedimentary rocks based on grain size.

Q. 16. How are extrusive igneous rocks formed?

Q. 17. Explain strike and dip of beds.

Q. 18. Describe the refractory industry.

Q. 19. Write a note on non-conformity.

Q. 20. Give the physical properties, occurrence and uses of corundum mineral.

Q. 21. Give the lithological correlation.

Q. 22. Write a note on order of superposition.

Q. 23. Describe the unconfined and confined aquifer.

Q. 24. Describe the core of the Earth.

Q. 25. Explain tone and pattern elements of image interpretation.

Q. 26. Give the types of landslide.

SECTION-D

Answer the following questions (Any THREE) : **[12]**

Q. 27. Write a note on Schistose and Gneissose structures.

Q. 28. Describe normal fault and reverse fault.

Q. 29. Describe the physical properties, chemical composition and uses of aluminium ore mineral.

Q. 30. Describe in detail any two modes of preservation of fossils.

Q. 31. Explain in detail the sources of groundwater.

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