**e-Learning Material to be uploaded on Virtual C4**

Course / Programme: M.Sc. Geology

Year& Semester: M.Sc. Geology & Semester II

Subject: Paper V-Igneous Petrology

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Topic** | **e-content Link \*** |
| 1 | Introduction to Igneous Rocks - Forms of Igneous bodies and their mode of emplacement | <https://www.youtube.com/watch?v=hIfVjoF_dxk> <https://www.youtube.com/watch?v=PrN7jygu4cQ><https://www.youtube.com/watch?v=LO16znM4E9M> |
| 2 | Texture of Igneous Rocks | <https://www.youtube.com/watch?v=sCN7wEWk0WM> <https://www.youtube.com/watch?v=YXxiJagLXCo>  |
| 3 | Structures of Igneous rocks | <https://www.youtube.com/watch?v=-qe_wQU7cEI> <https://www.youtube.com/watch?v=LnSBYll2vbA> <https://www.youtube.com/watch?v=bh8jQ3H3Nqc> <https://www.youtube.com/watch?v=lgW9OB6U5-E> |
| 4 | Classification of Igneous Rocks | <https://www.youtube.com/watch?v=mNI_f3czoK8> |
| 5 | IUGS Classification of Igneous Rocks | <https://www.youtube.com/watch?v=czslIPKxz6A> |
| 6 | Nature and evolution of magma | <https://www.youtube.com/watch?v=jyJnG2wqAUo> <https://www.youtube.com/watch?v=cpj48cy-R3E> <https://www.docsity.com/en/magma-evolution-geochemistry-i-lecture-notes/381006/> |
| 7 | Introduction to mantle petrology and mantle metasomatism | <https://www.youtube.com/watch?v=p1B5J421tJo> <https://www.youtube.com/watch?v=yua84HsKSiI> <https://ocw.mit.edu/courses/earth-atmospheric-and-planetary-sciences/12-109-petrology-fall-2005/lecture-notes/> |
| 8 | Factors affecting magma and evolution of magma, | <https://www.youtube.com/watch?v=YftpdL5pZBA><https://www.youtube.com/watch?v=Z9OV-OUp2IY><https://www.youtube.com/watch?v=NGLGD7Fqo_U> <https://www.docsity.com/en/igneosu-rock-cllsificaaaaation-in-the-ppt/2148086/> |
| 9 | Phase equilibrium of single silicate systems, its relation to magma genesis and crystallization in the light of modern experimental work | <https://www.youtube.com/watch?v=NqXIfsxy9yU> <https://www.youtube.com/watch?v=JAU0eubawiA> <https://www.chem.uci.edu/~lawm/263%206.pdf><http://nsdl.niscair.res.in/jspui/bitstream/123456789/330/3/PDF%20Phase%20equilibrium.pdf> |
| 11 | Phase equilibrium of binary silicate systems, its relation to magma genesis and crystallization in the light of modern experimental work | <https://www.youtube.com/watch?v=41Cfslz30uU> <https://www.chem.uci.edu/~lawm/263%206.pdf><https://www.tulane.edu/~sanelson/eens211/2compphasdiag.html> |
| 12 | Phase equilibrium of ternary silicate systems, its relation to magma genesis and crystallization in the light of modern experimental work | <https://www.youtube.com/watch?v=UoICczNYZAY> <https://www.tulane.edu/~sanelson/eens212/ternaryphdiag.htm> |
| 13 | Petrogenesis of ultramafic Komatiite | <https://www.youtube.com/watch?v=EZkHRdaGhUk> <http://orca.cf.ac.uk/121748/><https://www.researchgate.net/publication/271705329_Komatiites> |
| 14 | Petrogenesis of Basalts  | <https://www.youtube.com/watch?v=l38u2gzdpIA> <https://www.youtube.com/watch?v=vubViTCtxJo> <https://www.youtube.com/watch?v=M_FYRHvBJlM> [file:///C:/Users/sgbau/Downloads/Lecture3\_IgneousPetrogenesis\_175785.pdf](file:///C%3A/Users/sgbau/Downloads/Lecture3_IgneousPetrogenesis_175785.pdf)<https://ocw.mit.edu/courses/earth-atmospheric-and-planetary-sciences/12-109-petrology-fall-2005/lecture-notes/basalts.pdf> |
| 15 | Petrogenesis of Granites | <https://www.youtube.com/watch?v=zQT7rd9IC9s> <https://www.slideshare.net/samirkumariitb/granites-classification-petrogenesis-and-tectonic-descrimination-31117642><http://www.geo.umass.edu/courses/geo321/Lecture%2027%20Granites.pdf> |
| 16 | Petrogenesis of Alkaline rocks | <https://www.youtube.com/watch?v=Nib5gnhsiHk> <https://www.lpi.usra.edu/meetings/7thmars2007/pdf/3018.pdf> |
| 17 | Petrogenesis of Ophiolites, | <https://www.youtube.com/watch?v=tNabizMwmJA> <https://www.youtube.com/watch?v=Jy3hTDf3lRY> <https://www.youtube.com/watch?v=e3i4tvi_Cio> <https://en.wikipedia.org/wiki/Ophiolite> |
| 18 | Petrogenesis of Carbonatite | <https://www.youtube.com/watch?v=0F-i7epITIk> <https://www.youtube.com/watch?v=hhRmUNSARIc> <https://en.wikipedia.org/wiki/Carbonatite> |
| 19 | Petrogenesis of Lamprophyre | <https://www.youtube.com/watch?v=U7Jwx1uOPi8> <https://en.wikipedia.org/wiki/Lamprophyre> |
| 20 | Petrogenesis of Kimberlites | <https://www.youtube.com/watch?v=EAmab-UlQo4> <https://www.youtube.com/watch?v=7u5balYRB0Q> <https://en.wikipedia.org/wiki/Kimberlite> |

\* e-content:

1) Available as **free learning resourcespreferably**offered by MHRD or similar government organizations/institutions. viz. NPTEL You tube channel, SWAYAM, SWAYAMPRABHA, e-PG Pathshala, NDL, etc. OR

2) Own videos / e-content (PPT, pdf) prepared by the faculty (shared as a Google Drive link).

**Name of the teacher: Dr. S. F. R. Khadri**

**Designation: Professor and Head**

**Department: Geology**