

COMBINED COMPETITIVE EXAMINATION (MAIN)

GEOLOGY

Paper—I

Time : 3 hours

Full Marks : 200

Note : (1) The figures in the right-hand margin indicate full marks for the questions.

(2) Attempt **five** questions in all.

(3) Question No. 1 is compulsory.

1. Answer any ten questions :

4×10=40

- (a) What do you mean by 'shadow wave zone' and how does it happen?
- (b) What are the characteristics of andesitic lava flow?
- (c) What is unconformity?
- (d) What is the importance of Lameta beds in Indian stratigraphy?
- (e) In Indian stratigraphy, where do we put Neogene-Quaternary boundary?
- (f) Explain type area and type section.
- (g) Discuss the debated classification of Indian Gondwana.
- (h) What do you mean by 'nappe'?
- (i) What are mould and cast?
- (j) Name two ammonoids and state their ranges.
- (k) What is phylozone?
- (l) What is relief? What is its usefulness in studying the topography?

2. Answer any *eight* questions : 5×8=40

- (a) "Present is the key to the past." Express.
- (b) Write a note on Cambrian explosion.
- (c) How magnetic data is reliable tool in studying seafloor spreading?
- (d) Write different types of strain ellipsoid.
- (e) Define base level of erosion. Is it static or dynamics?
- (f) What do you mean by 'punctuated equilibrium'?
- (g) What are the differences between epifaunal and infaunal?
- (h) What do you mean by 'magnitude' of an earthquake?
- (i) Define erg and barchan.
- (j) Write a note on morphological features of bivalvia.

3. Answer any *five* questions : 8×5=40

- (a) What is Permian extinction?
- (b) What are linear and planar structures?
- (c) Add a note on K-Ar method of dating.
- (d) What are the hazards associated with volcano?
- (e) What are the landforms associated with glaciers?
- (f) Explain type specimen—holotype and paratype of fossils specimen.
- (g) How is epicentre of an earthquake determined?

