

## B. Sc. FIRST YEAR GEOLOGY PRACTICAL 2020-2021

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

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**Total** **75**

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### (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) Identification of following minerals under microscope: Quartz, Plagioclase feldspar, Microcline Feldspar, Muscovite, Biotite, Garnet, Hornblende, Calcite, Olivine, Hypersthene.

### (iv) Physical Geology:

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

### (v) Field Work:

Three days Geological field excursion and a report thereon.

**Students not taking part in the field work will not be awarded marks for the field work.**

Checked and Approved  
(-sd)  
(Dr. Maya Chaudhary)

Checked and Approved  
(-sd)  
Dr. Harish Kapasya

Checked and Approved  
(-sd)  
Mr. Subhash Janagal

## **B. Sc. First Year Science 2020-2021**

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

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- 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.
- Tar buck E. J. & Lutgens F. K.:** The Earth - An Introduction to Physical Geology, Merrill Publishing Company, London.
- Woods, Henry:** Paleontology Invertebrates, CBS Publishers & Distributors, Delhi.

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