



MODIFIED CBCS CURRICULUM OF GEOLOGY GENERAL PROGRAMME

SUBJECT CODE = 00

FOR UNDER GRADUATE COURSES UNDER RANCHI UNIVERSITY



Implemented from
Academic Session 2017-2020

Members of Board of Studies of CBCS Under- Graduate Syllabus as per Guidelines of the Ranchi University, Ranchi.

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COURSE STRUCTURE FOR UNDERGRADUATE '**GENERAL**' PROGRAMME**Table A -1: Distribution of 120 Credits** [*wherever there is a practical there will be no tutorial and vice –versa.]

| Course | Papers | Credits Theory + Practical | Credits Theory + Tutorial |
|---|--|-------------------------------|------------------------------|
| I. Core Course 04 Courses from each of the 03 discipline of choice | (DSC A to D) | | |
| Theory | 4x3=12 Papers | 12X4=48 | 12X5=60 |
| Practical/Tutorial* | 4x3=12 Papers | 12X2=24 | 12X1=12 |
| II. Elective Course (EC) A. Discipline Specific Elective 02 Courses from each of the 03 discipline of choice | (DSE A & B) | | |
| Theory | 2X3=6 Papers | 6X4=24 | 6X5=30 |
| Practical/ Tutorial* | 2X3=6 Papers | 6X2=12 | 6X1=6 |
| III. Ability Enhancement Compulsory Courses (AECC) | | | |
| 1. English/ MIL Communication/ MIL+NH/ Business Communication for Commerce | 1 Paper | 1X2=2 | 1X2=2 |
| 2. Environmental Science | 1 Paper | 1x2=2 | 1x2=2 |
| 3. Skill Enhancement Course of the Core Course opted | (SEC 1, 2, 3 & 4) 4 Papers | 4X2=8 | 4X2=8 |
| Total Credit = 120 | | | = 120 |

Table A -2: Course structure for B.Sc. (Undergraduate Programme)

| Semester | Course (Core Courses) 12 Papers | Allied (Elective Courses) 6 Papers | Ability Enhancement (Compulsory Courses) 6 Papers | Total Credits |
|----------|--|--|---|-------------------|
| Sem-I | DSC-1A, DSC-2A, DSC-3A (6+6+6=18 Credits) | --- | Eng / Hindi Comm/ NH+MB (02 Credits) | 20 Credits |
| Sem-II | DSC-1B, DSC-2B, DSC-3B (6+6+6=18 Credits) | --- | EVS (02 Credits) | 20 Credits |
| Sem-III | DSC-1C, DSC-2C, DSC-3C (6+6+6=18 Credits) | --- | SEC-1 (02 Credits) | 20 Credits |
| Sem-IV | DSC-1D, DSC-2D, DSC-3D (6+6+6=18 Credits) | --- | SEC-2 (02 Credits) | 20 Credits |
| Sem-V | --- | DSE-1A, DSE-2A, DSE-3A (6+6+6=18 Credits) | SEC-3 (02 Credits) | 20 Credits |
| Sem-VI | --- | DSE-1B, DSE-2B, DSE-3B (6+6+6=18 Credits) | SEC-4 (02 Credits) | 20 Credits |

Total = 120 Credits

COURSES OF STUDY FOR UNDERGRADUATE 'B. Sc. General' PROGRAMME

Table A -3: Basic Course structure for SCIENCE (Undergraduate Programme) Total:120 Credits

| Sem | Course (Core Courses) | | Allied (Elective Courses) | | Ability Enhancement (Compulsory Courses) | |
|------------|--------------------------|---|------------------------------|--|---|--|
| | Code | 4 x 3 = 12 Papers | Code | 2 x 3 = 6 Papers | Code | 1 + 1 + 4 = 6 Papers |
| I | DSC1A DSC2A DSC3A | Core Subject 1; Paper A Core Subject 2; Paper A Core Subject 3; Paper A | | | Compulsory Language Communication ENG/ MIL/ MIL+NH | |
| II | DSC1B DSC2B DSC3B | Core Subject 1; Paper B Core Subject 2; Paper B Core Subject 3; Paper B | | | EVS | Environmental Science |
| III | DSC1C DSC2C DSC3C | Core Subject 1; Paper C Core Subject 2; Paper C Core Subject 3; Paper C | | | SEC1 | SEC1: Elementary Computer Application Softwares + Lab |
| IV | DSC1D DSC2D DSC3D | Core Subject 1; Paper D Core Subject 2; Paper D Core Subject 3; Paper D | | | SEC2 | SEC2 of Either Core Subject 1,2 or 3 |
| V | | | DSE1A DSE2A DSE3A | Core Subject 1 Core Subject 2 Core Subject 3 | SEC3 | SEC3 of same subject opted in Sem III |
| VI | | | DSE1B DSE2B DSE3B | Core Subject 1 Core Subject 2 Core Subject 3 | SEC4 | SEC4 of same subject opted in Sem III |

Table A -4: Course structure for GEOLOGY (Undergraduate Programme)**Total: 120 Credits**

| Semester | Course (Core Courses) | | Allied (Elective Courses) | | Ability Enhancement (Compulsory Courses) | |
|------------|--------------------------|--|------------------------------|---|---|---|
| | Code | 4 Papers | Code | 2 Papers | Code | 4 Papers |
| I | DSC-A | Physical & Structural Geology + Lab | | | Compulsory Language Communication | |
| II | DSC-B | Crystallography & Mineralogy + Lab | | | EVS | Environmental Science |
| III | DSC-C | Petrology + Lab | | | SEC1 | Elementary Computer Application Softwares |
| IV | DSC-D | Stratigraphy & Paleontology + Lab | | | SEC2 | Environmental Geology + T |
| V | | | DSE-A | Economic Geology & Hydrology + Lab | SEC3 | Geochemistry + T |
| VI | | | DSE-B | Elements of Applied Geology + Lab | SEC4 | Photogeology & Remote Sensing + T |

Table A-5: Subject Combinations allowed for B. Sc. General Programme:

| | Subject 1 | Subject 2 | Subject 3 |
|----------|-------------|-----------|--------------------|
| 1 | Mathematics | Physics | Chemistry/ Geology |
| 2 | Mathematics | Chemistry | Geology |
| 3 | Botany | Zoology | Chemistry/ Geology |

Table A-6: Semester wise Structure for Mid Sem & End Sem Examinations:

| Sem | Core Honours, Allied DSE, Compulsory AECC Courses | | Examination Structure | | |
|------------|---|--|----------------------------|----------------------------|-------------------------------------|
| | Code | Papers | Mid Semester Theory (F.M.) | End Semester Theory (F.M.) | End Semester Practical/ Viva (F.M.) |
| I | DSC-A | Physical & Structural Geology + Lab | | 75 | 25 |
| | AECC | Language Communication | | 100 | |
| II | DSC-B | Crystallography & Mineralogy + Lab | | 75 | 25 |
| | AECC | EVS | | 100 | |
| III | DSC-C | Petrology + Lab | | 75 | 25 |
| IV | DSC-D | Stratigraphy & Paleontology + Lab | | 75 | 25 |
| V | DSE-A | Economic Geology & Hydrology + Lab | | 75 | 25 |
| VI | DSE-B | Elements of Applied Geology + Lab | | 75 | 25 |

Table A-7: Semester wise Structure for End Sem Examination of Skill Enhancement Course:

| Sem | Skill Enhancement Course SEC | | Examination Structure | | |
|------------|------------------------------|---|----------------------------|----------------------------|-------------------------------------|
| | Code | Papers | Mid Semester Theory (F.M.) | End Semester Theory (F.M.) | End Semester Practical/ Viva (F.M.) |
| III | SEC 1 | Elementary Computer Application Software + Lab | | 100 | |
| IV | SEC 2 | Electrical Circuit Network Skills + Lab | | 100 | |
| V | SEC 3 | Basic Instrumentation Skills + Lab | | 100 | |
| VI | SEC 4 | Renewable Energy & Energy Harvesting + Lab | | 100 | |

SEMESTER I

4 Papers

Total 100 x 4 = 400 Marks

I. ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)

(Credits: Theory-02)

Any One Compulsory Language Communication Prescribed by Ranchi University:

English Communication/ Hindi Communication / NH + MB Communication

II. CORE COURSE –DSC-A:

(Credits: Theory-04, Practicals-02)

Marks : 75 (ESE: 3Hrs) + 25 (Pr 3Hrs)=100**Pass Marks: Th ESE = 30 + Pr ESE =10***Instruction to Question Setter for
End Semester Examination (ESE):*

There will be two group of questions. Group A is compulsory and will contain two questions. Question No.1 will be very short answer type consisting of ten questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

PHYSICAL & STRUCTURAL GEOLOGY**Theory: 60 Lectures**

Unit-I: Introduction to geology and its scope, Earth and solar system: origin, size, shape, mass, density and its atmosphere.

Unit-II: A brief account of various theories regarding the origin and age of the earth; Brief idea of interior of earth and its composition.

Unit-III: Weathering and erosion: factors, types and their effects;

Unit-IV: Earthquakes: nature of seismic waves, their intensity and magnitude scale; Origin of earthquake; Volcanoes: types, products and causes of volcanism;.

Unit-V: Introduction to Structural Geology; contours, topographic and geological maps; Elementary idea of bed, dip and strike; Outcrop, effects of various structures on outcrop. Clinometer/Brunton compass and its use.

Unit-VI: Elementary idea of types of deformation; Folds: nomenclature and types of folds;

Unit-VII: Faults: nomenclature, geometrical and genetic classifications, normal, thrust and slip faults;

Unit-VIII: definition, kinds and significance of joints and unconformity.

GEOLOGY LAB- DSC A LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:****1. Physical Geology:**

Study of important geomorphological models; Reading topographical maps of the Survey of India; Identification of geomorphic features.

2. Structural Geology:

Study of clinometers/Brunton compass; Identification of different types of folds/faults from block models; Exercises on structural problems: preparation of cross section profile from a geological map.

Books Recommended:

- ☐ Arthur Holmes, 1992. Principles of Physical Geology. Chapman and Hall, London.
 - ☐ Miller, 1949. An Introduction to Physical Geology. East West Press Ltd.
 - ☐ Spencer, E.V., 1962. Basic concepts of Physical Geology. Oxford & IBH.
 - ☐ Mahapatra, G.B., 1994. A text book of Physical geology. CBS Publishers.
 - ☐ Billings, M.P., 1972. Structural Geology. Prentice Hall.
 - ☐ Davis, G.R., 1984. Structural Geology of Rocks and Region. John Wiley
 - ☐ Hills, E.S., 1963. Elements of Structural Geology. Farrold and Sons, London.
 - ☐ Singh, R. P., 1995. Structural Geology, A Practical Approach. Ganga Kaveri Publ., Varanasi.
 - ☐ A Practical Approach. Ganga Kaveri Publ., Varanasi.
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SEMESTER II

4 Papers**Total 100 x 4 = 400 Marks****I. ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)**

(Credits: Theory-02)

Marks : 100 (ESE: 3Hrs) =100**Pass Marks Th ESE = 40***Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **objective type test** consisting of hundred questions of 1 mark each. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

AECC – ENVIRONMENT STUDIES**Theory: 30 Lectures****Unit 1 : Introduction to environmental studies**

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

(2 lectures)**Unit 2 : Ecosystems**

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems :
 - a. Forest ecosystem
 - b. Grassland ecosystem
 - c. Desert ecosystem
 - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(2 lectures)**Unit 3 : Natural Resources : Renewable and Non---renewable Resources**

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water : Use and over---exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter---state).
- Energy resources : Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(5 lectures)**Unit 4 : Biodiversity and Conservation**

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega---biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man---wildlife conflicts, biological invasions; Conservation of biodiversity : In---situ and Ex---situ conservation of biodiversity.

- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

(5 lectures)

Unit 5 : Environmental Pollution

- Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management : Control measures of urban and industrial waste.
- Pollution case studies.

(5 lectures)

Unit 6 : Environmental Policies & Practices

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

(4 lectures)

Unit 7 : Human Communities and the Environment

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management : floods, earthquake, cyclones and landslides.
- Environmental movements : Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

(3 lectures)

Unit 8 : Field work

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site---Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems---pond, river, Delhi Ridge, etc.

(Equal to 4 lectures)

Suggested Readings:

- Raziuddin, M., Mishra P.K. 2014, *A Handbook of Environmental Studies*, Akanaksha Publications, Ranchi.
- Mukherjee, B. 2011: *Fundamentals of Environmental Biology*. Silverline Publications, Allahabad.
- Carson, R. 2002. *Silent Spring*. Houghton Mifflin Harcourt.
- Gadgil, M., & Guha, R. 1993. *This Fissured Land: An Ecological History of India*. Univ. of California Press.
- Gleeson, B. and Low, N. (eds.) 1999. *Global Ethics and Environment*, London, Routledge.
- Gleick, P. H. 1993. *Water in Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
- Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. *Principles of Conservation Biology*. Sunderland: Sinauer Associates, 2006.

- Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. *Science*, 339: 36---37.
 - McCully, P. 1996. *Rivers no more: the environmental effects of dams*(pp. 29---64). Zed Books.
 - McNeill, John R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century*.
 - Odum, E.P., Odum, H.T. & Andrews, J. 1971. *Fundamentals of Ecology*. Philadelphia: Saunders.
 - Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic Press.
 - Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co. Pvt. Ltd.
 - Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment*. 8th edition. John Wiley & Sons.
 - Rosencranz, A., Divan, S., & Noble, M. L. 2001. *Environmental law and policy in India*. Tripathi 1992.
 - Sengupta, R. 2003. *Ecology and economics: An approach to sustainable development*. OUP.
 - Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
 - Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. *Conservation Biology: Voices from the Tropics*. John Wiley & Sons.
 - Thapar, V. 1998. *Land of the Tiger: A Natural History of the Indian Subcontinent*.
 - Warren, C. E. 1971. *Biology and Water Pollution Control*. WB Saunders.
 - Wilson, E. O. 2006. *The Creation: An appeal to save life on earth*. New York: Norton.
 - World Commission on Environment and Development. 1987. *Our Common Future*. Oxford University
-

II. CORE COURSE –DSC-B:

(Credits: Theory-04, Practicals-02)

Marks : 75 (ESE: 3Hrs) + 25 (Pr 3Hrs)=100**Pass Marks: Th ESE = 30 + Pr ESE =10**

***Instruction to Question Setter for
End Semester Examination (ESE):***

There will be two group of questions. Group A is compulsory and will contain two questions. Question No.1 will be very short answer type consisting of ten questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

CRYSTALLOGRAPHY & MINERALOGY**Theory: 60 Lectures**

Unit-I: Crystals and their characters:

Unit-II: Crystal form, face, edge, solid angle; Interfacial angle and their measurements; Crystallographic axes and angles.

Unit-III: Crystal parameters, Weiss and Miller system of notations;

Unit-IV: Symmetry elements and description of normal class of Isometric, Tetragonal, Hexagonal, Trigonal, Orthorhombic, Monoclinic and Triclinic systems.

Unit-V: Introduction to Mineralogy, Definition and characters of mineral;

Unit-VI: Common physical properties of minerals; Chemical composition and diagnostic physical properties of minerals such as: Quartz, Orthoclase, Microcline, Hypersthene, Hornblende, Garnet, Muscovite, Biotite, Chlorite, Olivine, Epidote, Calcite.

Unit-VII: Polarizing microscope, its parts and functioning; Ordinary and polarized lights; Common optical properties observed under ordinary, polarized lights and crossed nicols.

Unit-VIII: Optical properties of some common rock forming minerals (Quartz, Orthoclase, Microcline, Olivine, Augite, Hornblende, Muscovite, Biotite, Garnet, Calcite).

GEOLOGY LAB- DSC B LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:****1. Crystallography:**

Study of symmetry elements of normal class of Isometric, Tetragonal, Hexagonal, Trigonal, Orthorhombic, Monoclinic and Triclinic systems.

2. Mineralogy:

Study of physical properties of minerals mentioned in theory course. Use of polarizing microscope; Study of optical properties of common rock forming minerals mentioned in theory course.

3. Geological Field Training:

Students will be required to carry out 03 days field work in a suitable geological area to study the elementary aspects of field geology and submit a report thereon.

Books Recommended:

- ☐ Dana, E.S. and Ford, W.E., 2002. A textbook of Mineralogy (Reprints).
 - ☐ Flint, Y., 1975. Essential of crystallography, Mir Publishers.
 - ☐ Phillips, F.C., 1963. An introduction to crystallography. Wiley, New York.
 - ☐ Berry, L.G., Mason, B. and Dietrich, R.V., 1982. Mineralogy. CBS Publ.
 - ☐ Nesse, D.W., 1986. Optical Mineralogy. McGraw Hill.
 - ☐ Read, H.H., 1968. Rutley's Element of Mineralogy (Rev. Ed.). Thomas Murby and Co.
 - ☐ Berry and Mason, 1961. Mineralogy. W.H. Freeman & Co.
 - ☐ Kerr, B.F., 1995. Optical Mineralogy 5th Ed. Mc Graw Hill, New York.
-

SEMESTER III

4 Papers

Total 100 x 4 = 400 Marks

I. SKILL ENHANCEMENT COURSE SEC 1:

(Credits: Theory-02)

All Four Papers (One paper to be studied in each semester) of any One Subject to be opted from either of the Core Subjects opted for General Courses of Study. Refer Content from the Syllabus of opted Skill Enhancement Course Subject.

II. CORE COURSE –DSC-C:

(Credits: Theory-04, Practicals-02)

Marks : 75 (ESE: 3Hrs) + 25 (Pr 3Hrs)=100**Pass Marks: Th ESE = 30 + Pr ESE =10*****Instruction to Question Setter for
End Semester Examination (ESE):***

There will be two group of questions. Group A is compulsory and will contain two questions. Question No.1 will be very short answer type consisting of ten questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

PETROLOGY**Theory: 60 Lectures****Igneous Petrology**

Unit-I: Magma: definition, composition, types and origin; Forms of igneous rocks; textures of igneous rocks.

Unit-II: Reaction principle; Differentiation and Assimilation; Crystallization of unicomponent and bicomponent (mix-crystals); Bowen's reaction series.

Unit-III: Mineralogical and chemical classification of igneous rocks:.

Unit-IV: Detailed petrographic description of Granite, Granodiorite, Rhyolite, Syenite, Phonolite, Diorite, Gabbro.

Sedimentary Petrology

Unit-V: Processes of formation of sedimentary rocks; Classification, textures and structures of sedimentary rocks;

Unit-VI: Petrographic details of important siliciclastic and carbonate rocks such as - conglomerate, breccia, sandstone, greywacke, shale, limestones.

Metamorphic Petrology

Unit-VII: Process and products of metamorphism; Type of metamorphism. Factors, zones and grade of metamorphism; Textures, structures and classification of metamorphic rocks.

Unit-VIII: Petrographic details of some important metamorphic rocks such as - slate, schists, gneiss, quartzite, marble.

GEOLOGY LAB- DSC C LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:****1. Igneous Petrology:**

Identification of rocks: On the basis of their physical properties in hand specimen; and optical properties in thin sections.

2. Sedimentary and metamorphic Petrology:

Identification of sedimentary and metamorphic rocks both in hand specimen and thin sections.

Books Recommended:

- ☐ Turner, F.J. & Verhoogen, J., 1960, Igneous & Metamorphic petrology. McGraw Hill Co.
 - ☐ Bose, M.K., 1997. Igneous petrology. World press
 - ☐ Tyrell, G. W., 1989. Principles of Petrology. Methuren and Co (Students ed.).
 - ☐ Ehlers, WG, and Blatt, H., 1987. Petrology, Igneous, Sedimentary and Metamorphic rocks, CBS Publishers
 - ☐ Moorhouse, WW., 1969. The study of rocks in thin sections. Harper and sons.
 - ☐ Friedman & Sanders, 1978. Principles of Sedimentology. John Wiley and sons.
 - ☐ Pettijohn, F.J., 1975. Sedimentary rocks, Harper & Bros. 3rd Ed.
 - ☐ Prasad, C., 1980. A text book of sedimentology.
 - ☐ Sengupta. S., 1997. Introduction to sedimentology. Oxford-IBH.
 - ☐ Turner, F.J., 1980. Metamorphic petrology. McGraw Hill.
 - ☐ Mason, R., 1978. Petrology of Metamorphic Rocks. CBS Publ.
 - ☐ Winkler, H.G.C., 1967. Petrogenesis of Metamorphic Rocks. Narosa Publ
-

SEMESTER IV

4 Papers**Total 100 x 4 = 400 Marks****I. SKILL ENHANCEMENT COURSE SEC 2:**

(Credits: Theory-02)

All Four Papers (One paper to be studied in each semester) of any One Subject to be opted from either of the Core Subjects opted for General Courses of Study. Refer Content from the Syllabus of opted Skill Enhancement Course Subject.

II. CORE COURSE –DSC-D:

(Credits: Theory-04, Practicals-02)

Marks : 75 (ESE: 3Hrs) + 25 (Pr 3Hrs)=100**Pass Marks: Th ESE = 30 + Pr ESE =10*****Instruction to Question Setter for******End Semester Examination (ESE):***

There will be two group of questions. Group A is compulsory and will contain two questions. Question No.1 will be very short answer type consisting of ten questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

STRATIGRAPHY & PALEONTOLOGY**Theory: 60 Lectures**

Unit I: Definition, Principle of stratigraphy; Geological Time Scale and stratigraphic classification; Physiographic division of India.

Unit II: Study of following Precambrian succession: Dharwar, Singhbhum, Cuddapa, Vindhyan and Delhi Supergroups; Brief idea of Palaeozoic succession of northwestern Himalaya; Triassic of Spiti; Mesozoic type succession of Kutch; Cretaceous of Tiruchirapalli;

Unit III: Study of following type localities: Gondwana and Deccan Trap.

Unit IV: Palaeogene-Neogene sequences of northwest Himalaya and Assam.

Unit-V: Palaeontology: definition, Fossils: definition, characters, binomial nomenclature in taxonomy, mode of preservation, condition of fossilization and significance of fossils;.

Unit VI: Morphology and geological distribution of brachiopods, pelecypods, cephalopods.

Unit VII: Morphology and geological distribution of trilobite, echinoidea.

Unit VIII: Evolutionary history of horse; Morphology, distribution and significance of Gondwana flora.

GEOLOGY LAB- DSC D LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:**

1. Morphological characters, systematic position and age of fossil genera pertaining to brachiopods, pelecypods, cephalopods, trilobite and Echinacea.
2. Preparation of lithostratigraphic maps of India showing distribution of important geological formations.

Books Recommended:

- ☐ Wadia, D., 1973. Geology of India. Mc Graw Hill Book co.
 - ☐ Krishnan, M.S., 1982. Geology of India and Burma, 6th Edition. CBS Publ.
 - ☐ Ravindra Kumar, 1985. Fundamentals of Historical Geology & Stratigraphy of India. Wiley Eastern.
 - ☐ Shrock, R.R. & Twenhoffel, W.H., 1952. Principles of Invertebrate Paleontology. CBS Publ.
 - ☐ Swinerton, HH., 1961. Outlines of Paleontology. Edward Arnold Publishers
 - ☐ Jain, P.C. & Anantharaman, M.S., 1983. Paleontology: Evolution & Animal Distribution. Vishal Publ.
 - ☐ Lehmann, U., 1983. Fossil Invertebrate. Cambridge Univ. Press.
 - ☐ Rastogi, 1988. Organic evolution. Kedrnath and Ramnath Publ.
-

SEMESTER V

4 Papers

Total 100 x 4 = 400 Marks

I. SKILL ENHANCEMENT COURSE SEC 3:

(Credits: Theory-02)

All Four Papers (One paper to be studied in each semester) of any One Subject to be opted from either of the Core Subjects opted for General Courses of Study. Refer Content from the Syllabus of opted Skill Enhancement Course Subject

II. GEOLOGY SPECIFIC –DSE A:

(Credits: Theory-05, Tutorials-01)

Marks : 100 (ESE 3Hrs) =100**Pass Marks Th ESE = 40***Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **two** group of questions. **Group A is compulsory** and will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of 20 marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

ECONOMIC GEOLOGY & HYDROLOGY**Theory: 75 Lectures Tutorial: 15 Lectures**

Unit-I: Concept of ore and ore deposits, ore minerals and gangue minerals; Tenor of ores; Metallic and non-metallic ore minerals; Strategic, Critical and essential minerals.

Unit-II: Processes of formation of ore deposits; Magmatic, contact metasomatic, hydrothermal, sedimentation, Residual.

Unit-III: Study of important metallic (Cu, Pb, Zn Mn, Fe, Au, Al) and non-metallic (industrial) minerals (gypsum, magnesite, mica).

Unit-IV: Distribution of coal and petroleum in India;

Unit-V: Definition of hydrogeology, Hydrological cycle;

Unit-VI: Hydrological parameters - Precipitation, evaporation, transpiration and infiltration.

Unit-VII: Origin of groundwater; Vertical distribution of groundwater; Types of aquifers; Water bearing properties of rocks - Porosity and Permeability; specific yield, specific retention.

Unit-VIII: Surface and subsurface geophysical and geological methods of ground water exploration; Groundwater provinces of India.

GEOLOGY LAB- DSE A LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:****1. Economic Geology:**

Study of ore and economic minerals in hand specimen; Preparation of maps showing distribution of important metallic and non-metallic deposits and important coal and oil fields of India.

2. Hydrology:

Study of hydro-geological models, Estimation of porosity and permeability from the given data;
Preparation and interpretation of water table maps.

Books Recommended:

- ☐ Brown, C. and Dey, A.K. 1955. Indian Mineral Wealth. Oxford Univ.
 - ☐ Gokhale, K.V.G.K. and Rao, T.C., 1983. Ore Deposits of India. East West Press Pvt. Ltd.
 - ☐ Jense, M.L. and Bateman A.M., 1981. Economic Mineral Deposits. John Wiley and Sons.
 - ☐ Krishnnaswamy, S., 1979. India's Minerals Resources. Oxford and IBH Publ.
 - ☐ Deb, S., 1980. Industrial minerals and Rocks of India. Allied Publishers Pvt. Ltd.
 - ☐ Umeshwar Prasad, 2003. Economic Geology. CBS Publishers and distributors.
 - ☐ Sharma, N.L. and Ram, K.V.S., 1972. Introduction to India's Economic Minerals, Dhanbad.
 - ☐ Karanth, K. R., 1989. Hydrogeology. Tata McGraw Hill Publ.
 - ☐ Raghunath, H. M., 1990. Groundwater. Wiley Eastern Ltd.
 - ☐ Subramaniam, V., 2000. Water-Kingston Publ. London.
-

SEMESTER VI

4 Papers

Total 100 x 4 = 400 Marks

I. SKILL ENHANCEMENT COURSE SEC 4:

(Credits: Theory-02)

All Four Papers (One paper to be studied in each semester) of any One Subject to be opted from either of the Core Subjects opted for General Courses of Study. Refer Content from the Syllabus of opted Skill Enhancement Course Subject

II. GEOLOGY SPECIFIC –DSE B:

(Credits: Theory-04, Practicals-02)

Marks : 100 (ESE 3Hrs) =100**Pass Marks Th ESE = 40***Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **two** group of questions. **Group A is compulsory** and will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of 20 marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

ELEMENTS OF APPLIED GEOLOGY**Theory: 75 Lectures****Unit-I:** Engineering properties of rocks and Soils.**Unit-II:** Soil and Soil groups of India.**Unit-III:** Dam, Types and their geological and environmental considerations; Geological problem of reservoirs.**Unit-IV:** Tunnels: geology, structure, seepage problem and role of water table;**Unit-V:** Landslides: classification, causes and preventative measures.**Unit-VI:** Mineral exploration: Elementary idea of geological and geophysical prospecting.**Unit-VII:** Elementary idea of mining.**Unit-VIII:** Environmental considerations for mining,

GEOLOGY LAB- DSE B LAB**60 Lectures****Marks : 25 (Pr 3Hrs)=25****Pass Marks: Pr ESE =10***Instruction to Question Setter for**End Semester Practical Examination (ESE):***Distribution of Marks in Practical Examination:****Total = 25 Marks** [Experiment = 15; Record = 5; Viva = 5]**Practicals:**

1. Surveying by Plane Table; Preparation of engineering geological maps; Engineering properties and identification of building stones. Identification of various models of landslide, tunnel and dam. Study of soil profiles.

Books Recommended:

- ☐ Valdiya, K.S., 1987. Environmental Geology – Indian Context. Tata McGraw Hill.
 - ☐ Rajendran S., 2007. Mineral Exploration : Recent Strategies.
 - ☐ Dobrin, M.B. & Savit, CH., 1988. Introduction to Geophysical Prospecting, McGraw-Hill.
 - ☐ Arogyaswamy, R.N.P., 1973. Courses in Mining Geology. Oxford and IBH Publ.
 - ☐ Parasins, D.S., 1997. Principles of applied geophysics. Chapman Hall.
 - ☐ Krynine D.P. and Judd W.R., 1957. Principles of Engineering Geology & Geotechnics. McGraw-Hill Book
 - ☐ Kesavulu, N.C., 2009. A text book of engineering geology. Macmillan P publishing India Ltd.
 - ☐ Crozier. M.J., 1989. Landslides: causes, consequences and environment. Academic Press.
 - ☐ Readman, J.H., 1979. Techniques in Mineral exploration. Applied Science Publishres.
 - ☐ Bell, F.G., 1983. Fundamentals of Engineering Geology. Butterworth and Co.
-

COURSES OF STUDY FOR **SKILL ENHANCEMENT COURSE 'B. Sc. General'**
PROGRAMME IN **"GEOLOGY"**

SEMESTER III**SKILL ENHANCEMENT COURSE****1 Paper****Total 100 x 1 = 100 Marks****I. SKILL ENHANCEMENT COURSE - SEC 1:**

(Credits: Theory-02)

Marks : 100 (ESE: 3Hrs) =100**Pass Marks Th ESE = 40**

*Instruction to Question Setter for
End Semester Examination (ESE):*

*There will be **objective type test** consisting of hundred questions of 1 mark each. Students are required to mark their answer on **OMR Sheet** provided by the University.*

ELEMENTARY COMPUTER APPLICATION SOFTWARES:

A Common Syllabus Prescribed by Ranchi University

Theory: 30 Lectures**Objective of the Course**

The objective of the course is to generate qualified manpower in the area of Information Technology (IT) and Graphic designing which will enable such person to work seamlessly at any Offices, whether Govt. or Private or for future entrepreneurs in the field of IT.

A. INTRODUCTION TO COMPUTER SYSTEM**Basic Computer Concept**

Computer Appreciation - Characteristics of Computers, Input, Output, Storage units, CPU, Computer System. **(1 Lecture)**

Input and Output Devices

Input Devices - Keyboard, Mouse, joystick, Scanner, web cam,
Output Devices- Soft copy devices, monitors, projectors, speakers, Hard copy devices, Printers – Dot matrix, inkjet, laser, Plotters. **(4 lectures)**

Computer Memory and Processors

Memory hierarchy, Processor registers, Cache memory, Primary memory- RAM, ROM, Secondary storage devices, Magnetic tapes, Floppy disks, hard disks, Optical Drives- CD-ROM, DVD-ROM, CD-R, CD-RW, USB Flash drive, Mass storage devices: USB thumb drive. Managing disk Partitions, File System. Basic Processor Architecture, Processor speed, Types of processor.

(5 lectures)**Numbers Systems and Logic Gates**

Decimal number system, Binary number system, Octal number system, Hexadecimal number system, Inter-conversion between the number systems. Basic Logic gates-AND, OR, NOT, Universal logic gates- NAND, NOR **(3 lectures)**

Computer Software

Computer Software- Relationship between Hardware and Software, System Software, Application Software, Compiler, Names of some high level languages, Free domain software. **(2 Lectures)**

Internet & its uses

History of Internet, WWW and Web Browsers: Web Browsing software, Surfing the Internet, Chatting on Internet, Basic of electronic mail, Using Emails, Document handling, Network definition, Common terminologies: LAN, WAN, MAN, Node, Host, Workstation, Bandwidth, Network Components: Servers, Clients, Communication Media. Wireless network

(3 Lectures)

Operating system-Windows

Operating system and basics of Windows, The User Interface, Using Mouse and Moving Icons on the screen, The My Computer Icon, The Recycle Bin, Status Bar, Start and Menu & Menu-selection, Running an Application, Windows Explorer Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows, Windows Setting, Control Panels, Wall paper and Screen Savers, Setting the date and Sound, Concept of menu Using Help, Advanced Windows, Using right Button of the Mouse, Creating Short cuts, Basics of Window Setup, Notepad, Window Accessories

(2 Lectures)

B. MICROSOFT OFFICE 2007 AND LATEST VERSIONS**Word Processing**

Word processing concepts: saving, closing, Opening an existing document, Selecting text, Editing text, Finding and replacing text, printing documents, Creating and Printing Merged Documents, Character and Paragraph Formatting, Page Design and Layout. Editing and Checking. Correcting spellings. Handling Graphics, Creating Tables and Charts, Document Templates and Wizards, Mail merge and Macros.

(3 Lectures)

Microsoft Excel (Spreadsheet)

Spreadsheet Concepts, Creating, Saving and Editing a Workbook, Inserting, Deleting Work Sheets, entering data in a cell / formula Copying and Moving from selected cells, handling operators in Formulae, Functions: Mathematical, Logical, statistical, text, financial, Date and Time functions, Using Function Wizard. Formatting a Worksheet: Formatting Cells changing data alignment, changing date, number, character or currency format, changing font, adding borders and colors, Printing worksheets, Charts and Graphs – Creating, Previewing, Modifying Charts. Integrating word processor, spread sheets, web pages. Pivot table, goal seek, Data filter and scenario manager

(4 Lectures)

Microsoft Power Point (Presentation Package)

Creating, Opening and Saving Presentations, Creating the Look of Your Presentation, Working in Different Views, Working with Slides, Adding and Formatting Text, Formatting Paragraphs, Drawing and Working with Objects, Adding Clip Art and other pictures, Designing Slide Shows, Running and Controlling a Slide Show, Printing Presentations. Creating photo album, Rehearse timing and record narration. Master slides.

(3 Lectures)

Reference Books

- Nishit Mathur, Fundamentals of Computer , Aph publishing corporation(2010)
 - Misty E. Vermaat, Microsoft word 2013 1st Edition (2013).
 - Satish Jain, M.Geeta, MS- Office 2010 Training Guide, BPB publication (2010)
 - Joan Preppernau, Microsoft PowerPoint 2016 step by step, Microsoft press(2015)
 - Douglas E Corner, The Internet Book 4th Edition, prentice –Hall(2009)
 - Faithe wempen, word 2016 in depth 1st edition, que publishing(2015)
 - Steven welkler, Office 2016 for beginners, Create Space Independent publishing Plateform (2016)
-

SKILL ENHANCEMENT LAB- SEC 1 LAB**A. MS-WORD LAB ASSIGNMENT**

1. Write down the following Paragraph OR any one provided by your teacher;

Without a doubt, the Internet is one of the most important inventions of modern times. The Internet is a global interconnected computer networks which allow each connected computer to share and exchange information with each other. The origins of the Internet can be traced to the creation of Advanced Research Projects Agency Network (ARPANET) as a network of computers under the auspices of the U.S. Department of Defense in 1969.

Apply following effects on The paragraph:

- i. Paragraph **font-size** and **font-type** must be 12 Verdana.
- ii. Paragraph **alignment** must be justified and double line spacing.
- iii. **Highlight** the “(ARPANET)” with green color.
- iv. Make the “Internet” keywords **Bold and Italic**.
- v. Insert any “**WordArt**” and a **symbol** to your document.
- vi. Insert a **clipart** to your document.
- vii. Add following lines to your document:
Internet, Intranet, Extranet, URL, WWW, Networking, Protocols, HTTP, TCP/IP

2. Create a Table of following fields:

Name, Surname, Age, Gender, Job and apply the following effects

- i. Insert 10 records
- ii. Font size should be 12
- iii. Title size should be 14
- iv. Font type should be Times new Roman
- v. Title color should be blue
- vi. Text color should be black
- vii. Table border should be 2

3. Write a letter on ‘Road Safety’ and send to ‘Multiple Recipients’ using mail merge.

4. Type the paragraph given below:

Today, the Internet is a public, cooperative and self-sustaining facility accessible to hundreds of millions of people worldwide. Physically, the Internet uses a portion of the total resources of the currently existing public telecommunication networks. Technically, what distinguishes the Internet is its use of a set of protocols called TCP/IP (for Transmission Control Protocol/Internet Protocol). Two recent adaptations of Internet technology, the intranet and the extranet, also make use of the TCP/IP protocol. Today, the Internet is a public, cooperative and self-sustaining facility accessible to hundreds of millions of people worldwide. Physically, the Internet uses a portion of the total resources of the currently existing public telecommunication networks. Technically, what distinguishes the Internet is its use of a set of protocols called TCP/IP (for Transmission Control Protocol/ Internet Protocol). Two recent adaptations of Internet technology, the intranet and the extranet, also make use of the TCP/IP protocol.

Apply the following:

- i. Change Internet into Internets at a time
- ii. Highlight TCP/IP in red color
- iii. Replace protocol into protocols
- iv. Find the word "Public"

B. MICROSOFT EXCEL LAB ASSIGNMENT

Basic Formatting and Spreadsheet Manipulation

1. Add rows and columns to an existing spreadsheet
2. Reformat data (center, comma and currency styles, bold, text color)
3. Work with a simple formula (product) and function (sum)

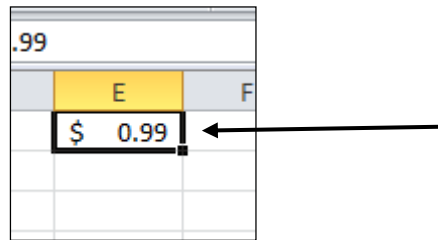
Assignment

1. Create a workbook as shown below.
2. To enter new rows or columns, simply click on the row or column header to select the whole row or column. Then right click with the mouse and choose insert.
3. Add the new row for S Spade with the data that's shown below (between the original rows 7 and 8).
4. Add a column for gender and the data as shown below (between the original columns A and B). Enter the appropriate gender for yourself in the last row.

| A | B | C | D |
|----------|-------------|-------------|-----------------|
| Name | Male/Female | Genre | Number of Songs |
| J Smith | F | Blues | 50 |
| B Doe | M | Country | 110 |
| S Spade | F | Country | 200 |
| F Zappa | M | Blues | 1400 |
| F Zappa | M | Alternative | 2300 |
| J Smith | F | Alternative | 150 |
| S Spade | F | Blues | 1000 |
| B Doe | M | Blues | 75 |
| yourname | M | Blues | 800 |

5. Center the data in columns B and C. Do this by selecting the whole column and click the center icon on the ribbon.
6. Bold the data in row 1, the column headings (ensure that the data all remains visible within the column boundaries).
7. Change the font color for row 1 to Blue.
8. Change the format of the data in column D to comma style (no decimal places showing). There is an icon on the home tab that sets it to comma style easily.
9. Add two new column labels to the right of the current columns; **Unit Price** and **Total Cost**. (They will be in columns E and F.) These two columns of data should be currency type so that the dollar sign is shown. There is an icon to quickly format the selected column as currency type.
10. All tunes are \$.99, so enter that value for all rows in Column E. You can copy quickly by using the **Auto Fill** handle and drag that amount down. When you over your mouse over the tiny square in

the bottom right hand corner of the active cell, your mouse shape will become a skinny plus sign, and you can click and drag that cell to make a copy.



11. Calculate Total Cost (column F) as *column D times Column E*. You will type in a formula like this into cell F2: **=D2*E2** (Be sure to begin the formula with an equal sign)
12. Use the AutoFill (skinny plus sign) again to copy the formula down column F; down to F10. Double check the picture below to make sure yours has the correct values
13. Add a border to all of the cells (A1-f10) using the Borders tool in the Fonts group on the Home Tab.
14. Change the page layout to landscape. Do this by clicking the Page Layout tab on the ribbon and then to Orientation to Landscape.
15. Save the file.
16. Click in cell F11 and Use the sum function or the shortcut icon that looks like Σ to get the total of the Total Cost column.
17. Ensure that the data is all visible within the column boundaries. Make the columns wider if needed.
18. Save the workbook. Your final spreadsheet should look like the following when printed.

| Name | Male/Female | Genre | Number of Songs | Unit Price | Total Cost |
|----------|-------------|-------------|-----------------|------------|-------------|
| J Smith | F | Blues | 50 | \$ 0.99 | \$ 49.50 |
| B Doe | M | Country | 110 | \$ 0.99 | \$ 108.90 |
| S Spade | F | Country | 200 | \$ 0.99 | \$ 198.00 |
| F Zappa | M | Blues | 1,400 | \$ 0.99 | \$ 1,386.00 |
| F Zappa | M | Alternative | 2,300 | \$ 0.99 | \$ 2,277.00 |
| S Spade | F | Blues | 1,000 | \$ 0.99 | \$ 990.00 |
| J Smith | F | Alternative | 150 | \$ 0.99 | \$ 148.50 |
| B Doe | M | Blues | 75 | \$ 0.99 | \$ 74.25 |
| yourname | M | Blues | 800 | \$ 0.99 | \$ 792.00 |

\$ 6,024.15

Create a sample table given below in Excel

- Using formula find Total
- Find the maximum value using MAX function from the **Units** column
- Find minimum value from **Total** column

| Order Date | Region | Rep | Item | Units | Unit Cost | Total |
|------------|---------|----------|---------|-------|-----------|----------|
| 1/6/2016 | East | Jones | Pencil | 95 | 1.99 | 189.05 |
| 1/23/2016 | Central | Kivell | Binder | 50 | 19.99 | 999.50 |
| 2/9/2016 | Central | Jardine | Pencil | 36 | 4.99 | 179.64 |
| 2/26/2016 | Central | Gill | Pen | 27 | 19.99 | 539.73 |
| 3/15/2016 | West | Sorvino | Pencil | 56 | 2.99 | 167.44 |
| 4/1/2016 | East | Jones | Binder | 60 | 4.99 | 299.40 |
| 4/18/2016 | Central | Andrews | Pencil | 75 | 1.99 | 149.25 |
| 5/5/2016 | Central | Jardine | Pencil | 90 | 4.99 | 449.10 |
| 5/22/2016 | West | Thompson | Pencil | 32 | 1.99 | 63.68 |
| 6/8/2016 | East | Jones | Binder | 60 | 8.99 | 539.40 |
| 6/25/2016 | Central | Morgan | Pencil | 90 | 4.99 | 449.10 |
| 7/12/2016 | East | Howard | Binder | 29 | 1.99 | 57.71 |
| 7/29/2016 | East | Parent | Binder | 81 | 19.99 | 1,619.19 |
| 8/15/2016 | East | Jones | Pencil | 35 | 4.99 | 174.65 |
| 9/1/2016 | Central | Smith | Desk | 2 | 125.00 | 250.00 |
| 9/18/2016 | East | Jones | Pen Set | 16 | 15.99 | 255.84 |
| 10/5/2016 | Central | Morgan | Binder | 28 | 8.99 | 251.72 |
| 10/22/2016 | East | Jones | Pen | 64 | 8.99 | 575.36 |
| 11/8/2016 | East | Parent | Pen | 15 | 19.99 | 299.85 |
| 11/25/2016 | Central | Kivell | Pen Set | 96 | 4.99 | 479.04 |
| 12/12/2016 | Central | Smith | Pencil | 67 | 1.29 | 86.43 |
| 12/29/2016 | East | Parent | Pen Set | 74 | 15.99 | 1,183.26 |

C. MS-POWERPOINT LAB ASSIGNMENT

Activity 1 : Using Text & Background/Themes

- i. Create one new slide and insert any text.
- ii. To make your slide more attractive, use the themes or background.
- iii. Make sure it apply for every slide not only one slide.

Activity 2 : Apply Custom Animation On Text

- i. Use the custom animation to add effects on your text. Set the text move after you click the mouse.
- ii. If you have more than one text, add effects for each of text.

Activity 3 : Insert Image & WordArt

- i. Insert one new blank slide.
- ii. Choose one pictures or clip art from any source and insert in your new slide.
- iii. Using the WordArt, make a note or title on your picture.
- iv. Use the custom animation again to add effects on your picture and WordArt.

Activity 4 : Insert Text Box

- i. Insert one new blank slide.
- ii. Use the text box to insert one paragraph of text and adjust your text.

Activity 5 : Insert Smart Art

- i. Insert one new blank slide.
- ii. Insert the Smart Art and put your text on the Smart Art.

Activity 6 : Insert Audio

- i. Back to your first slide and insert one audio on that slide. The audio must play automatically when you show your slide.
- ii. Make sure the speaker also not appear when you show your slide. (the icon).
- iii. The audio must play when you show alls your slide, not only one slide.

Activity 7 : inserting Video

- i. Insert one new slide and insert one short video

Activity 8 : Save File

- i. Save your file

Activity 9 : Create Photo Album & Hyperlink

- i. Insert one new slide and put a text ex: "My Photo Album"
- ii. Create one photo album and adjust your text and your photos
- iii. Save your photo album with a new file
- iv. Make a hyperlink to your photo using the text "My Photo Album"

Reference Books:

- ☐ Faithe wempen, word 2016 in depth 1st edition, que publishing(2015)
 - ☐ steven welkler, Office 2016 for bignners, Create Space Independent publishing plateform(2016)
 - ☐ Elaine Marmel, office 2016 simplified, 1st Edition, John wiley and sons Inc(2016)
 - ☐ Patrice-Anne Rutledge, Easy office 2016 1st edition, Que publishing(2016)
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SEMESTER IV

SKILL ENHANCEMENT COURSE

1 Paper

Total 100 x 1 = 100 Marks

II. SKILL ENHANCEMENT COURSE- SEC 2:

(Credits: Theory-02)

Marks : 100 (ESE 3Hrs) =100

Pass Marks Th ESE = 40

*Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **two** group of questions. **Group A is compulsory** and will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of 20 marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

ENVIRONMENTAL GEOLOGY**30 Lectures****Geomorphology and Geotectonics**

Unit-I: Basic principles of Geomorphology, geomorphological cycles, weathering and erosion; Geomorphic mapping- tools and techniques.

Unit-II: Epigene/exogenic processes: degradation and aggradation. Hypogene/endogenic processes; Diastrophism and volcanism, Extraterrestrial processes; Geological work of wind, glacier, river, underground water and ocean.

Unit-III: Earth as a dynamic system. Elementary idea of continental drift, sea-floor spreading and mid-oceanic ridges. Paleomagnetism and its application.

Unit-IV: Plate Tectonics: the concept, plate margins, orogeny, deep sea trenches, island arcs and volcanic arcs.

Books Recommended:

- ☐ Allen, P., 1997. Earth Surface Processes. Blackwell
 - ☐ Bloom, A.L., 1998. Geomorphology: A systematic Analysis of Late Cenozoic Landforms (3rd Edition). Pearson Education, Inc.
 - ☐ Keary, P. and Vine, F.J., 1997. Global Tectonics. Blackwell and crustal evolution. Butterworth-Heinemann.
 - ☐ Kale, V.S. and Gupta, A., 2001. Introduction to Geomorphology. Orient Longman Ltd.
 - ☐ Moores, E and Twiss. R.J., 1995. Tectonics. Freeman.
 - ☐ Patwardhan, A. M., 1999. The Dynamic Earth System. Prentice Hall.
 - ☐ Summerfield, M.A., 2000. Geomorphology and Global tectonic. Springer Verlag.
 - ☐ Valdia, K.S., 1988. Dynamic Himalaya. Universities Press, Hyderabad.
 - ☐ WD Thornbury, 2002. Principles of Geomorphology. CBS Publ. New Delhi.
-

SEMESTER V

SKILL ENHANCEMENT COURSE

1 Paper

Total 100 x 1 = 100 Marks

III. SKILL ENHANCEMENT COURSE- SEC 3:

(Credits: Theory-02)

Marks : 100 (ESE 3Hrs) =100

Pass Marks Th ESE = 40

*Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **two** group of questions. **Group A is compulsory** and will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of 20 marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

GEOCHEMISTRY**30 Lectures**

Unit-I: Earth and its spheres: atmosphere, hydrosphere, lithosphere, biosphere and Man; Earth Material.

Unit-II: Energy budget: Solar radiation; Global environments: coastal, riverine, desertic, tropical, cold, polar; Concept of global warming and climate change.

Unit-III: Geological hazards: Earthquakes, volcanism, landslides, avalanches, floods, droughts; Hazard mitigation.

Unit IV: Resource Management: Energy resources (Conventional and non-conventional), watershed management, landuse planning, management of water resources, land reclamation.

Books Recommended:

- ☐ Verma, V.K., 1986. Geomorphology Earth surface processes and form. McGraw Hill.
 - ☐ Chorley, R. J., 1984. Geomorphology. Methuen.
 - ☐ Selby, M.J., 1996. Earths Changing Surface. Oxford University Press UK.
 - ☐ Thornbury W. D., 1997. Principles of Geomorphology Wiley Eastern Ltd., New Delhi.
 - ☐ Valdiya, K. S., 1987. Environmental Geology - Indian Context. Tata McGraw Hill New Delhi.
 - ☐ Keller, E. A., 2000. Environmental Geology. Shales E. Merrill Publishing Co., Columbus, Ohio.
 - ☐ Montgomery, C., 1984. Environmental Geology. John Wiley and Sons, London.
 - ☐ Bird, Eric, 2000. Coastal Geomorphology: An Introduction. John Wiley & Sons, Ltd. Singapore.
 - ☐ Liu, B.C., 1981. Earthquake Risk and Damage, Westview.
-

SEMESTER VI

SKILL ENHANCEMENT COURSE

1 Paper

Total 100 x 1 = 100 Marks

IV. SKILL ENHANCEMENT COURSE- SEC 4:

(Credits: Theory-02)

Marks : 100 (ESE 3Hrs) =100

Pass Marks Th ESE = 40

*Instruction to Question Setter for**End Semester Examination (ESE):*

There will be **two** group of questions. **Group A is compulsory** and will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of 20 marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

PHOTOGEOLOGY & REMOTE SENSING**30 Lectures**

Unit-I: Introduction to geochemistry: basic knowledge about crystal chemistry. Types of chemical bonds, coordination number; Colloids in geological systems, ion exchanges and geological evidence for earlier colloids; Elementary idea of Periodic Table.

Unit-II: Cosmic abundance of elements; Composition of the planets and meteorites; Geochemical evolution of the earth and geochemical cycles;

Unit-III: Gold Schmidt's geochemical classification of elements; Distribution of major, minor and trace elements in igneous, metamorphic and sedimentary rocks.

Unit-IV: Elements of geochemical thermodynamics; Isomorphism and polymorphism; Isotope geochemistry.

Books Recommended:

- ☐ Hoefs, J., 1980. Stable Isotope Geochemistry. Springer-Verlag.
 - ☐ Klein, C. and Hurlbut, C.S., 1993. Manual of Mineralogy. John Wiley and Sons, New York.
 - ☐ Krauskopf, K.B., 1967. Introduction to Geochemistry. McGraw Hill.
 - ☐ Mason, B. and Moore, C.B., 1991. Introduction to Geochemistry. Wiley Eastern.
 - ☐ Rollinson, H.R., 1993. Using geochemical data: Evaluation, Presentation, and Interpretation. Longman
-

**SAMPLE CALCULATION FOR SGPA & CGPA FOR UNDERGRADUATE 'B.Sc./B.A./B.Com
Honours & General' PROGRAMME**

Distribution of Credits Semester wise for Undergraduate Honours Courses

Table B-1: UG (B.A./ B.Sc./B.Com. Hons. Programme)

Semester wise distribution of 140 Credits

| | C.C | AECC | GE | SEC | DSE | Total credits |
|--------------|------------|-------------|-----------|------------|------------|----------------------|
| Semester I | 12 | 02 | 06 | | | 20 |
| Semester II | 12 | 02 | 06 | | | 20 |
| Semester III | 18 | | 06 | 02 | | 26 |
| Semester IV | 18 | | 06 | 02 | | 26 |
| Semester V | 12 | | | | 12 | 24 |
| Semester VI | 12 | | | | 12 | 24 |
| | 84 | 04 | 24 | 04 | 24 | 140 |

CC=Core Course; AECC=Ability Enhancement Compulsory Course; GE=Generic Elective; SEC=Skill Enhancement Course; DSE=Discipline Specific Elective

Table B-2: UG (B.A./ B.Sc./B.Com. Programme)

Semester wise distribution of 120 Credits

| | C.C | AECC | GE | SEC | DSE | Total credits |
|--------------|------------|-------------|-----------|------------|------------|----------------------|
| Semester I | 18 | 02 | | | | 20 |
| Semester II | 18 | 02 | | | | 20 |
| Semester III | 18 | | | 02 | | 20 |
| Semester IV | 18 | | | 02 | | 20 |
| Semester V | | | | 02 | 18 | 20 |
| Semester VI | | | | 02 | 18 | 20 |
| | 72 | 04 | | 08 | 36 | 120 |

CC=Core Course; AECC=Ability Enhancement Compulsory Course; GE=Generic Elective; SEC=Skill Enhancement Course; DSE=Discipline Specific Elective

Table B-3: Sample calculation for SGPA for B.Sc./B.A./B.Com Honours Programme

| Course | Credit | Grade Letter | Grade Point | Credit Point (Credit X Grade) | SGPA (Credit Point/Credit) |
|---------------------|------------|--------------|-------------|----------------------------------|----------------------------------|
| Semester I | | | | | |
| C-1 | 06 | A | 8 | 48 | |
| C-2 | 06 | B+ | 7 | 42 | |
| AECC-1 | 02 | B | 6 | 12 | |
| GE-1 | 06 | B | 6 | 36 | |
| Total | 20 | | | 138 | 6.9 (138/20) |
| Semester II | | | | | |
| C-3 | 06 | B | 6 | 36 | |
| C-4 | 06 | C | 5 | 30 | |
| AECC-2 | 02 | B+ | 7 | 14 | |
| GE-2 | 06 | A+ | 9 | 54 | |
| Total | 20 | | | 134 | 6.7 (134/20) |
| Semester III | | | | | |
| C-5 | 06 | A+ | 9 | 54 | |
| C-6 | 06 | O | 10 | 60 | |
| C-7 | 06 | A | 8 | 48 | |
| SEC-1 | 02 | A | 8 | 16 | |
| GE-3 | 06 | O | 10 | 60 | |
| Total | 26 | | | 238 | 9.15 (238/26) |
| Semester IV | | | | | |
| C-8 | 06 | B | 6 | 36 | |
| C-9 | 06 | A+ | 9 | 54 | |
| C-10 | 06 | B | 6 | 36 | |
| SEC-2 | 02 | A+ | 9 | 18 | |
| GE-4 | 06 | A | 8 | 48 | |
| Total | 26 | | | 192 | 7.38 (192/26) |
| Semester V | | | | | |
| C-11 | 06 | B | 6 | 36 | |
| C-12 | 06 | B+ | 7 | 42 | |
| DSE-1 | 06 | O | 10 | 60 | |
| DSE-2 | 06 | A | 8 | 48 | |
| Total | 24 | | | 186 | 7.75 (186/24) |
| Semester VI | | | | | |
| C-13 | 06 | A+ | 9 | 54 | |
| C-14 | 06 | A | 8 | 48 | |
| DSE-3 | 06 | B+ | 7 | 42 | |
| DSE-4 | 06 | A | 8 | 48 | |
| Total | 24 | | | 192 | 8.0 (192/24) |
| CGPA | | | | | |
| Grand Total | 140 | | | 1080 | 7.71 (1080/140) |

Table B-4: Sample calculation for CGPA for B.Sc./B.A./B.Com Honours Programme

| Semester I | Semester II | Semester III | Semester IV | Semester V | Semester VI |
|------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|
| Credit:20; SGPA:6.9 | Credit:20; SGPA: 6.7 | Credit:26; SGPA: 9.15 | Credit:26; SGPA: 7.38 | Credit:24; SGPA: 7.75 | Credit:24; SGPA: 8.0 |

Thus CGPA= (20x6.9+20x6.7+26x9.15+26x7.38+24x7.75+24x8.0)/140=**7.71**

Table B-5: Sample calculation for SGPA for B.A./B.Sc./B.Com. Program

| Course | Credit | Grade Letter | Grade Point | Credit Point (Credit X Grade) | SGPA (Credit Point/Credit) |
|---------------------|------------|--------------|-------------|----------------------------------|-------------------------------|
| Semester I | | | | | |
| DSC - 1A | 06 | B | 6 | 36 | |
| DSC - 2A | 06 | B+ | 7 | 42 | |
| DSC - 3A | 06 | C | 5 | 30 | |
| AECC – 1 | 02 | B | 6 | 12 | |
| Total | 20 | | | 120 | 6.0 (120/20) |
| Semester II | | | | | |
| DSC - 1B | 06 | B | 6 | 36 | |
| DSC - 2B | 06 | B | 6 | 36 | |
| DSC - 3B | 06 | C | 5 | 30 | |
| AECC – 2 | 02 | A+ | 9 | 18 | |
| Total | 20 | | | 120 | 6.0 (120/20) |
| Semester III | | | | | |
| DSC - 1C | 06 | A | 8 | 48 | |
| DSC - 2C | 06 | A+ | 9 | 54 | |
| DSC - 3C | 06 | A | 8 | 48 | |
| SEC – 1 | 02 | A | 8 | 16 | |
| Total | 20 | | | 166 | 8.3 (166/20) |
| Semester IV | | | | | |
| DSC - 1D | 06 | C | 5 | 30 | |
| DSC - 2D | 06 | B | 6 | 36 | |
| DSC - 3D | 06 | B+ | 7 | 42 | |
| SEC - 2 | 02 | A+ | 9 | 18 | |
| Total | 20 | | | 126 | 6.3 (126/20) |
| Semester V | | | | | |
| DSE - 1A | 06 | B | 6 | 36 | |
| DSE - 2A | 06 | A+ | 9 | 54 | |
| DSE - 3A | 06 | A | 8 | 48 | |
| SEC – 3 | 02 | B | 6 | 12 | |
| Total | 20 | | | 150 | 7.5 (150/20) |
| Semester VI | | | | | |
| DSE - 1B | 06 | B+ | 7 | 42 | |
| DSE - 1B | 06 | B | 6 | 36 | |
| DSE - 1B | 06 | C | 5 | 30 | |
| SEC - 4 | 02 | C | 5 | 10 | |
| Total | 20 | | | 118 | 5.9 (118/20) |
| CGPA | | | | | |
| Grand Total | 120 | | | 800 | 6.67 (800/120) |

Table B- 6: Sample calculation for CGPA for B.A./B.Sc./B.Com. Program

| Semester I | Semester II | Semester III | Semester IV | Semester V | Semester VI |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Credit:20; SGPA: 6.0 | Credit:20; SGPA: 6.0 | Credit:20; SGPA: 8.3 | Credit:20; SGPA: 6.3 | Credit:20; SGPA: 7.5 | Credit:20; SGPA: 5.9 |

Thus CGPA= (20x6.0+20x6.0+20x8.3+20x6.3+20x7.5+20x5.9)/120=6.67

MARKS DISTRIBUTION FOR EXAMINATIONS AND FORMAT OF QUESTION PAPERS

Marks Distribution of Mid Semester Theory Examinations:**Table No. 15:** Marks distribution of Theory Examinations of Mid Semester

| Topic | Code | Full Marks | Pass Marks | Time | Group-A (Very short answer type Compulsory Questions) No. of Questions x Marks = F.M. | Group-B (Descriptive Questions with Choices) No. of Questions x Marks = F.M. | Total No. of Questions to Set | |
|----------|------|------------|------------|------|---|--|-------------------------------|---------|
| | | | | | | | Group A | Group B |
| Mid Sem* | T15 | 15 | 6 | 1 Hr | 5 x 1 = 5 | 2 (out of 3) x 5 = 10 | 5 | 3 |
| | T25 | 25 | 10 | 1 Hr | 5 x 1 = 5 | 4 (out of 6) x 5 = 20 | 5 | 6 |

Marks Distribution of End Semester Theory Examinations:**Table No. 16:** Marks distribution of Theory Examinations of End Semester

| Topic | Code | Full Marks | Pass Marks | Time | Group-A# (Very short answer type Compulsory Questions) No. of Questions x Marks = F.M. | Group-B (Descriptive Questions with Choices) No. of Questions x Marks = F.M. | Total No. of Questions to Set | |
|---------|-----------|------------|------------|-------|--|--|-------------------------------|---------|
| | | | | | | | Group A# | Group B |
| End Sem | T60 | 60 | 24 | 3 Hrs | Q.No.1 (10x1) + 1x5 = 15 | 3 (out of 5) x 15 = 45 | 2 | 5 |
| | T75 | 75 | 30 | 3 Hrs | Q.No.1 (10x1) + 1x5 = 15 | 4 (out of 6) x 15 = 60 | 2 | 6 |
| | T100 | 100 | 40 | 3 Hrs | Q.No.1 (10x1) + 2x5 = 20 | 4 (out of 6) x 20 = 80 | 3 | 6 |
| | T50 + T50 | 50X2=100 | 20 | 3 Hrs | 2 x 5 = 10 | 2 (out of 3) x 20 = 40 | 2 | 3 |

Question No.1 in Group-A carries 10 very short answer type 1 Mark Questions.

Marks Distribution of Mid/End Semester Practical Examinations:**Table No. 17:** Marks distribution of Practical Examinations of End Semester

| Topic | Code | Full Marks | Pass Marks | Time | Distribution of Marks | | | Total No. of Questions to Set |
|---------|------|------------|------------|-------|-----------------------|--------|------|---|
| | | | | | Experiment | Record | Viva | |
| End Sem | P25 | 25 | 10 | 3 Hrs | 15 | 5 | 5 | |
| | P50 | 50 | 20 | 3 Hrs | 30 | 10 | 10 | Pr. with components of both papers |
| | P75 | 75 | 30 | 3 Hrs | 45 | 15 | 15 | Pr. with components of all three papers |
| | P100 | 100 | 40 | 3 Hrs | 60 | 20 | 20 | Pr. with components of all four papers |

Abbreviations : T= Theory Examination, P= Practical Examination.

Mid Sem* : There will be 15 Marks Theory Examination in Practical Subjects and 25 Marks Theory Examination in Non-Practical Subjects/ Papers. 25 Marks Theory Examination may include 10 Marks questions from Assignment/ Project/ Tutorial where ever applicable.

Note : There may be subdivisions in each question asked in Theory Examinations.

FORMAT OF QUESTION PAPER FOR MID SEM EXAMINATION
OF
SUBJECTS WITH PRACTICAL



Ranchi University, Ranchi

Mid Sem No.Exam Year**Subject/ Code****F.M.** =15**Time**=1Hr.**General Instructions:**

समान्य निर्देश :

- i. **Group A** carries very short answer type compulsory questions.
(खंड 'A' में अत्यंत लघु उत्तरीय अनिवार्य प्रश्न हैं।)
- ii. **Answer 2 out of 3** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के तीन में से किन्हीं दो विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- iii. Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- iv. Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- v. Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

- | | | |
|----|-------|---------|
| 1. | ..... | [5x1=5] |
| 2. | ..... |  |
| 3. | ..... |  |
| 4. | ..... |  |
| 5. | ..... |  |

Group B

- | | | |
|----|-------|-----|
| 6. | ..... | [5] |
| 7. | ..... | [5] |
| 8. | ..... | [5] |

Note: There may be subdivisions in each question asked in Theory Examination.

FORMAT OF QUESTION PAPER FOR MID SEM EXAMINATION
OF
SUBJECTS WITHOUT PRACTICAL



Ranchi University, Ranchi

Mid Sem No.Exam Year**Subject/ Code****F.M.** =25**Time**=1 Hr.**General Instructions:**

समान्य निर्देश :

- i. **Group A** carries very short answer type compulsory questions.
(खंड 'A' में अत्यंत लघु उत्तरीय अनिवार्य प्रश्न हैं।)
- ii. **Answer 4 out of 6** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के छः में से किन्हीं चार विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- iii. Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- iv. Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- v. Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

- | | | |
|----|-------|---------|
| 1. | ..... | [5x1=5] |
| 2. | ..... |  |
| 3. | ..... |  |
| 4. | ..... |  |
| 5. | ..... |  |

Group B

- | | | |
|-----|-------|-----|
| 6. | ..... | [5] |
| 7. | ..... | [5] |
| 8. | ..... | [5] |
| 9. | ..... | [5] |
| 10. | ..... | [5] |
| 11. | ..... | [5] |

Note: There may be subdivisions in each question asked in Theory Examination.

FORMAT OF QUESTION PAPER FOR END SEM EXAMINATION
OF
AECC NH + MB COMMUNICATION



Ranchi University, Ranchi

End Sem No.Exam Year**Subject/ Code****F.M.** =50**P.M.** =20**Time**=1.5Hrs.**General Instructions:**

- i. **Group A** carries short answer type **compulsory** questions.
(खंड 'A' में लघु उत्तरीय अनिवार्य प्रश्न हैं।)
- ii. **Answer 2 out of 3** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के तीन में से किन्हीं दो विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- iii. Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- iv. Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- v. Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

- | | | |
|----|-------|-----|
| 1. | | [5] |
| 2. | | [5] |

Group B

- | | | |
|----|-------|------|
| 3. | ..... | [20] |
| 4. | ..... | [20] |
| 5. | ..... | [20] |

Note: There may be subdivisions in each question asked in Theory Examination.

FORMAT OF QUESTION PAPER FOR END SEM EXAMINATION
OF
SUBJECTS WITH PRACTICAL



Ranchi University, Ranchi

End Sem No.Exam Year**Subject/ Code****F.M.** =60**P.M.**=30 (Including Mid Sem)**Time**=3Hrs.**General Instructions:**

- i. **Group A** carries very short answer type **compulsory** questions.
- ii. **Answer 3 out of 5** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के पाँच में से किन्हीं तीन विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- iii. Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- iv. Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- v. Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

- | | | |
|-------|-------|-----------|
| 1. | | [10x1=10] |
| i. | ..... | [10x1=10] |
| ii. | ..... |  |
| iii. | ..... |  |
| iv. | ..... |  |
| v. | ..... |  |
| vi. | ..... |  |
| vii. | ..... |  |
| viii. | ..... |  |
| ix. | ..... |  |
| x. | ..... |  |
| 2. | ..... | [5] |

Group B

- | | | |
|----|-------|------|
| 3. | ..... | [15] |
| 4. | ..... | [15] |
| 5. | ..... | [15] |
| 6. | ..... | [15] |
| 7. | ..... | [15] |

Note: There may be subdivisions in each question asked in Theory Examination.

FORMAT OF QUESTION PAPER FOR END SEM EXAMINATION
OF
SUBJECTS WITHOUT PRACTICAL



Ranchi University, Ranchi

End Sem No.Exam Year**Subject/ Code****F.M.** =75**P.M.** =40 (Including Mid Sem)**Time**=3Hrs.**General Instructions:**

- i. **Group A** carries very short answer type **compulsory** questions.
- ii. **Answer 4 out of 6** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के छः में से किन्हीं चार विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- iii. Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- iv. Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- v. Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

1. [10x1=10]
 - i.
 - ii.
 - iii.
 - iv.
 - v.
 - vi.
 - vii.
 - viii.
 - ix.
 - x.
2. [5]

Group B

3. [15]
4. [15]
5. [15]
6. [15]
7. [15]
8. [15]

Note: There may be subdivisions in each question asked in Theory Examination.

FORMAT OF QUESTION PAPER FOR END SEM EXAMINATION

OF

GE, SEC, GENERAL & AECC HINDI/ ENGLISH COMMUNICATION



Ranchi University, Ranchi

End Sem No.Exam Year

Subject/ Code

F.M. =100**P.M.** =40**Time**=3Hrs.

General Instructions:

- Group A** carries very short answer type **compulsory** questions.
- Answer 4 out of 6** subjective/ descriptive questions given in **Group B**.
(खंड 'B' के छः में से किन्हीं चार विषयनिष्ठ/ वर्णनात्मक प्रश्नों के उत्तर दें।)
- Answer in your own words as far as practicable.
(यथासंभव अपने शब्दों में उत्तर दें।)
- Answer all sub parts of a question at one place.
(एक प्रश्न के सभी भागों के उत्तर एक साथ लिखें।)
- Numbers in right indicate full marks of the question.
(पूर्णांक दायीं ओर लिखे गये हैं।)

Group A

- [10x1=10]
 -
 -
 -
 -
 -
 -
 -
 -
 -
 -
- [5]
- [5]

Group B

- [20]
- [20]
- [20]
- [20]
- [20]
- [20]

Note: There may be subdivisions in each question asked in Theory Examination.