

M.Sc. Sem.-1 Examination

404

Applied Geology

January-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q.1 Write the following.

- (i) Explain aseismic design of building located in the seismic zone V. (07)
- (ii) Discuss geotechnical problems associated with construction of bridges.(07)

OR

- (i) Explain seismic zonation of India with neat sketch.(07)
- (ii) Discuss the geological factors affecting the stability of tunnels.(07)

Q.2 Write the following.

- (i) Discuss iron meteorites.(07)
- (ii) Explain the significance of hydrogen and helium in the cosmos. (07)

OR

- (i) Explain the mineralogical composition of stony meteorites. (07)
- (ii) Discuss the petrology of meteorites.(07)

Q.3 Write the following.

- (i) Explain the working mechanism of gravimeters.(07)
- (ii) Discuss the plane table method of surveying.(07)

OR

- (i) Explain seismic methods of surveying.(07)
- (ii) Discuss well logging techniques.(07)

Q.4 Write the following.

- (i) Discuss engineering geological problems associated with dam sites.(07)
- (ii) Explain the methods of grouting, anchoring and bolting.(07)

OR

- (i) Discuss the procedure of mapping with the use of Brunton compass. (07)
- (ii) Explain the influence of the geological conditions on foundations.(07)

Q.5 Attempt any seven out of twelve.**(14)**

- (1) Define anchoring.
- (2) Define cosmos.
- (3) Provide two examples of stony meteorites.
- (4) Provide the full name of MBT.
- (5) State the name of different types of dam.
- (6) Define iron meteorites.
- (7) Provide the significance of the Chicxulub Crater of Mexico.
- (8) Provide two examples of the most abundant elements of the universe.
- (9) Define toe of the dam.
- (10) What do you understand by the term "Reservoir"?
- (11) Provide the seismic zonation classification of India as per BIS.
- (12) Provide two examples of the moon of Jupiter.

