

N.B. (1) **Question No 1** is compulsory.

(2) Attempt any **three** questions out of remaining **five**.

(3) Draw sketches wherever necessary.

(4) Figures to the right indicate full marks.

1. a) Define the following terms

- i) Volcanic rock
- ii) Cheveron fold.
- iii) Solifluction.
- iv) Juvenile water.
- v) Disconformity.

(5)

b) Answer the following.

- i) Differentiate volcanic tuff and volcanic bomb.
- ii) What do you mean by plunge of a fold?
- iii) Name two minerals which show pearly lustre.
- iv) Name the mineral which is bluish in colour with bladed form.
- v) Name the mineral which shows fibrous form and splintery fracture.

(5)

c) Draw labelled diagram of the following.

- (i) Parts of gravity dam.
- (ii) Angular unconformity.
- (iii) Horst and graben.
- (iv) Crag and tail.
- (v) Perched water table.

(10)

2. (a) Write short note on Plate tectonic theory.

(5)

(b) Describe various types of joints found in igneous rocks.

(5)

(c) What are the controlling factors for landslide?

(5)

(d) What do you mean by aquifer? Explain different types of aquifer.

(5)

3. (a) Explain the erosional and depositional features of wind.

(10)

(b) Explain the terminology of fold with suitable diagram.

(5)

(c) Give a brief account on mechanical weathering.

(5)

4. (a) Enumerate the structures of sedimentary rocks. (10)  
(b) Explain different types of faults with suitable diagram. (5)  
(c) What is order of superposition? Mention economic importance of Deccan trap. (5)
5. (a) What are the different types of geological investigation? Explain a direct method of subsurface investigation. (10)  
(b) Describe various geological considerations for site selection of tunnel. (5)  
(c) On a horizontal tunnel a bed of sandstone dips 30 degree eastwards. Its true thickness is 200m. Determine its vertical thickness and width of outcrop in the tunnel. (5)
6. Write difference between the following. (Any five) (20)  
(a) Central eruption and fissure type eruption.  
(b) Concordant and discordant type of igneous intrusion.  
(c) Porphyritic and Poikilitic texture.  
(d) Cross bedding and graded bedding.  
(e) Isoclinal fold and overturned fold.  
(f) Diamond drilling and calyx drilling.

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