

B. Sc. FIRST YEAR GEOLOGY PRACTICAL 2019-20

Examination will be of four hours duration.

Maximum Marks 75

Physical Geology	05
Paleontology	20
Crystallography-Mineralogy	20
Field Work	15
Viva Voce	05
Record	10
Total	75

(i) Paleontology

Identification and description of following fossils in hand specimens:

Foraminifera	: <i>Nummulites, Assilina, Alveolina.</i>
Echinoidea	: <i>Cidaris, Hemiaster, Micraster.</i>
Brachiopoda	: <i>Rhynchonella, Terebratula, Productus, Spirifer.</i>
Pelecypoda	: <i>Pecten, Ostrea, Trigonina, Lima, Exogyra.</i>
Gastropoda	: <i>Trochus, Murex, Voluta, Physa, Turritella, Conus.</i>
Ammonoidea	: <i>Phylloceras, Ceratites, Perisphinctes.</i>
Coleoidea	: <i>Belemnites.</i>
Nautiloidea	: <i>Nautilus, Orthoceras.</i>
Trilobita	: <i>Calymene, Phacops, Agnostus, Trinucleus, Paradoxides.</i>
Graptoloidea	: <i>Monograptus, Diplograptus.</i>
Plant fossils	: <i>Glossopteris, Gangmopteris, Vertibraria, Ptilophyllum.</i>

(ii) Crystallography and Mineralogy:

Description and identification of the following minerals in hand specimen : Quartz, feldspar, muscovite, biotite, chlorite, hornblende, augite, olivine, garnet, kyanite, staurolite, sillimanite, tremolite, asbestos, serpentine, calcite, dolomite, magnetite, hematite, epidote, tourmaline, beryl, nepheline, talc, gypsum, apatite, fluorite, topaz and corundum.

Drawing, description and identification of crystal models.

(iii) Physical Geology:

Preparation of charts and diagrams illustrating important processes of erosion and weathering.

(iv) Field Training:

Five days Geological field excursion and a report thereon.

Fieldwork is compulsory. Students not taking part in the fieldwork shall not be allowed to appear in the examination.

Books suggested, besides the Internet: B. Sc. Part I

Datta A. K.: Introduction to Physical Geology, Kalyani Publishers, New Delhi.

Ford, W. E.: Dana's Textbook of Mineralogy, John Wiley & Sons, New York.

Hamblin W. K.: Earth's Dynamic Systems, Macmillan Publishing Company, New York.

Homes A.: Principles of Physical Geology, Thomas Nelson & Sons, London.

Mahapatra G. B.: A Textbook of Geology, CBS Publishers & Distributors, Delhi.

Mukerjee P. K.: A Textbook of Geology, The World Press Pvt. Ltd., Calcutta.

Parbin Singh: Engineering & General Geology, S. K. Kataria & Sons, New Delhi.

Read H. H.: Rutley's Elements of Mineralogy (revised by C.D. Gribble), CBS Publishers & Distributors, Delhi.

Sharma, N. L.: Determinative Tables, ISM, Dhanbad.

Shrock R. R. & Twenhofel W. H.: Principles of Invertebrate Palaeontology, CBS Publishers & Distributors, Delhi.

Tarbuck E. J. & Lutgens F. K.: The Earth - An Introduction to Physical Geology, Merrill Publishing Company, London.

Woods, Henry: Paleontology Invertebrates, CBS Publishers & Distributors, Delhi.