

**REVISED CURRICULUM AND CREDIT
FRAMEWORK FOR THE FOUR-YEAR
UNDERGRADUATE PROGRAMMES (FYUGP)**

**As per Provision of NEP-2020
Implemented from the Academic Year 2022-23 onwards**

**DEPARTMENT OF ECONOMICS
JAMSHEDPUR WOMEN'S UNIVERSITY, JAMSHEDPUR**

REGULATION FOR CURRICULUM AND CREDIT FRAMEWORK FOR FOUR YEAR UNDERGRADUATE PROGRAMME FOR STATE UNIVERSITIES OF JHARKHAND

1. PREAMBLE

India has a rich tradition of the multidisciplinary approach since ages, as exemplified by the ancient institutions such as Nalanda and Takshashila. These higher learning centres of ancient India were known for teaching every branch of knowledge, such as singing, painting, chemistry, mathematics; vocational fields such as carpentry, clothes-making; professional fields such as medicine and engineering; and soft skills such as communication discussion and debate. Over the centuries the broader learning opportunities got narrowed, and gradually, in recent years the focus moved to specialization in particular subjects resulting in the growth of single-stream institutions. To reboot the legacy of multidisciplinary education, the National Education Policy 2020 (NEP 2020), suggests several policy directions for offering multidisciplinary education.

The University Grants Commission (UGC) has initiated several measures to bring equity, efficiency and excellence to the Higher Education System of the country. The important measures taken to enhance academic standards and quality in higher education include innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems, besides governance and other matters. The UGC has formulated various regulations and guidelines from time to time to improve the higher education system and maintain minimum standards and quality across the Higher Educational Institutions (HEIs) in India.

The academic reforms recommended by the UGC in the recent past have led to the overall improvement in the higher education system. However, due to a lot of diversity in the system of higher education, there are multiple approaches followed by universities towards examination, evaluation and grading systems. Presently the performance of the students is reported using the conventional system of marks secured in the examinations or grades or both. The conversion from marks to letter grades and the letter grades used vary widely across the HEIs in the country. This creates difficulty for the academia and the employers to understand and infer the performance of the students graduating from different universities and colleges based on grades.

The grading system is considered to be better than the conventional marks system and hence it has been followed by the top institutions in India and abroad. So, it is desirable to introduce a uniform grading system. This will facilitate student mobility across institutions within and countries and also enable potential employers to assess the performance of students. To bring in the desired uniformity, in the grading system and method for computing the cumulative grade point average (CGPA) based on the performance of students in the examinations, the UGC has formulated guidelines and is being incorporated by the State Universities of Jharkhand with modifications, considerations of the need and resources of the state.

2. INTRODUCTION

The Choice Based Credit System (CBCS) implemented for the undergraduate programmes in the Jharkhand State needs to be revised for instilling innovation and flexibility in line with the National Education Policy (NEP) 2020 and Curriculum and Credit Framework for Undergraduate Programmes published by Secretary, University Grants Commission, Bahadur Shah Zafar Marg, New, Delhi.

The HEIs of the state shall move to a criterion-based grading system for assessing student's achievement based on the learning goals for each programme. The state envisages the setting up of facilitative norms for multidisciplinary and holistic education across disciplines providing broad-based exposure to the students and sensitising them to the fundamentally interconnected nature of all human knowledge and enquiry. A new framework is required with cutting edge curriculum, creative combination of subjects, flexible options and multiple entry and exit options during the undergraduate course.

The present student-centric Curriculum and Credit Framework for the Four-Year Undergraduate Programme (FYUGP) incorporating a flexible choice-based credit system, multidisciplinary approach, and multiple entry and exit options will facilitate students to pursue their career path by choosing the subject/field of their interest has been prepared as per the UGC curricular and credit framework for the State Universities of Jharkhand implemented from Academic Year 2022-23 onwards.

3. TRANSFORMATIVE INITIATIVES FOR (FYUGP) FOUR-YEAR UNDERGRADUATE PROGRAMME

The curriculum framework of Four Year Under Graduate Programme (FYUGP) envisages several transformative initiatives in higher education in Jharkhand, in line with the revised UGC Guideline on the adoption of the Choice Based Credit System (CBCS) to implement NEP-2020. These include:

1. Introducing holistic and multidisciplinary undergraduate education across the Natural and Physical Sciences, Mathematics, Statistics and Computer Applications, Library Information and Media Sciences, Commerce and Management, Humanities and Social Sciences; would help develop all capacities of human beings- intellectual, aesthetic, social, physical, emotional, ethical and moral - in an integrated manner; soft skills, such as complex problem solving, critical thinking, creative thinking, communication skills; and rigorous specialization in a chosen field(s) of learning.
2. Adoption of flexible curricular structures to enable creative combinations of disciplinary areas for study in multidisciplinary contexts that would also allow flexibility in course options that would be on offer to students, in addition to rigorous specialization in a subject or subjects.

3. Undergraduate degree programmes of either 3 or 4-year duration, with multiple entries and exit points and re-entry options within this period, with appropriate certifications such as:
 - i. a Certificate after completing 1 year (2 semesters) of study in the chosen fields of study,
 - ii. a Diploma after 2 years (4 semesters) of study,
 - iii. a Bachelor's Degree after a 3-year (6 semesters) programme of study,
 - iv. a Bachelor's Degree (Honours) after a 4-year (8 semesters) programme of study,
 - v. a Bachelor's Degree (Honours with Research) after a 4-year (8 semesters) programme of study to the students undertaking 12 credit Research component in fourth year of FYUGP.
4. The 4-year Bachelor's degree programme is considered a preferred option since it would provide the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.
5. Inclusion of credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based education.
6. Environment education to include areas such as climate change, pollution, waste management, sanitation, conservation of biological diversity, management of biological resources and biodiversity, forest and wildlife conservation, and sustainable development and living.
7. Value-based education to include the development of humanistic, ethical, Constitutional, and universal human values of truth, righteous conduct, peace, love, nonviolence, scientific temper, citizenship values, and life skills.
8. Lessons in service and participation in community service programmes to be an integral part of holistic education.
9. Global Citizenship Education and education for sustainable development to form an integral part of the curriculum to empower learners to become aware of and understand global and sustainable development issues and to become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies.
10. Students to be provided with opportunities for internships with local industry, businesses, artists, crafts persons, etc., as well as research internships with faculty and researchers at their own or other HEIs/research institutions, so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability.
11. Reorienting teaching programmes to ensure the development of capabilities across a range of disciplines including sciences, social sciences, arts, humanities, languages, as well as vocational subjects. This would involve offering programmes/courses of study relating to Languages, Literature, Music, Philosophy, Art, Dance, Theatre, Statistics, Pure and Applied

Jharkhand, NEP Regulations for FYUGP. 2022 onwards Sciences, Sports, etc., and other such subjects needed for a multidisciplinary and stimulating learning environment.

12. Preparing professionals in cutting-edge areas that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience, with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing the employability of the youth.

4. MAIN FEATURES OF THE NEW CURRICULUM FRAMEWORK

The new curriculum framework will have the following features:

- i. Flexibility to move from one discipline of study to another;
- ii. Opportunity for learners to choose the courses of their interest in all disciplines;
- iii. Facilitating multiple entry and exit options with UG certificate/ UG diploma/ or degree depending upon the number of credits secured;
- iv. Flexibility for learners to move from one institution to another to enable them to have multi and/or interdisciplinary learning;
- v. Flexibility to switch to alternative modes of learning (offline, ODL, and Online learning, and hybrid modes of learning).

Regulations for Academic Bank of Credits (ABC) and guidelines for Multiple Entry and Exit are already in place to facilitate the implementation of the proposed "Curriculum and Credit Framework for Undergraduate Programmes"

5. DEFINITIONS

- i. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- ii. **Semester:** The odd semester is scheduled from July to December and the even semester is from January to June. Each week has a minimum of 40 working hours spread over 6 days.
An academic year comprising 180 working days in the least is divided into two semesters, each semester having at least 90 working days. With six working days in a week, this would mean that each semester will have $90 / 6 = 15$ teaching/ working weeks. Each working week will have 40 hours of instructional time.
Each semester will include – Admission, course work, conduct of examination and declaration of results including semester break.
- iii. **Academic Calendar:** An Academic Calendar will be prepared by the university to maintain uniformity in the CBCS of the UG Honours Programmes, UG Programmes, semesters and

Jharkhand, NEP Regulations for FYUGP. 2022 onwards
courses in the college run under the university (Constituent /Affiliated). In order to undergo 8 weeks summer internship/apprenticeship during the summer camp, the Academic Calendar may be scheduled for academic activities as below:

Odd Semester: From first Monday of August to third Saturday of December

Even Semester: From first Monday of January to third Saturday of May

iv. **Summer term:** A summer term is for eight weeks, and summer term courses may be offered on a fast-track mode to enable students to complete arrears courses. The HEIs can decide on the kind of courses (offline, ODL, and Online learning, and hybrid modes of learning) to be offered in the summer term.

v. **Choice Based Credit System (CBCS):** CBCS provides choices for students to select from the prescribed Programme.

vi. **Programmes:**

An undergraduate programme leading to the Undergraduate Certificate/ Undergraduate Diploma/ Bachelor's Degree/ Bachelor's Degree Honours & Bachelor's Degree Honours with Research.

vii. **Courses:**

a) A course is a structured set of instructions that are imparted to a student based on a syllabus or a framework decided beforehand (and has the sanction of the different academic (Board of Studies, Faculty, Academic Council) and executive (Syndicate/ Senate) bodies of the University extended over a semester.

b) Each course is designed variously under instructions given as Lectures, Tutorials, and Practical (laboratory and field exercises). Usually, these components are referred to as *L*, *T*, and *P* components. The credits for each course determine the volume of the course content.

c) **Allowed Course Combinations:** The Board of Studies (BOS) may revise subject combinations from time to time.

The BOS may add or delete subjects in the combination of subjects. Each **UG Hons/Research Programme** shall be designed as **160 credits**, a full-time undergraduate degree programme delivered in **Eight (08) Semesters**.

viii. **Credit:** The term 'credit' refers to the weightage given to a course, usually in terms of the number of instructional hours per week assigned to it. The workload relating to a course is measured in terms of credit hours. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

a) One hour of teaching/ lecture or two hours of laboratory /practical work will be assigned per class/interaction.

One credit for Theory = 15 Hours of Teaching i.e., 15 Credit Hours

One credit for Practicum = 30 Hours of Practical work i.e., 30 Credit Hours

- b) Each course may have only a lecture component or a lecture and tutorial component or a lecture and practicum component or a lecture, tutorial, and practicum component, or only practicum component. For example, a three-credit lecture course in a semester means three one-hour lectures per week. In a semester of 15 weeks' duration, a three-credit lecture course is equivalent to 45 hours of teaching.
- c) For credit determination, instruction is divided into three major components:
 - Lectures (L)** – Classroom lectures of one-hour duration.
 - Tutorials (T)** – Special, elaborate instructions on specific topics of one-hour duration
 - Practical (P)** – Laboratory or field exercises in which the student has to do experiments or other practical work of two-hour duration.
- d) All courses needed not to carry the same weight. The course should define learning objectives and learning outcomes. A Course is designed to comprise lecture/ tutorials/ laboratory work/ fieldwork/ project work/ viva/ seminars/ assignments/ presentations etc. or a combination of some of these

6. AWARDING UG CERTIFICATE, UG DIPLOMA AND DEGREES

UG Certificate: Students who opt to exit after completion of the first year and have secured 40 credits will be awarded a UG certificate provided they complete one vocational course of 4 credits during the summer vacation of the first year or internship/ Apprenticeship in addition to 6 credits from skill-based courses earned during first and second semester. These students are allowed to re-enter the degree programme within three years and complete the degree programme within the stipulated maximum period of seven years.

UG Diploma: Students who opt to exit after completion of the second year and have secured 80 credits will be awarded the UG diploma provided they complete one vocational course of 4 credits or internship/ Apprenticeship/ skill based vocational courses offered during first year or second year summer term in addition to 9 credits from skill-based courses earned during first, second, and third semester. These students are allowed to re-enter within a period of three years and complete the degree programme within the maximum period of seven years.

3-year UG Degree: Students who wish to undergo a 3-year UG programme will be awarded UG Degree in the Major discipline after successful completion of three years, securing 120 credits and satisfying the minimum credit requirement.

4-year UG Degree (Honours): A four-year UG Honours degree in the major discipline will be awarded to those who complete a four-year degree programme with 160 credits and have satisfied the minimum credit requirements of each course & semester.

4-year UG Degree (Honours with Research): Students who secure 75% marks and above in the first six semesters and wish to undertake research at the undergraduate level can choose a research stream in the fourth year. They should do a research project or dissertation under the guidance of a faculty member of the University/College. The research project/dissertation will be in the major discipline. The students who secure 160 credits, including 12 credits from a research project/dissertation, are awarded UG Degree (Honours with Research).

Infrastructure Requirement: The Departments offering a 4-year UG Degree (Honours with Research) must have the required infrastructure such as the library, access to journals, computer lab and software, laboratory facilities to carry out experimental research work, and at least two permanent faculty members who are recognized as Ph.D. supervisors. The Departments already recognized for conducting the Ph.D. programme may conduct a 4-year UG Degree (Honours with Research) without obtaining any approval from the affiliating University.

UG Degree Programmes with Single Major: A student has to secure a minimum of 50% credits from the major discipline for the 3-year/4-year UG degree to be awarded a single major. For example, in a 3-year UG programme, if the total number of credits to be earned is 120, a student of Physics with a minimum of 60 credits will be awarded a B.Sc. in Physics with a single major. Similarly, in a 4-year UG programme, if the total number of credits to be earned is 160, a student of Physics with a minimum of 80 credits will be awarded a B.Sc. (Hons./Hon. With Research) in Physics in a 4-year UG programme with single major.

UG Degree Programmes with Double Major: A student has to secure a minimum of 40% credits from the second major discipline for the 3-year/4-year UG degree to be awarded a double major. For example, in a 3-year UG programme, if the total number of credits to be earned is 120, a student of Physics with a minimum of 48 credits will be awarded a B.Sc. in Physics with a double major. Similarly, in a 4-year UG programme, if the total number of credits to be earned is 160, a student of Physics with a minimum of 64 credits will be awarded a B.Sc. (Hons./Hon. with Research) in Physics in a 4-year UG programme with double major.

Interdisciplinary UG Programmes: The credits for core courses shall be distributed among the constituent disciplines/subjects so as to get core competence in the interdisciplinary programme. For example, a degree in Econometrics requires courses in economics, statistics, and mathematics. The total credits to core courses shall be distributed so that the student gets full competence in Econometrics upon completion of the programme. The degree for such students will be awarded as B.Sc. in Econometrics for a 3-year UG programme or B.Sc. (Honours) / B.Sc. (Honours with Research) in Econometrics for a 4-year UG programme.

Multidisciplinary UG Programmes: In the case of students pursuing a multidisciplinary programme of study, the credits to core courses will be distributed among the broad disciplines such as Life sciences, Physical Sciences, Mathematical and Computer Sciences, Data Analysis, Social Sciences, Humanities, etc., For example, a student who opts for a UG program in Life sciences will have the total credits to core courses distributed across Botany, Zoology and Human biology disciplines. The degree will be awarded as B.Sc. in Life Sciences for a 3-year programme and B.Sc. (Honours) in Life Sciences or B.Sc. (Honours with Research) for a 4-year programme without or with a research component respectively.

The statutory bodies of the Universities and Colleges such as the Board of Studies and Academic Council will decide on the list of courses under major category and credit distribution for double major, interdisciplinary and multidisciplinary programmes.

7. APPLICABILITY OF CBCS AND GRADING SYSTEM

- i. The Regulation herein specified applies to all full-time undergraduate Programmes under the Revised Choice Based Credit System in Four-Year Undergraduate Programme (FYUGP) by the State Universities of Jharkhand hereinafter referred to as the University.
- ii. The College imparting undergraduate teaching, hereinafter, shall be referred to as College.

8. UNDERGRADUATE PROGRAMME

- i. The University is offering several undergraduate courses in its different constituent and affiliated colleges for the award of the degree for Certificate after one year, Diploma after two years, Bachelor degree after three years and Bachelor degree (with Hons./Research) after four years. Programmes shall have option of entry and exit after every two semesters.
- ii. A participant of the programme is a student who registers himself/ herself with the University for a Course of study and attends the same.
- iii. A full-time programme is a programme where the participants study as per the schedule and are not employed.

9. MULTIPLE ENTRY AND EXIT POINTS

Level 5: Undergraduate Certificate: Entry will be based on the Certificate obtained after successful completion of Grade 12 or equivalent stage of education and the marks/grade imposed by the institution. The Undergraduate Certificate will be awarded to the student seeking exit after the successful completion of two-semesters with courses of 40 credits and one vocational course/ internship/ project of 4 credits during the summer vacation.

Level 6: Undergraduate Diploma: Continuation of study or lateral entry in the second year of the undergraduate programme will be possible for those who have met the entrance requirements, including attainment of prescribed levels as specified in the programme. The continuation of the study will be based on the evaluation of documentary evidences (including the academic record and/or evidence relating to the assessment and certification of prior learning) of the applicant's ability to pursue an undergraduate programme of study. The Undergraduate Diploma will be awarded to the student seeking exit after the successful completion of four-semesters with courses of 80 credits and one vocational course/ internship/ project of 4 credits during the summer vacation.

Level 7: Bachelor's Degree: Continuation of study or lateral entry in the third year (fifth semester) of the undergraduate programme will be possible for those who have met the entrance requirements, including attainment of prescribed levels as specified in the programme. The continuation of the study will be based on the evaluation of documentary evidences (including the academic record and/or evidence relating to the assessment and certification of prior) of the applicant's ability to pursue an undergraduate programme of study. The Bachelor's Degree will be awarded to the student seeking exit after the successful completion of Six-semesters with courses of 120 credits.

Level 8: Bachelor's Degree with Hons./Research: An individual seeking admission/ continuation to the Bachelor's Degree with Honours/ Research in a specified field of learning should have completed all requirements of the relevant 3-year Bachelor's degree with a minimum CGPA of 7.5, will be allowed to take the Research courses in fourth year of the undergraduate programme. In lieu of Research courses (for students securing less than 7.5 CGPA and qualified otherwise) three Advanced Major (disciplinary/ interdisciplinary/ multidisciplinary) courses will be offered leading to Hons. Degree.

Lateral Entry

- a. There will be a lateral entry of the students only in semesters III, V & VII.
- b. The student must have cleared the specified credits of all the courses of previous semesters.
- c. The master content of the syllabus studied previously must be equivalent and there should not be variation in the syllabus more than 30%.
- d. Depending upon the academic and physical facilities available, the HEIs may earmark seats for lateral entrants to the second year/third year/fourth year of a first-degree programme, if the student has either
 - i. successfully completed the first year/second year/third year of the same programme in any institution, or
 - ii. already successfully completed a first degree programme and is desirous of and academically capable of pursuing another first degree programme in an allied subject.

10. DURATION (TIME FRAME) OR VALIDITY OF REGISTRATION

- i. The UG programme for a regular student shall be for a period of four years with multiple entry and multiple exit options.
- ii. Each academic year shall comprise of two semesters, viz. Odd and Even semesters.
- iii. Odd Semesters shall be from July to December and Even Semesters from January to June.
- iv. Eligibility to take Research courses in Semester VII is to secure a minimum of overall marks 75% (7.5 CGPA) and above up to semester VI along with other criteria of the Institution.
- v. The validity of credits earned/kept in the Academic Bank of Credits account will be 7 years.

11. ELIGIBILITY CRITERIA TO PURSUE UNDERGRADUATE COURSES

- i. The students passing Grade 12/ Intermediate/ equivalent examination shall be eligible for applying admission. The criteria for admission under the heads shall be the minimum pass marks at the last lower examination.
- ii. Entry will be based on the Certificate obtained after successful completion of Grade 12 or equivalent stage of education and the marks/grade imposed by the institution.
- iii. UG Degree Programmes with Double Major shall be provided only to those students who secure a minimum of overall 75% marks (7.5 CGPA) or higher.
- iv. Other eligibility criteria including those for multiple entry will be in light of the UGC Guidelines for Multiple Entry and Exit in Academic Programmes offered in Higher Education Institutions.

12. SELECTION CRITERIA FOR ADMISSION

The selection for admission will be primarily based on availability of seats in the Major subject and marks imposed by the institution. Merit point for selection will be based on marks obtained in Major subject at Class 12 (or equivalent level) or the aggregate marks of Class 12 (or equivalent level) if Marks of the Major subject is not available. Reservation norms of The Government of Jharkhand must be followed as amended in times.

13. CHOOSING PROGRAMME/ STUDY COURSES

The curriculum consists of major stream courses, minor stream courses and courses from other disciplines, language courses, skill courses, and a set of courses on Environmental education, understanding India, Digital and technological solutions, Health & Wellness, Yoga education, and sports and fitness. There will courses from broad disciplinary areas, each having basket of courses:

- i. Natural and Physical Sciences
- ii. Mathematics, Statistics, and Computer Applications
- iii. Library, Information and Media Sciences
- iv. Commerce and Management
- v. Humanities and Social Sciences
- vi. Or others offered by the University

At the time of admission, a student will have to select a 'Major' from any of the broad disciplinary areas. The selection for admission will be primarily based on availability of seats in Major and marks imposed by the institution. A student will also have to select three subjects for 'Multidisciplinary Courses' from a pool of subjects offered by the institution from the concerned broad disciplinary areas.

Major Courses: (Disciplinary/Interdisciplinary Major)

- i. The FYUGP offers students a general understanding as well as in-depth study of at least one subject area termed as Major.
- ii. At the time of admission, a student will select a Major subject offered by the institution.
- iii. The major subject will be of a higher level to get deep knowledge and specialization in the discipline selected. These will be of total 80 credits to be covered during semesters I -VIII. In semesters VII and VIII, the advanced level courses of the major subject of 12 credits be offered in lieu of taking up Research Courses.

Minor Courses: (Disciplinary/Interdisciplinary Minor)

- i. The student will have to choose Two Minor subjects at the time of admission.
- ii. One Minor subject to support the major subject from the concerned broad disciplinary area in the first semester.

- iii. The other will be from a pool of vocational courses/skill enhancement courses of vocational nature either supporting the major or from the field of major courses offered by the institution.

Change of Major & Minor: At the end of the second semester, students can decide either to continue with the chosen major or request a change of major. The minor stream courses include vocational courses which will help the students to equip with job-oriented skills. A student may declare the choice of the minor and vocational stream at the end of the second semester, after exploring various courses.

Common Courses: The following courses may be common to all students in semesters I to III:

- i. A student has to opt for One paper of 2 credits in MIL (Hindi Communication).
- ii. English Communication will be a compulsory common paper of 2 credits.
- iii. 'Environmental studies' of 2 credits
- iv. 'Understanding India' of 2 credits
- v. 'Health & Wellness, Yoga Education, Sports & Fitness' of 2 credits
- vi. 'Community Engagement & Service (NSS/ NCC/ Adult Education)' of 2 credits

Ability Enhancement Courses (AEC): Modern Indian Language (MIL) & English language focused on language and communication skills.

Students are required to achieve competency in a Modern Indian Language (MIL) and in the English language with special emphasis on language and communication skills. The courses aim at enabling the students to acquire and demonstrate the core linguistic skills, including critical reading and expository and academic writing skills, that help students articulate their arguments and present their thinking clearly and coherently and recognize the importance of language as a mediator of knowledge and identity. They would also enable students to acquaint themselves with the cultural and intellectual heritage of the chosen MIL and English language, as well as to provide a reflective understanding of the structure and complexity of the language/literature related to both the MIL and English language. The courses will also emphasize the development and enhancement of skills such as communication, and the ability to participate/conduct discussion and debate.

Value-Added Courses (VAC): Common to All UG Students (The HEIs may introduce other innovative value-added courses relevant to the discipline or common to all UG programmes.)

- i. **Understanding India:** The course aims at enabling the students to acquire and demonstrate the knowledge and understanding of contemporary India with its historical perspective, the basic framework of the goals and policies of national development, and the constitutional obligations with special emphasis on constitutional values and fundamental rights and duties.

The course would also focus on developing an understanding among student-teachers of the Indian knowledge systems, the Indian education system, and the roles and obligations of teachers to the nation in general and to the school/community/society. The course will attempt to deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented to develop an appreciation of the contributions made by people of all sections and regions of the country, and help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities as effective citizens of a democratic society.

- ii. **Environmental science/education:** The course seeks to equip students with the ability to apply the acquired knowledge, skills, attitudes, and values required to take appropriate actions for mitigating the effects of environmental degradation, climate change, and pollution, effective waste management, conservation of biological diversity, management of biological resources, forest and wildlife conservation, and sustainable development and living. The course will also deepen the knowledge and understanding of India's environment in its totality, its interactive processes, and its effects on the future quality of people's lives.
- iii. **Digital and technological solutions:** Courses in cutting-edge areas that are fast gaining prominences, such as Artificial Intelligence (AI), 3-D machining, big data analysis, machine learning, drone technologies, and Deep learning with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing the employability of the youth.
- iv. **Health & Wellness, Yoga education, sports, and fitness:** Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social, spiritual, and environmental well-being of a person. Sports and fitness activities will be organized outside the regular institutional working hours. Yoga education would focus on preparing the students physically and mentally for the integration of their physical, mental, and spiritual faculties, and equipping them with basic knowledge about one's personality, maintaining self-discipline and self-control, to learn to handle oneself well in all life situations. The focus of sports and fitness components of the courses will be on the improvement of physical fitness including the improvement of various components of physical and skills-related fitness like strength, speed, coordination, endurance, and flexibility; acquisition of sports skills including motor skills as well as basic movement skills relevant to a particular sport; improvement of tactical abilities; and improvement of mental abilities.

Skill Enhancement Courses (SEC): These courses are aimed at imparting practical skills, hands-on training, soft skills, etc., to enhance the employability of students. The institution may design

courses as per the students' needs and available institutional resources. These courses may be approved by the competent authority before implementation.

Administrative aspects of SEC such as Infrastructure, Faculty, Financial aspects, Fee of Courses and Regulations etc. to be substantiated well in advanced.

Summer Internship/Apprenticeship/Project: A key aspect of the new UG programme is induction into actual work situations.

- i. **Internship/Apprenticeship/Project:** All students will also undergo internships / Apprenticeships in a firm, industry, or organization or Training in labs with faculty and researchers in their own or other HEIs/research institutions during the summer term. Students will be provided with opportunities for internships with local industry, business organizations, health and allied areas, local governments (such as panchayats, municipalities), Parliament or elected representatives, media organizations, artists, crafts persons, and a wide variety of organizations so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability. Students who wish to exit after the first two semesters will undergo a 4-credit work-based learning/internship during the summer term in order to get a UG Certificate.
- ii. **Community engagement and service:** The curricular component of 'community engagement and service' seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This can be part of summer term activity or part of a major or minor course depending upon the major discipline.
- iii. **Field-based learning/minor project:** The field-based learning/minor project will attempt to provide opportunities for students to understand the different socio-economic contexts. It will aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situations in rural and urban contexts, and to observe and study actual field situations regarding issues related to socioeconomic development. Students will be given opportunities to gain a first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They would have the opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems. This may be a summer term project or part of a major or minor course depending on the subject of study.

Multidisciplinary Courses: The introductory Multidisciplinary course will be of 9 credits to be covered during the first three semesters, in which 03 credits will be for each courses aligned with broad disciplines mentioned above.

Students are not allowed to choose or repeat courses already undergone at the higher secondary level (12th class) in the proposed major and minor stream under this category.

Research Courses: (Disciplinary/Interdisciplinary Advanced Major)

- i. At the beginning of semester VII, each student will take up a research project along with advanced disciplinary /interdisciplinary courses. The final semester will be devoted mainly to the research project. The project should preferably be related to a topic in the chosen major.
- ii. In Research courses, the student will learn mainly
 - a. Research Methodology
 - b. Writing research proposal, data collection and review of the literature
 - c. Research internship/ Field work
 - d. Preparation of research project/ Writing research project report

Other Activities: This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives, mentoring school students, and other similar activities.

Pedagogical approaches: The Learning Outcomes-Based Approach to curriculum planning and transaction requires that the pedagogical approaches are oriented towards enabling students to attain the defined learning outcomes relating to the courses within a programme. The outcome based approach, particularly in the context of undergraduate studies, requires a significant shift from teacher-centric to learner-centric pedagogies, and from passive to active/participatory pedagogies.

Every programme of study lends itself to the well-structured and sequenced acquisition of knowledge and skills. Practical skills, including an appreciation of the link between theory and practice, will constitute an important aspect of the teaching-learning process.

Teaching methods, guided by such a framework, may include lectures supported by tutorial work; practicum and field-based learning; the use of prescribed textbooks and e-learning resources and other self-study materials; field-based learning/project, open-ended project work, some of which may be team-based; activities designed to promote the development of generic/transferable and subject specific skills; and internship and visits to field sites, and industrial or other research facilities etc.

Note:

- i. Major and Minor courses once continued in Semester-III would not be changed unless the student quits a programme and joins a new programme.
- ii. The student will be required to accumulate a certain minimum number of credits (as defined in the case of the Programme) to qualify for the stages of the Four-year UG programme.
- iii. University may revise subject mapping as per subjects available at institutions or in cases of new subject introduced in times.
- iv. The FYUGP Curriculum framework may be revised subject to the guidelines provided by the UGC in times.
- v. Only the minimum total number of credits in each semester is indicated above. The HEIs may decide the number of credits for each course (e.g. Major, Minor, Multidisciplinary, etc.) to fulfil the minimum number of credit requirements.
- vi. Students may be permitted to audit course(s) of their choice offered by the HEI provided they meet the pre-requisite for the course.
- vii. Minor stream courses can be from 50% of the total credits must be secured in the relevant subject/discipline and another 50% of the total credits from a minor can be earned from any discipline as per students' choice.
- viii. Students are not allowed to take the same courses studied in the 12th class under the interdisciplinary category.
- ix. 40% of the credits in any category may be earned through online courses approved by the Department and Institution as per the existing UGC regulations.
- x. VIII-Semester core major may be seminar-based with students' presentations and discussions.
- xi. Students may be encouraged to enrol in activities such as NSS / NCC.

Table 1: Credit Framework for Four Year Undergraduate Programme (FYUGP) under State Universities of Jharkhand [Total Credits = 160]

Level of Courses	Semester	MJ : Discipline Specific Courses - Core or major (80)	MN : Minor form discipline (16)	MN : Minor form vocational (16)	MDC : Multidisciplinary Courses (Life sciences, Physical Sciences, Mathematical and Computer Sciences, Data Analysis, Social Sciences, Humanities, etc) (9)	AEC : Ability Enhancement Courses (modern Indian language and English) (8)	SEC : Skill Enhancement Courses (9)	VAC : Value Added Courses (6)	IAP : Internship / Dissertation (4)	RC : Research Courses (12)	AMJ : Advance Courses in lieu of Research (12)	Credits	Double Major (DMJ)
I	2	3	4	5	6	7	8	9	10	11	12	13	14
100-199 : Foundation or Introductory courses	I	4	4		3	2	3	4				20	4+4
	II	4+4		4	3	2	3					20	4+4
	Exit Point : Undergraduate Certificate provided with Summer Internship/Project (4 credits)												
200-299 : Intermediate-level courses	III	4+4	4		3	2	3					20	4+4
	IV	4+4+4		4		2		2				20	4+4
	Exit Point : Undergraduate Diploma provided with Summer Internship in 1 st or 2 nd year/Project (4 credits)												
300-399 : High-level courses	V	4+4+4	4						4			20	4+4
	VI	4+4+4+4		4								20	4+4
	Exit Point : Bachelor's Degree												
400-499 : Advanced courses	VII	4+4+4+4	4									20	4+4
	VIII	4		4						12	4+4+4	20	4+4

Note : Honours students not undertaking research will do 3 courses for 12 credits in lieu of a Research project / Dissertation.

Table 2: Semester wise Course Code and Credit Points for Single Major :

Semester	Common, Introductory, major, Minor, Vocational & Internship Courses		Credits
	Code	Papers	
I	AEC-1	Language and Communication Skills (MIL-1; Modern Indian language including TRL)	2
	VAC-1	Value Added Course-1	4
	SEC-1	Skill Enhancement Course-1	3
	MDC-1	Multi-disciplinary Course-1	3
	MN-1 A	Minor from Discipline-1	4
	MJ-1	Major paper 1 (Disciplinary / Interdisciplinary Major)	4
II	AEC-2	Language and Communication Skills (English)	2
	SEC-2	Skill Enhancement Course-2	3
	MDC-2	Multi-disciplinary Course-2	3
	MN-2 A	Minor from Vocational Studies/Discipline-2	4
	MJ-2	Major paper 2 (Disciplinary/Interdisciplinary Major)	4
	MJ-3	Major paper 3 (Disciplinary/Interdisciplinary Major)	4
III	AEC-3	Language and Communication Skills (MIL-2; Modern Indian language including TRL)	2
	SEC-3	Skill Enhancement Course-3	3
	MDC-3	Multi-disciplinary Course-3	3
	MN-1 B	Minor from Discipline-1	4
	MJ-4	Major paper 4 (Disciplinary/Interdisciplinary Major)	4
	MJ-5	Major paper 5 (Disciplinary/Interdisciplinary Major)	4
IV	AEC-3	Language and Communication Skills (MIL-2/English-2)	4
	VAC-2	Value Added Course-2	2
	MN-2 B	Minor from Vocational Studies/ Discipline-2	4
	MJ-6	Major paper 6 (Disciplinary/Interdisciplinary Major)	4
	MJ-7	Major paper 7 (Disciplinary/Interdisciplinary Major)	4
	MJ-8	Major paper 8 (Disciplinary/Interdisciplinary Major)	4
V	MN-1 C	Minor from Discipline-1	4
	MJ-9	Major paper 9 (Disciplinary/Interdisciplinary Major)	4
	MJ-10	Major paper 10 (Disciplinary/Interdisciplinary Major)	4
	MJ-11	Major paper 11 (Disciplinary/Interdisciplinary Major)	4
	IAP	Internship/Apprenticeship/ Field Work/ Dissertation/ Project	4
VI	MN-2 C	Minor from Vocational Studies/ Discipline-2	4
	MJ-12	Major paper 12 (Disciplinary/Interdisciplinary Major)	4
	MJ-13	Major paper 13 (Disciplinary/Interdisciplinary Major)	4
	MJ-14	Major paper 14 (Disciplinary/Interdisciplinary Major)	4
	MJ-15	Major paper 15 (Disciplinary/Interdisciplinary Major)	4
VII	MN-1 D	Minor from Discipline-1	4
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4
VIII	MN-2 D	Minor from Vocational Studies/ Discipline-2	4
	MJ-20	Major paper 20 (Disciplinary/ Interdisciplinary Major)	4
	RC/	Research Internship/ Field Work/ Dissertation OR	12/
	AMJ-1	Advanced Major paper-1 (Disciplinary/Interdisciplinary Major)	4
	AMJ-2	Advanced Major paper-2 (Disciplinary/Interdisciplinary Major)	4
	AMJ-3	Advanced Major paper-3 (Disciplinary/Interdisciplinary Major)	4
Total Credit			160

NUMBER OF CREDITS BY TYPE OF COURSE

The hallmark of the new curriculum framework is the flexibility for the students to learn courses of their choice across various branches of undergraduate programmes. This requires that all departments prescribe a certain specified number of credits for each course and common instruction hours (slot time).

Table 3 : Overall Course Credit Points for Single Major

Courses	Nature of Courses	3 yr UG Credits	4 yr UG Credits
Major	Core courses	60	80
Minor	i. Discipline/ Interdisciplinary courses and ii. Vocational Courses	24	32
Multidisciplinary	3 Courses	9	9
AEC	Language courses	8	8
SEC	Courses to be developed by the University	9	9
Value Added Courses	Understanding India, Environment Studies, Digital Education, Health & Wellness, Summer Internship/ Apprenticeship/ Community outreach activities, etc.	6	6
Internship (In any summer vacation for Exit points or in Semester – V)		4	4
Research/ Dissertation / Advanced Major Courses	Research Institutions / 3 Courses		12
Total Credits =		120	160

Table 4 : Overall Course Code and Additional Credit Points for Double Major

Courses	Nature of Courses	3 yr UG Credits	4 yr UG Credits
Major 1	Core courses	60	80
Major 2	Core courses	48	64
Minor	i. Discipline/ Interdisciplinary courses and ii. Vocational Courses	24	32
Multidisciplinary	3 Courses	9	9
AEC	Language courses	8	8
SEC	Courses to be developed by the University	9	9
Value Added Courses	Understanding India, Environment Studies, Digital Education, Health & Wellness, Summer Internship/ Apprenticeship/ Community outreach activities, etc.	6	6
Internship (In any summer vacation for Exit points or in Semester – V)		4	4
Research/ Dissertation / Advanced Major Courses	Research Institutions / 3 Courses		12
Total Credits =		168	224

Table 5: Semester wise Course Code and Additional Credit Points for Double Major :

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits
	Code	Papers	
I	DMJ – 1	Double Major paper - 1 (Disciplinary/ Internship Major)	4
	DMJ – 2	Double Major paper - 2 (Disciplinary/ Internship Major)	4
II	DMJ – 3	Double Major paper - 3 (Disciplinary/ Internship Major)	4
	DMJ – 4	Double Major paper - 4 (Disciplinary/ Internship Major)	4
III	DMJ – 5	Double Major paper - 5 (Disciplinary/ Internship Major)	4
	DMJ – 6	Double Major paper - 6 (Disciplinary/ Internship Major)	4
IV	DMJ – 7	Double Major paper - 7 (Disciplinary/ Internship Major)	4
	DMJ – 8	Double Major paper - 8 (Disciplinary/ Internship Major)	4
V	DMJ – 9	Double Major paper - 9 (Disciplinary/ Internship Major)	4
	DMJ – 10	Double Major paper - 10 (Disciplinary/ Internship Major)	4
VI	DMJ – 11	Double Major paper - 11 (Disciplinary/ Internship Major)	4
	DMJ – 12	Double Major paper - 12 (Disciplinary/ Internship Major)	4
VII	DMJ – 13	Double Major paper - 13 (Disciplinary/ Internship Major)	4
	DMJ – 14	Double Major paper - 14 (Disciplinary/ Internship Major)	4
VIII	DMJ – 15	Double Major paper - 15 (Disciplinary/ Internship Major)	4
	DMJ – 16	Double Major paper - 16 (Disciplinary/ Internship Major)	4
Total Credits =			64

Abbreviations:

ACE	Ability Enhancement Courses
SEC	Skill Enhancement Courses
IAP	Internship/Apprenticeship/ Project
MDC	Multidisciplinary Courses
MJ	Major Disciplinary/Interdisciplinary Courses
DMJ	Double Major Disciplinary/Interdisciplinary Courses
MN	Minor Disciplinary/Interdisciplinary Courses
AMJ	Advance Major Disciplinary/Interdisciplinary Courses
RC	Research Courses

17. LEARNING ASSESSMENT

A variety of assessment methods that are appropriate to a given disciplinary/subject area and a programme of study will be used to assess progress towards the course/programme learning outcomes. Priority will be accorded to formative assessment. Evaluation will be based on continuous assessment, in which sessional work and the terminal examination will contribute to the final grade.

Sessional work will consist of class tests, mid-semester examination(s), homework assignments etc., as determined by the faculty in charge of the courses of study. Progress towards achievement of learning outcomes will be assessed using the following: time-constrained examinations; closed-book and open-book tests; problem-based assignments; practical assignment laboratory reports; observation of practical skills; individual project reports (case-study reports); team project reports; oral presentations, including seminar presentation; viva voce interviews; computerized adaptive assessment, examination on-demand, modular certifications etc.

18. LETTER GRADES AND GRADE POINTS

- i. Credit Weighted Marking System: The performance of a student is evaluated in terms of earned credit weighed marking system. Earned credits are defined as the sum of course credits in which grade points above a certain cut off have been obtained for declaring a learner pass in that course.
- ii. An absolute grading will be followed where the marks are converted directly to the grades based on pre-determined class intervals.
- iii. A 10-point grading system with the following letter grades as given below will be followed:

Table No. 6. Grades and Grade Points

Letter Grade	Grade Point
O (Outstanding)	10
A+(Excellent)	9
A(Very Good)	8
B+(Good)	7
B(Above Average)	6
C(Average)	5
P (Pass)	4
F(Fail)	0
Ab (Absent)	0

Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by the letters O, A+, A, B+, B, C, P and F.

Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale as above:

Table No. 7. Grades and Grade Points Conversion

Class interval of Marks %	Grade Point	Letter Grade	Grade	Conventional Equivalent
90 % and above	10	O	Outstanding	First Class with Distinction
75 to less than 90	9	A+	Excellent	
60 to less than 75	8	A	Very Good	First Class
55 to less than 60	7	B+	Good	Second Class
50 to less than 55	6	B	Above Average	
45 to less than 50	5	C	Average	
40 to less than 45	4	P	Pass	
Below 40	0	F	Fail	Fail
Absent	0	Ab	Absent	

19. CUMULATIVE GRADE POINT AVERAGE (CGPA)

It is a measure of the overall cumulative performance of a student's overall semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

20. COMPUTATION OF SGPA AND CGPA

- The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)
- The SGPA is the ratio of the sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$SGPA (S_i) = \sum (C_i \times G_i) / \sum C_i$$

where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

Thus, SGPA =

$$\frac{\text{All } \sum \text{Course } [(Credits \text{ in each course}) \times (Grade \text{ point in that course})]}{\text{Total No. of Credits in that semester}}$$

- iii. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \sum (C_i \times S_i) / \sum C_i$$

where S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.

Thus, CGPA =

$$\frac{\text{All semester } \sum [(SGPA \text{ in each semester}) \times (Total \text{ Credits in that semester})]}{\text{Total No. of Credits in all semesters}}$$

- iv. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
v. For merit list, in case of equality, the CGPA shall be computed beyond two decimal places till the equality is resolved.
vi. In order to pass a Semester examination, the minimum **SGPA required is 4.0** and a minimum of **4.0 GP** in individual theory, practical and other credit components.

21. ILLUSTRATION OF COMPUTATION OF SGPA AND CGPA

- i. Computation of SGPA (Table No. 9)
ii. Computation of CGPA (Table No. 10)

Table No. 8: Illustration for SGPA

Course	Credit	Grade letter	Grade point	Credit Point (CreditXGrade)
Course 1	3	A	8	3X8=24
Course 2	4	B+	7	4X7=28
Course 3	3	B	6	3X6=18
Course 4	3	O	10	3X10=30
Course 5	3	C	5	3X5=15
Course 6	4	B	6	4X6=24
TOTAL=	20			139

Thus, SGPA = 139/20 = 6.95

Table No. 9: Illustration for CGPA

Semester 1	Semester 2	Semester 3	Semester 4
Credit: 20 SGPA: 6.9	Credit: 20 SGPA: 7.8	Credit: 20 SGPA: 7.0	Credit: 20 SGPA: 8.4
Semester 5	Semester 6		
Credit: 20 SGPA: 7.3	Credit: 20 SGPA: 8.6		

$$\begin{aligned}\text{Thus, CGPA} &= \frac{20 \times 6.9 + 20 \times 7.8 + 20 \times 7.0 + 20 \times 8.4 + 20 \times 7.3 + 20 \times 8.6}{20+20+20+20+20+20} \\ &= \frac{138 + 156 + 140 + 168 + 146 + 172}{120} = 7.66\end{aligned}$$

Transcript (Format): Based on the above recommendations on Letter grades, grade points, SGPA and CCPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

22. EVALUATION OF LEARNING OUTCOME

1. Examination Regulation for UG Hons. Programme of 160 Credits

- i. Semester Internal Theory Examination in Major, Minor and Research Courses will be organized at College/ Institution level. However, Only One End semester evaluation in other courses will be done either at College/ Institution or University level depending upon the nature of course in the curriculum.
- ii. For the units of evaluation (namely tests, seminars, presentations, class performance, field work, thesis and others) the weightage assigned to each of such units in respect of each course shall be determined by the appropriate academic body of the university, and shall be made known to the students at the beginning of the academic session of the year, the semester as the case may be.
- iii. The question papers for the examinations shall be set in such a manner as to ensure that they cover the entire syllabus of the concerned course.
- iv. The tests and examinations shall aim at evaluating not only the student's ability to recall information, which he/she had memorized, but also his/her understanding of the subject and ability to synthesize scattered bits of information into a meaningful whole. Some of the questions shall be analytical and invite original thinking or application of theory.
- v. Semester Internal Theory Examination (each of 1 hour) in Courses will be organized at College/Institution level.
- vi. There shall be only one Practical Examination (each of 3 hours) in each semester for each paper separately.
- vii. Practical Examinations will be conducted by One External & One Internal Examiners.

2. Marks Distribution for Examinations for UG Hons. Programme of 160 Credits

There will be **Only One Semester Internal Examination** in Major, Minor and Research Courses, which will be organized at college/institution level.

- Out of 100 Marks in Semester Internal Theory Examination (each of 1 hour) for Practical subjects will be of 15 marks and non-Practical subjects will be of 25 marks.
- 15 Marks in Theory Examination may include 10 Marks questions from Written Examination/ Assignment/ Project/ Tutorial wherever applicable whereas 5 marks will be awarded on the attendance/ overall class performance in the semester.
- 25 Marks in Theory Examination may include 20 Marks questions from Written Examination/ Assignment/ Project/ Tutorial wherever applicable whereas 5 marks will be awarded on the attendance/ overall class performance in the semester.
- To convert attendance into marks a suggestive range is provided here. However, institutions may develop its own range: [Attendance Upto 45%, 1 mark; 45 < Attd. < 55, 2 marks; 55 < Attd. < 65, 3 marks; 65 < Attd. < 75, 4 marks; 75 < Attd, 5 marks].

3. Marks distribution will be as shown in Table No.- 11

Table No. 10: Marks distribution pattern [25 Marks for each credit]

Subjects	Credits	FM	Semester Internal Examination	End Semester University Examination
Ability Enhancement Courses	2	50	---	50
Value Added Courses	2	50	---	50
Skill Enhancement Courses	3	75	---	75
Multidisciplinary Courses	3	75	---	75
Minor Courses	4	100	25	75
Advanced Major	4	100	25	75
Research Courses				
i. Research Methodology (F.M.=100)	12	100 + 200	25 + ---	75 + 200
ii. Synopsis, Thesis & others (F.M.=200)				
Vocational Courses including Internship	4	100	---	100/ (Grade point awarded by the concerned organisation)
Non- Practical Subjects (MJ/MN)	4	100	25	75
Practical Subjects (MJ/MN)	4	T	T	T
		75	15	60
		P		P
		25		25

4. Eligibility for appearing in End Semester Examinations (ESE):

- i. Irrespective of performance in the semester internal examinations, a student will be eligible to appear in the End Semester Examinations (ESE).
- ii. If a student failed to secure pass marks in aggregate of Semester Internal & End Semester, He/she will be required to reappear in End Semester Examination of following Sessions within period of Upper Limit of Six Years in Three Year Programme or Upper Limit of Seven Years in Four Year Degree Programme.
- iii. The validity of credits earned/kept in the Academic Credit Account will be 7 years. After 7 years, re-entry into a programme will be based on the validation of prior learning outcomes.

5. Guidelines for Question Setter:

- i. Question Paper shall show Full Marks (FM), Pass Marks (PM) & Maximum Time allowed (in Hrs.) at the top of the Question Paper.
- ii. In order to avoid rote memory and to evaluate in-depth study, knowledge, understanding and application domain of student the pattern of questions as given below must be set.
- iii. There will be two categories of Questions Namely **Group A & Group B**. Group A will be of very short answer type (consisting objective type excluding multiple choice questions) of 1 mark & short answer type of 5 marks and questions in this group will be all compulsory. Group B will contain long answer type questions.

iv. For Semester Internal Examination (SIE 10 marks, 1Hr Exam):

There will be two group of questions. **Question No.1 will be very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

v. For Semester Internal Examination (SIE 20 marks, 1Hr Exam):

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

vi. For End Semester Examination (ESE 50 marks, 2Hrs Exam):

There will be two group of questions. **Question No.1 will be very short answer type compulsory question in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

vii. For End Semester Examination (ESE 60 marks, 3Hrs Exam):

There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark

each. Question No.2 & 3 will be short answer type of 5 marks. Group B will contain descriptive type five questions of fifteen marks each, out of which any three are to answer.

viii. **For End Semester Examination (ESE 75 marks, 3Hrs Exam):**

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

ix. **For End Semester Examination (ESE 100 marks, 3Hrs Exam):**

There will be two group of questions. Group A is compulsory which 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 twenty marks each, out of which any four are to answer.

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

23. CALCULATION OF MARKS FOR THE PURPOSE OF RESULT

Passing in a subject will depend on the collective marks obtained in Semester internal and End Semester University Examination both. However, students must pass in Theory and Practical Examinations separately.

Pass Marks in 160 Credit Course [40% of F.M.]

- The pass marks in 160 credit courses will be 40% of the total marks obtained in each Course offered by the student.
- To pass in MIL/ Non-Hindi subject, a student must obtain minimum 20 marks out of 50 marks in 2 credit courses.

Table No. 11: Full Marks (FM) & Pass Marks (PM) pattern for Subjects

Subjects	FM	PM
MIL Hindi	50	20
Other Language	50	20
Non- Practical Subjects	100	40
Non- Practical Subjects	75	30
Non- Practical Subjects	50	20
Practical Subjects: Theory Paper	75	30
Practical Subjects: Practical Paper	25	10
Practical Subjects: Practical Paper	50	20
Practical Subjects: Practical Paper	75	30
Practical Subjects: Practical Paper	100	40

24. PROMOTION CRITERIA

First degree programme with single major:

- i. The Requisite Marks obtained by a student in a particular subject will be the criteria for promotion to the next Semester.
- ii. No student will be detained in odd Semesters (I, III, V & VII).
- iii. To get promotion from Semester-II to Semester-III a student will be required to pass in at least 75% of Courses in an academic year, a student has to pass in minimum 9 papers out of the total 12 papers.
- iv. To get promotion from Semester-IV to Semester-V (taken together of Semester I, II, III & IV) a student has to pass in minimum 18 papers out of the total 24 papers.
- v. To get promotion from Semester-VI to Semester-VII (taken all together of Semester I, II, III, IV, V & VI) a student has to pass in minimum 26 papers out of the total 34 papers.
- vi. However, it will be necessary to procure pass marks in each of the paper before completion of the course.

First degree programme with dual major:

- vii. Above criteria are applicable as well on the students pursuing dual degree programmes however first degree programme will remain independent of the performance of the student in dual major courses.
- viii. To get eligible for taking ESE, a student will be required to pass in at least 75% of Courses in an academic year. a student has to pass in minimum 3 papers out of the total 4 papers.
- ix. It will be a necessity to clear all papers of second major programme in second attempt in succeeding session, failing which the provision of dual major will be withdrawn and the student will be entitled for single first degree programme.

25. MODERATION (GRACE MARKS)

- i. Grace marks will be awarded in theory papers only.
- ii. A maximum of 5 marks; only in one paper, only once in complete academic cycle; will be awarded as grace marks.
- iii. Grace marks will be awarded in the condition of requirement for the change of status of result viz: Not-promoted to Promoted & for Promoted to Pass.
- iv. Provision of Grace marks will be applicable to students in the parent institute only.
- v. A student will have to clear all his papers within Seven Years of duration to qualify for the degree.
- vi. On completion of UG course of 160 credit, a student will get a comprehensive result with marks sheet on hybrid system i.e. on Grade system, percentage system.

- vii. The minimum and maximum number of credits may increase provided a candidate opts for Add-on courses. A separate certificate in such cases may be issued.
- viii. The tentative/ provisional grade shall be issued at the end of every semester indicating the courses completed successfully. The final Grade Card may be issued by the Registrar/ Controller of Examinations of the concerned university after a candidate has successfully completed all the courses of the said programme.

26. RANKING

The Merit List and Ranking thereupon shall be prepared only for Regular Examinees, who passed the Examination in single attempt.

27. REVIEW

The University may, review, alter, substitute, amend any of the provisions of this regulation subject to such conditions as may be prescribed by the UGC and as per any special situation arising during the operation of this regulation as perceived by the Academic Council of the University.

FORMAT OF QUESTION PAPER FOR SEMESTER INTERNAL EXAMINATION

Question format for 10 Marks:

Subject/ Code		Exam Year
F.M. =10	Time=1Hr.	
General Instructions:		
<ul style="list-style-type: none">i. Group A carries very short answer type compulsory questions.ii. Answer 1 out of 2 subjective/ descriptive questions given in Group B.iii. Answer in your own words as far as practicable.iv. Answer all sub parts of a question at one place.v. Numbers in right indicate full marks of the question.		
Group A		
1.		[5x1=5]
i.	.....
ii.	.....
iii.	.....
iv.	.....
v.	.....
Group B		
2.	.....	[5]
3.	.....	[5]
Note: There may be subdivisions in each question asked in Theory Examination.		

Question format for 20 Marks:

Subject/ Code		Exam Year
F.M. =20	Time=1Hr.	
General Instructions:		
<ul style="list-style-type: none">i. Group A carries very short answer type compulsory questions.ii. Answer 1 out of 2 subjective/ descriptive questions given in Group B.iii. Answer in your own words as far as practicable.iv. Answer all sub parts of a question at one place.v. Numbers in right indicate full marks of the question.		
Group A		
1.		[5x1=5]
i.	.....
ii.	.....
iii.	.....
iv.	.....
v.	.....
2.	.....	[5]
Group B		
3.	.....	[10]
4.	.....	[10]
Note: There may be subdivisions in each question asked in Theory Examination.		

FORMAT OF QUESTION PAPER FOR END SEMESTER UNIVERSITY EXAMINATION
Question format for 50 Marks:

F.M. =50	Subject/ Code Time=3Hrs.	Exam Year
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 . iii. Answer in your own words as far as practicable. iv. Answer all sub parts of a question at one place. v. Numbers in right indicate full marks of the question.		
Group A		
1.		[5x1=5]
i.	
ii.	
iii.	
iv.	
v.	
Group B		
2.	[15]
3.	[15]
4.	[15]
5.	[15]
6.	[15]
Note: There may be subdivisions in each question asked in Theory Examination.		

Question format for 60 Marks:

F.M. =60	Subject/ Code Time=3Hrs.	Exam Year
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 . iii. Answer in your own words as far as practicable. iv. Answer all sub parts of a question at one place. v. Numbers in right indicate full marks of the question.		
Group A		
1.		[5x1=5]
i.	
ii.	
iii.	
iv.	
v.	
2.	[5]
3.	[5]
Group B		
4.	[15]
5.	[15]
6.	[15]
7.	[15]
8.	[15]
Note: There may be subdivisions in each question asked in Theory Examination.		

Question format for 75 Marks:

Subject/ Code		Exam Year
F.M. = 75	Time=3Hrs.	
General Instructions:		
<ul style="list-style-type: none">i. Group A carries very short answer type compulsory questions.ii. Answer 4 out of 6 subjective/ descriptive questions given in Group B.iii. Answer in your own words as far as practicable.iv. Answer all sub parts of a question at one place.v. Numbers in right indicate full marks of the question.		
Group A		
1.		[5x1=5]
i.	.....
ii.	.....
iii.	.....
iv.	.....
v.	.....
2.	.....	[5]
3.	.....	[5]
Group B		
4.	.....	[15]
5.	.....	[15]
6.	.....	[15]
7.	.....	[15]
8.	.....	[15]
9.	.....	[15]
Note: There may be subdivisions in each question asked in Theory Examination.		

Question format for 100 Marks:

Subject/ Code		Exam Year
F.M. = 100	Time=3Hrs.	
General Instructions:		
<ul style="list-style-type: none">i. Group A carries very short answer type compulsory questions.ii. Answer 4 out of 6 subjective/ descriptive questions given in Group B.iii. Answer in your own words as far as practicable.iv. Answer all sub parts of a question at one place.v. Numbers in right indicate full marks of the question.		
Group A		
1.		[10x1=10]
i.	.....
ii.	.....
iii.	.....
iv.	.....
v.	.....
vi.	.....
vii.	.....
viii.	.....
ix.	.....
x.	.....
2.	.....	[5]
3.	.....	[5]
Group B		
4.	.....	[20]
5.	.....	[20]
6.	.....	[20]
7.	.....	[20]
8.	.....	[20]
9.	.....	[20]
Note: There may be subdivisions in each question asked in Theory Examination.		

Table 6: Semester wise Course Code and Credit Points for Economics:

Semester			Credits
	Code	Papers	
I	AEC-1	Hindi [50 Marks]	2
	VAC-1	Understanding India	4
	SEC-1	Basics of Computer	3
	MDC-1	Health and Wellness, Yoga Education, Sports and Fitness	3
	MN-1 A	Micro Economics	4
	MJ-1	Introductory Economics	4
II	AEC-2	English [50 Marks]	2
	SEC-2	Python	3
	MDC-2	Global Citizenship Education and Education for sustainable Development	3
	MN-2 A	Entrepreneurship - I	4
	MJ-2	Introductory Macro Economics	4
	MJ-3	Indian Economy : Principles and Policies	4
III	AEC-3	Any Language Course [50 Marks]	2
	SEC-3	Income Tax	3
	MDC-3	Community engagement and Service	3
	MN-1 B	Money and Banking	4
	MJ-4	Public Economics	4
	MJ-5	Theory of Statistics	4
IV	AEC-3	Any Language Course [50 Marks]	2
	VAC-2	Environmental Studies	2
	MN-2 B	Entrepreneurship - II	4
	MJ-6	Growth and Development Economics	4
	MJ-7	Introductory Mathematical Economics	4
	MJ-8	History of Economic Thought	4
V	MN-1 C	Indian Economy	4
	MJ-9	Economics of Jharkhand	4
	MJ-10	International Economics	4
	MJ-11	Economic History of India (1857 – 1947)	4
	IAP	Internship / Apprenticeship / Field Work / Dissertation / Project	4
VI	MN-2 C	Cyber Defense - I	4
	MJ-12	Demography	4
	MJ-13	Indian Rural Development	4
	MJ-14	Economics of Health and Education	4
	MJ-15	Environmental Economics	4
VII	MN-1 D	Development Issues of Indian Economy	4
	MJ-16	Economics of Social Sector	4
	MJ-17	Macro Economic Analysis	4
	MJ-18	Agricultural Economics	4
	MJ-19	Labour and Industrial Economics	4
VIII	MN-2 D	Cyber Defense - II	4
	MJ-20	Monetary Economics and Financial Markets	4
		Research Methodology	4
		Research Internship / Field Work / Dissertation – Viva Voce	8
		Total Credit	160

SEMESTER I

MAJOR COURSE –MJ 1:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.**

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.**

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

INTRODUCTORY ECONOMICS

Theory: 60 Lectures

Course Objectives:

1. This course aims to train students in the basic economic theory.
2. It will also enable them to discuss real world economic issues & problems related to Consumer's Behaviour, Production, Market, Distribution & Welfare.

Course Learning Outcomes:

1. The student will be able to understand the Basic Economic Theory.
2. It will also enable them to learn to use empirical methods to derive conclusions about the validity of Economic Theories.

Course Content:

UNIT- I Introduction

1. Definition of Economics: Adam Smith, Alfred Marshall, Lionel Robbins & Samuelson.
2. Micro and Macro Economics: Difference and Scope.
3. Normative and Positive Economics.

UNIT- II Consumer's Behaviour

1. Utility; Marshallian Utility Analysis- Law of Diminishing Marginal Utility; Law of Equi-Marginal Utility;
2. Indifference curve Analysis- Definition; Properties of Indifference curves; Budget line; Consumer's Equilibrium; Price Effect; Income Effect; Substitution Effect; Application of Indifference Curve Analysis
3. Demand- Meaning; Factors affecting Demand; Law of Demand; Elasticity of Demand –

Meaning; Types; Measurement

4. Consumer's Surplus –Concept; Measurement with the help of Marshallian Utility Analysis and Indifference Curve Analysis

UNIT- III Theory of Production

1. Factors of production.
2. Law of Variable Proportions (Short run Law of Production).
3. Law of Returns to Scale (Long-run Law of Production).
4. Isoquant- Definition; Properties, Cobb Douglas Production Function.
5. Producer's Equilibrium –Concept & Measurement with the help of Isoquant and Isocost.
6. Traditional Theory of Cost.

UNIT- IV Market Forms and Equilibrium

1. Types of Markets - Perfect and Imperfect; Revenue Curves in different forms of Markets
2. Perfect Competition- Characteristics; Equilibrium of Firms in short run and long run; Equilibrium of Industry in short run and long run
3. Monopoly- Characteristics; Equilibrium of Firm in short run and long run; Degrees of Price Discrimination & its Equilibrium
4. Monopolistic Competition- Meaning; Characteristics

UNIT- V Theories of Distribution

1. Rent- Classical Theory; Modern Theory
2. Interest- Classical Theory; IS-LM Theory; Keynesian Theory
3. Wages- Classical Theory; Marginal Productivity Theory of Distribution
4. Profit- Innovation Theory; Risk Bearing Theory

Reference Books:

1. Varian, Hal R., Intermediate Microeconomics, 8TH Edition, Affiliated East-West Press.
 2. Stonier, Alfred W. & Hague, Douglas C., A Textbook of Economic Theory, 5TH Edition, Pearson.
 3. Koutsoyiannis, A., Modern Microeconomics, 2ND Edition, Palgrave Macmillan.
 4. Pindyck, Robert & Rubinfeld, Daniel. Microeconomics, 8th Edition, Pearson
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SEMESTER II

MAJOR COURSE - MJ 2:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

INTRODUCTORY MACRO ECONOMICS

Theory: 60 Lectures

Course Objectives:

1. The course aims to introduce the students to the basic concepts of Macro Economics which deals with the economy as a whole.

Course Learning Outcomes:

1. After completing this course, the students will be able to explain the basic concepts of GDP, National Income, Money, Inflation, Functions of Central bank, Credit Creation and Credit Control, Trade Cycle and its different phases.

Course Content:

UNIT- I Introduction to Macroeconomics

1. Macroeconomics, Meaning and Scope;
2. Concept and Measurement of GDP, GNP, NDP and NNP at market price and factor cost;
3. Methods of measuring National Income (Product Method, Expenditure, Income Method);
4. Circular Flow of Income in a Two Sector, Three Sector and Four Sector Model; Real and Nominal GDP.

UNIT- II Money

1. Functions of money.
2. Determinants of Demand for Money and Supply of Money.
3. Quantity Theory of Money – Cash Transaction and Cash Balance Approach;
4. Keynesian Theory of Money and Prices.

UNIT- III Inflation

- 1 Definition and types of inflation.
- 2 Demand Pull and Cost Push Inflation.
- 3 Measures to control inflation- Fiscal and Monetary policy;

UNIT- IV Banking

- 1 Objectives, Functions of Central bank;
- 2 Methods of Credit Control – Quantitative and Qualitative methods;
- 3 Monetary Policy- objectives and instruments.

UNIT- V Theories of Employment and Income

- 1 Classical theory of Employment; Keynesian theory of Effective Demand.
- 2 Consumption Function, Saving Function – MPC and MPS; Factor affecting Consumption Function; Investment Function- Autonomous and Induced Investment.
- 3 Marginal Efficiency of Capital (MEC) and Factors affecting MEC;
- 4 Keynesian Multiplier.

UNIT- VI Trade Cycle

- 1 Meaning, Phases of trade cycle;
- 2 Hawtrey's theory of trade cycle.
- 3 Monetary measures to control trade cycle.
- 4 Fiscal measures to control trade cycle

Reference Books:

- 1 Dornbusch, Fischer, Startz, Macro Economics, Mc Graw Hill, 11th edition, 2010.
 - 2 N. Gregory Mankiw, Macro Economics, Worth Publishers, 11th edition, 2021.
 - 3 Seth, M.L., Macro Economics, Laxmi Narayan Publications (Both in English & Hindi).
 - 4 Ahuja, H.L., Advanced Macro Economics, S.Chand Publications.(Both in English & Hindi).
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SEMESTER II

MAJOR COURSE - MJ 3:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

INDIAN ECONOMY: PRINCIPLES AND POLICIES

Theory: 60 Lectures

Course Objectives:

- 1 On completion of the course, students will be able to develop an understanding of the basic structure of the Indian economy.
- 2 They will understand the importance, causes and impact of population growth and relate them with economic development.
- 3 The course also enables the students to understand the agricultural and industrial structure, their problems and contributions to the economy.
- 4 Lastly, it deals with foreign trade of the economy.

Course Learning Outcomes:

- 1 At the end of the course student will be able to pinpoint and understand the past and present economic conditions of the country in various sectors.
- 2 They will also be able to forecast the future course of development through their knowledge of policies and programmes set by the Government and other development agencies.

Course Content:

UNIT- I Planning and Development

- 1 Major economic features of the Indian economy at the eve of independence.
- 2 Economic Planning in India – Historical background up to NITI Aayog.
- 3 Objectives of Indian Planning.
- 4 New Economic Policy (1991)-Objectives, Features, Impact on different sectors.
- 5 Recent initiatives for development – MGNREGA; NRLM; Make in India Program Start Up India Scheme; Pradhan Mantri Kaushal Vikas Yojana.

UNIT- II Population and Human Development

- 1 Demographic trends in size, population growth rate, age, sex, rural-urban and occupational distribution in India.
- 2 Human development: Meaning; Indicators: HDI; GDI- Concept and India's global ranking.
- 3 Human capital and its Components: Education (Importance, Gross Enrolment Ratio, Literacy rate); Health (Importance, Status and Trends of MMR, IMR, Life Expectancy); Skill Enhancement; Workforce Participation.
- 4 Problems of Indian Population: Malnutrition, Poverty and Unemployment- Meaning, Status and Government measures to eradicate.

UNIT- III Indian Agriculture

- 1 Role of agriculture in the Indian economy; Trend of share of Agriculture in GDP
- 2 Problems of Indian agriculture.
- 3 Land reforms; Green revolution.

UNIT- IV Indian Industry

- 1 Role of industry in the Indian economy; Trend of share of industry in GDP.
- 2 Large Scale Industries: Importance; Pattern of industrialization.
- 3 MSME: Composition; Importance; Major Problems faced by MSME.
- 4 New Industrial Policy 1991- Goals, Objectives, Main features.

UNIT- V India's Foreign Trade

- 1 Composition of Foreign Trade; Direction of Foreign Trade.
- 2 India's Balance of Payment since 1991.
- 3 Foreign Trade Policy- Importance, Objectives, Features of 2015 Policy.
- 4 Regulatory bodies of Foreign Trade – FEMA; WTO and India- Favourable and Unfavourable Impact of WTO on Indian Economy.

Reference Books:

- 1 Puri V.K and Mishra S.K, Indian Economy, (English and Hindi) (January 2022), Himalaya Pub. House.
 - 2 Dutt, Gaurav and Sundaram, Indian Economy, (English and Hindi) (Latest edition), S Chand & Co Ltd.
 - 3 Kapila, Uma, Indian Economy: Performance and Policies, (22nd edition 2021), Academic Foundation Publications.
 - 4 Jalan Bimal, India's Economic Policy (2000), Penguin India Publication.
 - 5 Sinha V.C, Indian Economy Performance and Policies (2019), SBPD Publications
 - 6 Verma Sanjeev, The Indian Economy (2020), Unique Publishers.
 - 7 Mishra J.P, Bharat ki Arthik Nitiyan (2019), Sahitya Bhavan Publications.
 - 8 Singh, Ramesh, Bharitiya Arthavyavastha (14th edition), McGraw Hills.
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SEMESTER III

MAJOR COURSE - MJ 4:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

PUBLIC ECONOMICS

Theory: 60 Lectures

Course Objectives:

- 1 Public Economics is a study of government activities from the point of view of efficiency and equity.
- 2 The course aims to introduce students to the importance of government intervention by exposing the students to a host of topics including public goods, market failures and externalities.
- 3 It covers the main theoretical and empirical concepts in public economics mainly relating to public expenditure, taxation and public debt.
- 4 It aims to equip students with understanding the role of fiscal policy in achieving the desired macro-economic goals. The centre-state financial relations in a federal system have also been included.

Course Learning Outcomes:

1. At the end of the module the students should be able to demonstrate their understanding of the theory of three tools of public economics, namely, public expenditure, taxation and public debt.
2. Extensive use of diagrams will enhance their comprehension of the concepts.
3. Study of functioning of fiscal policy and Centre- Statefinancial relations will enhance their knowledge on public economics

Course Content:

UNIT 1: Nature and Scope of Public Finance

- 1 Meaning and Scope of Public Finance.
- 2 Distinction between Private and Public Finance; Public goods and Private goods; Merit goods.
- 3 Principle of Maximum Social Advantage.
- 4 Market Failure; Role of the government.

Unit 2 : Public Expenditure

- 1 Meaning, Classification and Principles of Public Expenditure.
- 2 Cannons of Public Expenditure; Effects of Public Expenditure.
- 3 Causes of Growth of Public Expenditure; Wiseman Peacock Hypothesis.
- 4 Trends in Public Expenditure in India.

Unit 3 : Taxation

- 1 Taxation: Meaning, Cannons of Taxation; Classification of Taxes; Characteristics of a good Tax System.
- 2 Division of tax burden—The Benefit Approach; Ability-to-Pay Approach.
- 3 Impact and Incidence of Taxes.
- 4 Taxable Capacity.
- 5 Effects of Taxation on production and distribution.
- 6 Tax reforms; VAT and GST

Unit 4: Public Debt and Financial Administration

- 1 Public Debt: Meaning, Types, Sources and Need.
- 2 Effects of Public Debt; Burden of Public Debt.
- 3 Methods of Debt Redemption.
- 4 The Public Budget—Kinds of budget; Economic and Functional Classification of Budget.

Unit 5 : Fiscal Policy

- 1 Meaning and objectives of fiscal policy.
- 2 Function of fiscal policy
- 3 Instruments of fiscal policy
- 4 Fiscal policy during inflation and depression

Unit 6 : Financial Decentralization in India

- 1 Centre-State Financial Relationship.
- 2 Role of Finance Commission.
- 3 Features of current Finance Commission.

Reference Books:

1. Musgrave R. A. & Musgrave P. B.— Public Finance in Theory and Practice, McGraw Hill.
 2. Singh, S. K., Public Finance in Theory and Practice, S. Chand Publications.
 3. Singh, S. K., Lok Vitt (Hindi), S. Chand Publications.
 4. Bhatia, H. L., Public Finance, Vikas Publishing House.
 5. Bhatia, H.L., Lok Vitt, (Hindi), Vikas Publishing House.
 6. Sundaram, K. P. M. and Andley, K. K., Public Finance, S. Chand Publications.
 7. Tyagi, B. P.— Public Finance, Jai Prakash Nath & Co.
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SEMESTER III

MAJOR COURSE - MJ 5:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

THEORY OF STATISTICS

Theory: 60 Lectures

Course Objectives:

The Course aims to Introduce the Students to the basic concepts of Statistics and its application in realworld.

Course Learning Outcomes:

- 1 After completing this course, the students will be able to explain basic concepts of data and its measurement, univariate and bivariate analysis, time series analysis, index number, probability.
- 2 Learn data analysis & interpretation that are widely used to solve the economic and business problems.

Course Content:

UNIT- I Introduction to Statistics

- 1 Definition and scope of Statistics
- 3 Types of Data – Primary and Secondary Data
- 4 Methods of Collection of Data - Census and Sampling methods
- 5 Classification and Presentation of Data- Tabular; Diagrammatic and Graphic

UNI-II Univariate Analysis

- 1 Measures of Central Tendency: Mathematical average –Arithmetic Mean, Geometric Mean and Harmonic Mean, Positional Average- Median and Mode.
- 2 Measures of Dispersion: Absolute measure of Dispersion, Range, Inter Quartile Range, Quartile Deviation, Mean Deviation, Standard Deviation, Relative measure of Dispersion, Co-efficient of Range, Quartile Deviation, , Mean Deviation and Standard Deviation (co-efficient of variation).

UNIT-III Bivariate Analysis

- 1 Co- relation Definition: Type; Karl Pearson and Rank Correlation
- 2 Properties of Correlation co-efficient; co-efficient of determination, Co-efficient of Alienation
- 3 Regression Equations, Lines of Regression; Least Square Method.
- 4 Interpretation of Regression co-efficient and Relation with Correlation co-efficient.

UNIT-IV Time Series and Index Number

- 1 Time Series Analysis – Concept; Component; Trend Line and Trend Value by Least Square Method
- 2 Index Number – Concept; Price relative; quantity relative; weighted Index Number; Problem in the construction of Index Number and Limitation of Index Number
- 3 Methods of Construction of Index Number – Laspeyre's, Pasche's , Fisher's, Marshall's, Edgeworth's and Consumer Price Index.
- 4 Tests for Adequacy of Index Number – Laspeyre's, Pasche's, Fisher's, Marshall's, Edgeworth's and Consumer Price Index.

UNIT - V Probability

- 1 Basic Concept – Random Experiments, Sample Space and Events
- 2 Definition of Probability - Classical, Statistical and Axiomatic
- 3 Rules of Probability Addition and Multiplication Theorem; Conditional Probability; Bayes Theorem

Reference Books:

- 1 Sah, N.M., Statistics for Economics, Arya Publication.
 - 2 Schaum Outline of Theory and Problem of Statistics, Murray R. Spiegel, Larry J. Stephens, Tata McGraw-Hill.
 - 3 Agrawal, V.L. Basic Statistics, New Age International Publishers.
 - 4 Gupta, V.N., Quantitative Technique (Hindi Edition), SPBD Publication.
 - 5 Sinha, V.C. and Gupta Alok, Business Statistics, SPBD Publication.
 - 6 Gupta, S.C., Fundamental of Statistics Himalaya Publishing House.
 - 7 Singh A, C., Sankhayaki, S Chand Publications.
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SEMESTER IV

MAJOR COURSE - MJ 6:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

GROWTH AND DEVELOPMENT ECONOMICS

Theory: 60 Lectures

Course Objectives:

1. The course begins with a discussion of issues of growth and development, their measures and indicators. Human Development and international comparisons with India. Basic growth models and theories of development have been included.
2. Issues of poverty, inequality and population growth linking them to economic growth are explored.
3. Role of macroeconomic policies as well as foreign investments in economic development of a nation are included.

Course Learning Outcomes:

- 1 This course is designed to enable students to have an understanding of the basics of economics of growth and development along with theories and models.
- 2 An understanding of macro policies and global linkages in context of economic development of a nation will give a direction to minds of students to take a wholistic view on growth and development.

Course Content:

UNIT- I Economic Growth and Development:

- 1 Meaning and Measurement of Economic Growth; Distinction between Economic Growth and Development, Indicators of Economic Development.
- 2 Factors affecting Growth and Development; Main obstacles to Economic Development; Sustainable Development.
- 3 Indices of Development: HDI, GDI, GEM, PQLI;

UNIT-II Growth Models

- 1 The Harrod - Domar Model
- 2 Solow Model
- 3 Endogenous Growth Models
- 4 The Mahalanobis Model

UNIT-III Theories of Economic Development

- 1 Ricardian Theory
- 2 Marxian Theory
- 3 Rostow's stages of Growth
- 4 Balanced Growth Theory

UNIT-IV Leading Issues in Poverty, Inequality and Development

- 1 Meaning of Poverty; Absolute & Relative Poverty; Characteristics of Poverty; Vicious Circle of Poverty; Mechanisms that generate poverty trap.
- 2 Measurement of Poverty: Income based measures and Poverty Line, Non- monetary Measures (PQLI)
- 3 Concept of Economic Inequality; Measurement of Inequality: The Lorenz Curve; GINI Coefficient; Inequality and Economic Development
- 4 Population and Economic Development: Population as a drag on development in underdeveloped countries; Human Resource Development-Role of Health and Education

UNIT - V Macro Economic Policy & Economic Development

- 1 Role of Monetary Policy in Promoting Economic Development, Fiscal Policy and Economic Development
- 2 External Resources in Development: FDI, Adverse Trade; Technology Inflow; MNC and Economic Growth
- 3 Indian Planning Commission and NITI Aayog.

Reference Books:

- 1 Ray, D. (1998). Development economics. Princeton University Press.
 - 2 Meier, G., Rauch, J. (2005). Leading issues in economic development. Oxford University Press.
 - 3 Gullybaba IGNOU, MEC-004 Economics of Growth and Development.
 - 4 Ahuja, H L, (2016) Development Economics. S Chand Publishing.
 - 5 Sinha, U P, Economic Development and Growth Models. Bharti Publications.
 - 6 Human Development Report. Relevant years.
 - 7 Todaro, M., Smith, S. (2015). Economic Development. Pearson.
 - 8 Higgins, B (1959) Economic Development, WW Norton, New York.
 - 9 Lekhi, R K, Joginder Singh, The Economics of Development and Planning, Kalyani publishers.
 - 10 Mishra J P. (2022 revised Ed.) Samvridhi evam Vikas ka Arthshastra, Sahitya Bhawan Publications.
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SEMESTER IV

MAJOR COURSE - MJ 7:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 11hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.**

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.**

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

INTRODUCTORY MATHEMATICAL ECONOMICS

Theory: 60

Lectures

Course Objectives:

- 1 The course aims to transmit the body of basic mathematics and its application to the study of economic theory at the Undergraduate level.
- 2 It starts from the basic concepts of set theory, functions and equations.
- 3 Thereafter it deals with the techniques of differentiation and their applications in economics.
- 4 The concept of matrix, determinants and their basic applications in solution of equation, linear programming and game theory.

Course Learning Outcomes:

- 1 The course provides the mathematical foundations necessary for further study of a variety of disciplines including most of the theoretical papers of post-graduate economics, statistics, econometrics and data analysis that is essential for higher studies in economics as well as getting employment in corporate world/ banking/civil services by enhancing their skills in the field of data analysis.

Course Content:

UNIT- I Basic Concepts

1. Set Theory: Types; Set operation; Use of Venn Diagram
- 2 Functions: Concept; Types of Function and graphical presentation; Homogeneous and homothetic function.

- 3 Equations: System of equations; Economic application of equations
- 4 Coordinate Geometry and Economic Applications: Straight line (Keynesian Saving Function and Consumption Function; Parabola (Average Cost Curve and Total Product Curve); Hyperbola (Unit Elastic Demand Curve and Average Fixed Cost Curve).

UNIT-II Limit and Differentiation

- 1 Limit: Concept; Rules.
2. Differentiation of functions of one independent variable $[y=f(x)]$: Concept; 1st order and 2nd order derivatives.
3. Partial Differentiation of Function with two independent variables: 1st order and 2nd order.

UNIT-III Application of Differentiation to Economics

- 1 Total and Marginal utilities; Total cost and Marginal cost; Total revenue and Marginal revenue, Relationship between Average revenue and Marginal revenue, Average cost and Marginal cost.
- 2 Elasticity: Income elasticity of demand; Price elasticity of demand; Supply elasticity; Cross elasticity of demand; Relationship of elasticity with Average revenue and Marginal revenue;
- 3 Unconstrained Maxima and Minima of a function in one independent variable: 1st order and 2nd order conditions.
- 4 Economic application of Maximization and Minimization in one independent variable; Unconstrained optimization: Maximization of total revenue; profit; Minimization of Averagecost and Marginal cost
- 5 Equilibrium of a firm under Perfect Competition and Monopoly; Effect of tax and subsidy on equilibrium

UNIT -IV Integration, Difference and Differential Equation

- 1 Integration: concepts; Definite Integrals, Indefinite Integrals
- 2 Economic applications: Obtaining total functions from Marginal cost; Marginal revenue; MPS; MPC
- 3 Economic applications of Definite Integrals: Consumer surplus and producers' surplus under perfect competition.

UNIT -V Matrix and Determinants

- 1 Matrix: Meaning and Types of matrices
- 2 Matrix operations
- 3 Determinants operations
- 4 Inverse of a matrix; Rank of a matrix

Reference Books:

- 1 Allen, R.G.D., Mathematical Analysis for Economists; All India publishers and distributors
 - 2 Chiang, A.C., Fundamental Methods of Mathematical Economics; McGraw Hill Publication
 - 3 Taro Yamane, Mathematics for Economists; Printing Hall of India
 - 4 Mehta, B.C. and Madnani, G.M.K. (English and Hindi); Mathematics for Economists; Sultan Chand and sons.
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SEMESTER IV

MAJOR COURSE - MJ 8:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. Group B will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. Group A is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

HISTORY OF ECONOMIC THOUGHT

Theory: 60 Lectures

Course Objectives:

The course will seek to achieve the following objectives:

1. The course comprises of a study of the main schools of economic thought starting from early views of Mercantilists and Physiocrats.
2. The Classical, Neo-Classical and the Marginalist Revolution, Economic thought of Socialists like Sismondi and Marx have been covered.
3. The syllabus also includes the valuable contributions of Indian economic thinkers like Kautilya, Dada Bhai Naoroji, B.R. Ambedkar, M.K. Gandhi and A.K. Sen.

Course Learning Outcomes:

- 1 The students will analytically learn how the economic thought has evolved over time.
- 2 They will critically and analytically study the main contributions of great economists who have influenced economic thought over time.

Course Content:

UNIT- I Economic Thought of Early Modern School

- 1 Mercantilism (16th to 18th century): Main Characteristics; Thomas Munn as a Mercantilist.
- 3 Physiocracy (1757-1776): Quesnay (1759 -1766): Natural Order, Laissez faire, Primacy of Agriculture, Social Classes, Tableau Economique, Taxation.
- 4 Economic ideas of Physiocrats - Tourgot, Petty, Locke and Hume.

UNIT-II Economic Thought in the Classical Period

- 1 Adam Smith (1723-1790): Division of Labour, Theory of Value, Capital Accumulation, Distribution, Views on Trade, Economic Progress.

- 2 David Ricardo (1772-1823): Value, Theory of Rent, Stationary State, Distribution, Ideas on International Trade.
- 3 Thomas R. Malthus (1776-1834): Theory of Population, Theory of General Glut.
- 4 J. B. Say (1767-1832): Individual liberty and private property; Importance of free markets; Law of Markets.

UNIT-III Economic Ideas of Neo-Classical School and Marginalists

- 1 Comparison of Neo-Classical and Classical economics; Assumptions of Neo- Classical analysis; Main ideas on Utility and Marginalism.
- 2 Jevons (1835-1882): Mathematical Deductive reasoning, Subjective theory of value, Marginalism in Price Determination, Capital and interest rates, Disparity in effects of inflation, Business cycle.
- 3 Leon Walras (1834-1910): Marginal theory of value, General equilibrium theory, Walras law.
4. H. H. Gossen (1810-1858): Utilitarianism; Marginalism; Gossen's first law, Second Law, Third Law. Marshall (1842-1924): Markets and Role of Time in Price Determination, Economic Methods, Ideas on Consumer's Surplus, Elasticity, Representative Firm, Quasi-Rent, External and Internal Economies; Partial equilibrium analysis, long-run and short-run analysis.
5. A.C. Pigou (1877-1959): Dual criteria for increase in Social Welfare, Conditions for welfare maximisation; Policy recommendations for increasing Social Welfare.
6. Vilfredo Pareto (1848-1923): Pareto principle (80/20 rule), Welfare economics- Pareto optimality; Pareto efficiency.

UNIT-IV Economic Thought of Socialists

1. J.C.L. Sismondi (1773-1842): His criticism of Capitalist system, Human welfare , Class conflict, State intervention.
2. Karl Marx (1818-1883): Dynamics of Social Change, Labour Theory of Value, Surplus Value, Profit and Theory of Capitalist Crisis.
3. J.S. Mill (1806-1873): Liberal Socialism, Liberty and Utilitarianism; Advocate of government intervention for social upliftment.

UNIT - V Keynesian and Post Keynesian Thoughts

1. Neo-classicism and Keynesianism.
2. J M Keynes (1883-1946), A monetary economist: Keynesian Revolution, General Theory, Liquidity Preference, Multiplier, Rejection of Say's law and Laissez-faire, Recommendations for economic policy.
3. Post-Keynesianism: Nicholas Kaldor (1908-1986) Piero Staffa (1898-1983): Role of Aggregate Demand; Rejection of Walras General equilibrium; Views on economic growth and development; Uncertainty and Expectations; The Institution of Money; Macroeconomic paradoxes- paradox of thrift, paradox of debt, paradox of inequality.
4. Neo-Keynesianism: (Alvin Hansen 1887-1975, John Hicks 1904-1989) Keynesian versus Neo-Keynesian views; Stickiness of prices, Market failures and need for government intervention, Expansionary Monetary Policy.
5. New- Classical School: Robert Lucas (1937): Rational expectations, Unique equilibrium of economy at full employment, Trade liberalisation and free market approach.

Reference Books:

1. Schumpeter J., A History of Economic Analysis. Oxford University Press, (1954).
 2. Keynes J.M. General Theory of Employment, Interest and Money., Atlantic Publishers and Distributors, (any edition).
 3. Schumpeter J.A. Ten Great Economists: From Marx to Keynes. (Any edition).
 4. Bhatia, H.L., History of Economic Thought, (English, Hindi) Vikash Publishing House.
 5. Ganguli, B.N(1977): Indian Economic Thought: A 19th Century Perspective, Tata Mcgraw Hill.
 6. Hajela,T.N (2011) : History Of Economic Thought (English, Hindi) , Ane Books.
 7. Jhingan, M.L (2008): Aarthik Vicharon Ka Itihas, Vrinda Publications, New Delhi.
 8. Kautilya (1992), The Arthashastra, Translated And Introduced By L.N.Rangarajan, Penguin Books.
 9. Loknathan, V (2009): History of Economic Thought, S.Chand & Company.
 10. Roll,Eric: History of Economic Thaght, Faber.
 11. Sinha, V.C (2011): Aarthik Vicharon Ka Itihas, Mayur Publications.
 12. Staley,Charles.E, "A History of Economic Thought: From Aristole To Arrow", Blackwell Publishing.
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SEMESTER V

MAJOR COURSE - MJ 9:

(Credits: Theory - 04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type of 5 marks. Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ECONOMICS OF JHARKHAND

Theory: 60 Lectures

Course Objectives:

At the master's level, students ought to know different aspects of the State economy. As such, this paper is intended to provide valuable insights about the overall status of Jharkhand economy, including, agriculture, industries, infrastructure and finances of the state.

UNIT- I Overview of Jharkhand Economy

- 1 Jharkhand Economy : Features; Growth of State Domestic Product; Per Capita income; Human Development Index.
- 2 Natural Resources in Jharkhand : Mineral Resources; Water resources; Forest resources; Land resources; Power Resources.
- 3 Population Dynamics of Jharkhand : Growth; Composition; Density; Problems.
- 4 Issues of Poverty and Unemployment; Remedies; Anti-Poverty and Employment Generation Programmes running in the state.

UNIT- II Agriculture

- 1 Agriculture Development in Jharkhand.
- 2 Agricultural Trend : in terms of Area, Production, Regional Pattern and Field of Major Crops; Horticultural/Plantation Crops; Vegetables and Fruits; Floriculture; Sericulture.
- 3 Agricultural Marketing in Jharkhand : Issue; Problems; Remedies.
- 4 Agricultural Prices and Agriculture policy.

UNIT- III Industry, Infrastructure and Regional Imbalances

- 1 Industrial Development in Jharkhand.
- 2 Industrial policy; rural versus urban industrialization.
- 3 Infrastructure Development in Jharkhand : Irrigation and Power Sector; Transport and Communications; Financial Institutions.
- 4 Regional Imbalance : Extent of Disparities, causes and consequences; Identification of backward areas; Measures to reduce imbalances in the state.

UNIT- IV State Finances

- 1 Sources of Revenue of Jharkhand state; Growth of Revenue; GST, Tax Reforms; Sharing of Central Taxes and Grants-in-Aid.
 - 2 Growth of Expenditure of Jharkhand state; Causes for Growth of Public Expenditure.
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SEMESTER V

MAJOR COURSE - MJ 10:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

INTERNATIONAL ECONOMICS

Theory: 60 Lectures

Course Objectives:

1. This course is designed to expose the students to the theory and practice of international trade and of trade-related policies.
2. It focuses on analyzing the gains from trade, the changing patterns of trade, the income distributional consequences of liberalizing foreign trade, the relationship between trade, investment, and economic growth, and the reasons for and consequences of trade policies.

Course Learning Outcomes:

1. On successful completion of this course students will be able to understand different theories of international trade and their economic implications, international trade policies, foreign exchange and Balance of Payment.
2. They will be familiar with the major recent developments in the world trading system, and be able to critically analyze key international issues.

Course Content:

UNIT- I Scope and Theories of International Trade

International Economics: Definition, Nature and Importance.

1. Absolute Cost Advantage.
3. Ricardian Comparative Cost Advantage.
4. Heckscher-Ohlin Theory of International Trade
5. Theory of Reciprocal Demand and Offer Curves

UNIT-II International Trade and Factor Prices

1. Trade, Factor movement and Factor prices.
2. Factor Price – Equalisation Theorem.
3. Stopler-Samuelson Theorem.

UNIT-III International Trade Policy

1. Free Trade vs. Protection; Case for and against Free Trade and Protection.
2. Methods of Trade Restriction: Tariff-Types, Optimum Tariff, Impact of Tariff in partial equilibrium analysis.
3. Quotas-Types, Their impact in partial equilibrium analysis.
4. Forms of Economic Co-operation – Free Trade area, Customs Union and Common Market.

UNIT IV Foreign Exchange

1. Exchange Rate Determination: Gold Standard (Mint Parity); Purchasing Power Parity Theory.
2. Devaluation and Appreciation of Currency & impact on International Trade.
3. Foreign Exchange Control: Meaning and Importance.

UNIT V Balance of trade and Balance of Payment

1. Balance of Trade and Balance of Payment: Concept and Components.
2. Equilibrium and Dis-equilibrium in Balance of Payment; Consequences of Disequilibrium in Balance of Payment.
3. Measures to Correct Deficit in the Balance of Payments.

UNIT VI International Financial Institutions and India

1. Functions of IMF; World Bank; WTO with reference to India.
2. Need and Importance of Foreign Capital in Developing Economies.
3. Multinational Corporations: Meaning; Advantages and Disadvantages.

Reference Books:

1. Bhagwati, J. International Trade, Cambridge Uni. Press
 2. Verma, M.L. International Trade, Vikas Publication
 3. Singh, S. K. International Monetary System-Trends & Issues, Indus Publishing Company
 4. Mannur, H.G. International Economics, Vikas publication
 5. Krugman, Paul R International Economics-Theory and Practice, Pearson Publication
 6. D. Salvatore, International Economics, Wiley India
 7. Sachdeva, International Economics, Vikas Bharati Publication
 8. Vaishya & Sachdeva Singh-Antarashtriya Arthshastra, Oxford & IBH Com.
 9. Sodersten, B.O. and Geoffrey Reed, International Economics, Palgrave Macmillan Publisher.
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SEMESTER V

MAJOR COURSE - MJ 11:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ECONOMIC HISTORY OF INDIA 1857 – 1947

Theory: 60 Lectures

Course Objectives :

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the mechanisms that linked economic development in India to the compulsions of colonial rule.

Course Learning Outcomes :

The course develops critical analytical skills and expose students to understanding the intricacies of India's economic, political and social developments both in the past and present times. It increases their employability by enhancing their ability to deal with a variety of textual and statistical sources, and to draw upon them to construct a coherent argument. These skills would be useful in a variety of careers in academics, research, journalism and the government.

Unit 1

Colonial India : background and introduction

Unit 2

Trends in national income, population : labour and occupational structure

Unit 3

Agriculture, agrarian structure and land relations.

Unit 4

Railways and industry.

Unit 5

Economy and state in the imperial context.

References :-

Some readings may be updated periodically. Material for the course will be drawn from the following sources

1. Balachandran, G. (2016), colonial India and the world economy, C 1850 -1940. In L. Chaudhary, B. Gupta, T. Roy, A. Swami (eds.). A new economic history of colonial India. Routledge.
2. Bogart, D. Chaoudhary, L. (2016). Railways in colonial India : an economic achievement? In L. Chaudhary, B. Gupta, T. Roy, A. Swami (eds) : new economic history of colonial India. Routledge.
3. Chaudhary, L. Gupta, B. Roy, T. Swami, A. (2016). Agriculture in colonial India. In L. Chaudhary, B. Gupta, T. Roy, A. Swami (eds.) : A new economic history of colonial India. Routledge
4. Chaudhuri K. (1982). Foreign trade and balance of payments (1757 – 1947). In D. Kumar, T. Raychaudhari (eds.) : Cambridge economic history of India 1757-c. 1970 2. Orient Longman
5. Guha, S. (1991). Mortality decline in early 20th century India. Indian Economic and Social History Review, 28 (4), 371-87
6. Jain, L.(2011). Indigenous credit instruments and systems. In M. Kudaisya (ed.) : The Oxford India anthology of business history. Oxford University Press.
7. Kelin, I. (1984) When rains fail : Famine relief and mortality in British India. Indian Economic and social History Review 21, 185 - 214

SEMESTER VI

MAJOR COURSE - MJ 12:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

DEMOGRAPHY

Course Objectives:

Theory: 60 Lectures

- 1 The course aims to orient the students with the positive aspects of population and how it can help in the Economic Development of the nation.
- 2 It exposes the students to the important theories of demography.
- 3 The concepts of fertility, mortality and Nuptiality have a direct bearing on growth of population, hence have been taken up. Various population indices have been included.
- 4 The course also focuses on demographics of India and the Population Policy in India.

Course Learning Outcomes:

- 1 At the end of the course, the students will be oriented towards appreciating the link between demography and development of an economy.
- 2 They will understand the subject with the help various theoretical aspects of demography.
- 3 They will have a grasp of quantitative and qualitative aspects of population study and various demographic concepts and indices.

Course Content:

UNIT- I Population and Development

- 1 Meaning of Demography; Scope of Demography.
- 2 Meaning of Population Growth; Components of Population growth; Measurement of Population growth.
- 3 Theories of Population-Malthus theory; Optimum theory; Theory of Demographic Transition.

UNIT-II Analysis of Population Data

- 1 Fertility: Meaning; Importance of study of fertility; Meaning and formula of important Birth Rate Concepts: Crude Birth Rate, Age Specific Birth Rate; Total Fertility Rate, Gross Reproduction Rate and Net Reproduction Rate; Factors affecting fertility rate; Trend of fertility ratio India.
- 2 Mortality – Meaning; Concepts and measurements of important Death rates- Crude Death Rate, Infant Mortality Rate; Neo-Natal Mortality Rate; Maternal Mortality Rate; Factors responsible for decline in mortality in recent past.

UNIT-III Migration and Urbanization

- 1 Migration: Meaning; Types; Factors promoting migration
- 2 Urbanization: Meaning; Characteristics of Urban and Rural areas
- 3 Status and Trend of Urbanization in India; Reasons for increasing urbanization in India

UNIT-IV Population Indices

- 1 Meaning of Life table; Basic concepts of Life Table, Forms of Life Table; Preparation of life table.
- 2 Population Pyramid- Concept; Significance; Construction of Population Pyramid; Shapes of Population Pyramid and their implications.
- 3 Population Projection: stable and stationary population.

UNIT-V Sources of Demographic Data in India

- 1 Sources of Demographic data: Census, Registration and Sample Survey-Their relative merits and demerits.
- 2 Population Census: Methodology of collecting Census data; Characteristics of Census; Nature of information collected in 1991, 2001 and 2011.

UNIT-VI Population Policy in India

- 1 Meaning of Population Policy
- 2 Five Year Plans and Population policy.
- 3 The new population policy 2000.

Reference Books:

- 1 Desai, J. N. Jhingan M. L. and Bhatt B. K. (2003), Demography, Vrinda Publications.
 - 2 Mishra J, (2016), Demography, Sahitya Bhawan Publications.
 - 3 Preston, S, Heuveline, P, and Guillot, Michel (2000), Demography: Measuring and Modelling Population Processes, John Wiley and Sons Publications.
 - 4 Sinha, V. C. and Sinha, P, (2018) (English and Hindi), Demography, SBPD Publication.
 - 5 Weinstein, Jay and Pillai, Vijayan K. (2000), Demography: The Science of Population, Rowman and Littlefield Publications (2015).
 - 6 Mishra, J. P., Jananki (Hindi), (Revised edition 2021) Sahitya Bhawan Publications.
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SEMESTER VI

MAJOR COURSE - MJ 13:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 11hr) + 75 (ESE: 31hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

INDIAN RURAL DEVELOPMENT

Theory: 60 Lectures

Unit I :

Broad features of Indian Economy
Importance of agriculture in Indian economy
Indian agriculture and planning

Unit II :

Land Reforms : Objectives and implementation, changes in land utilization pattern, Cropping pattern – determinants and future of cropping pattern
Pattern of soil conservation

Unit III :

Food problem in India and Food security
Irrigation
Flood Control

Unit IV :

Agriculture marketing system, Agriculture price policy, New agriculture strategy – Green revolution and its impact, Agricultural Labour – problem and measures.

Unit V :

Rural credit in India – need and sources, co-operative credit societies, commercial bank, RR, NABARD strategies rural development, IRDP, SGSY, MNREGA

Unit VI :

Rural Industries importance and problems.
Unemployment
Poverty in India

SEMESTER VI

MAJOR COURSE - MJ 14:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ECONOMICS OF HEALTH AND EDUCATION

Theory: 60 Lectures

Course Objective :-

This is a course in applied economics, which will introduce the students to the study of health and education as components of human capital in the framework of economic theory.

Course Learning Outcomes :-

The students will learn the role of health and education in human development. They will be able to apply economic theory to understand the demand for health care, market failure in health insurance, economic evaluation of health care programmes and the role of public policy in the healthcare industry. They will also learn to analyse the returns to education, its role in labour market signaling and the progress of schooling in India. They will also be exposed to the theories of discrimination.

Unit I :

Role of health and education in human development : health and education outcomes and their relationship with macroeconomic performance.

Unit II :

Topics in health economic theory : demand for health, Grossman's model of demand for health, information asymmetry in healthcare demand, and the health insurance market, physician induced demand, advance selection and moral hazard in health insurance.

Unit III :

Economic evaluation of health care : cost effectiveness and cost-benefit analysis; valuing life.

Unit IV :

Public policy in the health sector : externalities in health and health care ; rationale for government intervention in the health sector.

Unit V :

Education : investment in human capital ; rate of return to education : private and social, quality of education : signaling of human capital; theories of discrimination : gender and caste discrimination in India.

Unit VI :

Education sector in India : an overview

References :-

1. Bhattacharya, J. Hyde, T. Tu, P (2014), Health economics, Palgrave Macmillan.
2. Bhrenberg, R., Smith, R. (2012) Modern labour economics. Theory and public policy, 11th ed. Addison Wesley.
3. World Development Report (1993). Investing in Health. The World Bank .
4. World Health Organisation (2013). The economics of the social determinants of health and health inequalities : A resource book. World Health Organisation.

SEMESTER VI

MAJOR COURSE - MJ 15:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ENVIRONMENTAL ECONOMICS

Theory: 60 Lectures

Course Objective :-

This course focuses on economic cause of environmental problems. In particular, economic principles are applied to environmental questions viewed as externalities and their management through various economic institutions, economic incentives and other instruments and policies. Methods for analyzing economic implications of environmental policy are also addressed as well as the valuation of environmental quality, assessment of environmental damages, and tools needed for the evaluation of projects such as cost-benefit analysis, and environmental impact assessments. Selected topics on international environmental issues are also discussed.

Course Learning Outcomes :-

The module aims to introduce students to the main theoretical and empirical concepts in environmental economics, equip students with a thorough analytical grasp of environmental policy theory, ranging from externalities to international environmental agreements, and familiarize students with the main issues in environmental valuation and with the basic features of the environmental policy tools. At the end of the module the students should be able to demonstrate their understanding of the economic concepts of environmental policy. In some models, the student will be these concepts, use diagrammatic analysis to demonstrate and compare the economic welfare effects of various environmental policy options, demonstrate their understanding of the usefulness and problems related to environmental valuation, and demonstrate their critical understanding of environmental policies.

Unit I :

Introduction : What is environmental economics? Review of microeconomics and welfare economics.

Unit II :

The theory of externalities : Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

Unit III :

The design and implementation of environmental policy : overview Pigouvian taxes and effluent fees; tradable permits, choice between taxes and quotas under uncertainty; implementation of environmental policy.

Unit IV :

International environmental problems : trans-boundary environmental problems; economics of climate change; trade and environment.

Unit V :

Measuring the benefits of environmental improvements : non-market values and measurement methods; risk assessment and perception.

Unit VI :

Sustainable development : concepts; measurement

References :-

1. Aldy, J. et al. (2010). Designing climate mitigation policy. *Journal of Economic Literature*, 48, 903-934
2. Cropper, M. Oates, W. (1992). *Environmental economics : A survey* *Journal of Economic Literature* 30, 675 – 740
3. Heal, G. (2012). Reflections – defining and measuring sustainability. *Review of Environmental Economics and Policy*, 6, 147 -163
4. Kolstand. C. (2010) *Intermediate environmental economics*, 2nd ed Oxford University Press.
5. Newell, R. Pizer, W. Raimi. D. (2013) carbon markets 15 years after Kyoto Lessons learned, new challenges. *Journals of Economic Perspectives*. 27 123
6. Perman, R., Ma, Y, McGilvray, J, Commo, M. (2011), *natural resource and environmental economics*, 3rd ed. Pearson Education / Addison Wesley.
7. Stavins, R. (ed.) (2012). *Economics of the environment : Selected readings*. 5th ed. W. W. Norton.
8. *World Development Report* (1993). Investing in Health. The World Bank .
9. World Health Organization (2013). *The economics of the social determinants of health and health inequalities : A resource book*. World Health Organization.

SEMESTER VII

MAJOR COURSE - MJ 16:

(Credits: Theory-04)

Marks: 25 (S Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd. 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ECONOMICS OF SOCIAL SECTOR

Theory: 60 Lectures

Course Objective :-

This paper is meant to provide insights into the application of economic theory in the design and implementation of public policy related to the management of social sectors. Units incorporated in the course are devoted to issues of social services and the problem of valuation of these services, and designing of instruments and institutions for the management of the social services.

Module – I : Introduction to Social Sector

1. Social Sector : Issues; Scope and Importance; Society and Economics Development.
2. Human Resource Development : Concept; Problems; Strategies and Indicators of Human Resource Development.
3. Human Capital Formation : Role in Social Sector Development; Human Capital versus Physical Capital.

Module – II : Economics of Education

1. Education and Economic Development.
2. Cost of Education : Educational investment; Characteristics of Educational Investment; External Effects of Investments in Education.
3. Benefits of Education : Measurement of Benefits; Education and Productivity; Analysis of Production and Cost Functions of Education.
4. Education in India : Status, Problems, Solutions and Financing; Trends in Expenditure on Education; Education Policy of India.

Module – III : Health Economics

1. Health and Economics Development.
2. Indicators of Health Status; Health Needs & Health Care Sector.
3. Health Economics : Definition; Importance; Scope; Demand and Supply of Health Care.
4. Development of Health Sector in India under Five Year Plans; National Health Policy; Emerging Health Insurance market.

Module – IV : Gender Economics

1. Gender Economics : Concept; Scope and Importance; gender and economic development; Gender equality; Gender differences in economic behavior.
 2. Gender discrimination : Education, health and employment.
 3. Role of Women in Global Economy.
-

SEMESTER VII

MAJOR COURSE - MJ 17:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SLA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. **Group A** is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

MACRO ECONOMIC ANALYSIS

Theory: 60 Lectures

Course Objective :-

This paper is intended to develop the analytical skill to understand the functioning of national economy and the functional relationships between different macro aggregates which is extremely important in any policy-making.

Module – I : Consumption Function

1. Keynes Psychological law of consumption, income – Consumption relationship.
2. Absolute income, Relative income, Life Cycle and Permanent income Hypothesis.
3. Consumption and Asset Price.
4. Consumption under Uncertainty – Modern Approach.

Module – II : Investment Function

1. Marginal Efficiency of capital and investment – long run and short run, Factors affecting Investment Function, Derivation of MEC.
2. Investment Multiplier.
3. Acceleration Principle, Investment Behavior

Module – III : Macro Economic models

1. Classical Macro Economic Model.
2. Neo – Classical Macro Economic Model.
3. Keynesian Macro Economic Model.
4. Post Keynesian Macro Economic Model – Rational and Adaptive Expectation Model, Mundell Fleming Model.

Module – IV : Theories of Inflation

1. Classical, Keynesian and Monetarist approaches to Inflation; Structuralist theory of inflation.
2. Inflationary Gap, Measures to remove the gap, Demand Pull and Cost Push theory of inflation.
3. Phillips curve analysis : Short-run and long-run; the natural rate of Unemployment Hypothesis; Tobin's modified Philips Curve.
4. Control of Inflation by Monetary, Non-Monetary and fiscal measures.

Module – V : Economic Fluctuations

1. Business cycle – Nature Scope, Phases, Monetary and Non-Monetary Theory.
 2. Traditional Theories of business Cycle (Schumpeter's and Kaldor).
 3. Business Cycle Theories of Hicks and Samuelson.
-

SEMESTER VII

MAJOR COURSE - MJ 18:

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 11hr) + 75 (ESE: 31hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

AGRICULTURAL ECONOMICS

Theory: 60 Lectures

Course Objective :-

- 1 This course is designed to expose the students to the nature, scope and Principles of agricultural Economics.
- 2 The emphasis of this course is on concepts and introduction of various tools required for analysis in agricultural economics.
- 3 In particular, the course aims to deepen students' understanding of how economic theory can be applied to analyse policy problems of agricultural sectors.
- 4 It also focuses on analysing the Principles of Agricultural production, costs and prices.

Course Learning Outcomes:

- 1 On completion of the course, the students will be able to understand the role of agriculture in economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole.
- 2 The students can develop understanding of economic theories applicable in analysing the problems of agricultural production, costs and prices.

Course Content:

UNIT- I Overview of Agricultural Economics

- 1 Nature and scope of agriculture: Traditional agriculture and its modernization;
- 3 Role of Agriculture in economic development; Interdependence of Agriculture and Industry
- 4 Mellor's approach and Lewis Model; Linkages between agriculture and industry; Sustainable agricultural development.
- 5 Ranis – Fie Model of Agricultural Growth.

UNIT II Principles of Agricultural Economics

- 1 Farm Management; Features and Kinds of firm ownership
- 2 Farm size and productivity
- 3 Intensive and extensive cultivation
- 4 Classification of agricultural products (cash and food crops, cereal and non- cereal crops)

UNIT III Principles of Agricultural Production

- 1 Production and Production Functions: Short Run and Long Run Production Function.
- 2 Relationship between TPP, APP and MPP.
- 3 Factor-Product Relationship
- 4 Laws of Returns: Law of Increasing Returns, Law of Constant Returns and Law of Diminishing Returns.
- 5 Product-Product Relations: Production Possibility Curve, Iso Revenue line, Optimum Product combination.

UNIT IV Principles of Agricultural Cost and Pricing

- 1 Cost relationships and Profit maximization.
- 2 Marketing Costs and Margins.
- 3 Supply behavior in Agriculture.
- 4 Risk and uncertainty in Farming: Sources of Risk, Measuring the Expectation and Variation, Measures to manage Farm Risk.

UNIT V Agricultural Prices

- 1 Meaning.
- 2 Types of Price instability, causes and impact of price fluctuations.
- 3 Agricultural price determination.
- 4 Cobweb model of Agricultural Pricing.
- 5 Trends in Agricultural Prices.

UNIT VI Agricultural Marketing

- 1 Meaning and scope of Agricultural Marketing.
- 2 Significance of Agricultural Marketing.
- 3 Market Risks.
- 4 Marketed and Marketable Surplus.

Reference Books:

- 1 Andrew Barkley, Principles of Agricultural Economics, Routledge Taylor and Francies, London and New York.
 - 2 Sadhu, A. N. and Singh Amarjeet: Fundamental of Agricultural Economics, Himalaya Publishing House, New delhi.
 - 3 Lekhi, R. K. & Singh, Joginder: Agricultural Economics-An Indian Perspective, Kalyani Publishers, New Delhi.
 - 4 S. Subba Reddy, P. Raghu Ram, T.V. Neelakanta Sastry, I. Bhavani Devi: Agricultural Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
 - 5 Arun Katyan: Krishi Vigyan ke Sidhant, Kitab Mahal Publishers, New Delhi
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SEMESTER VII

MAJOR COURSE - MJ 19: (Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

LABOUR AND INDUSTRIAL ECONOMICS

Theory: 60 Lectures

Course Objectives:

- 1 The syllabus is designed to enable the students to have an understanding of the basics of industrial economics and labour economics.
- 2 It covers the nature, scope and importance of industrial economics. Important topics like Industrial Revolution, Business organisations, Industrial productivity, and Industrial finance are included. Industrial growth pattern in India along MSME sector has been covered.
- 3 Different aspects of Labour Economics have been introduced before exploring the labour market, labour legislations and wage boards in India.
- 4 The course ends with composition of labour force, Industrial disputes and social security of labour in India.

Course Learning Outcomes:

- 1 The course has been so designed that it will equip the students to have a thorough grasp of different aspects of Industrial and Labour Economics with focus on India.

Course Content:

UNIT- I Industrial Economics: An Introductory Framework

- 1 Meaning and Definition of Industrial Economics; Subject Matter of Industrial Economics; Nature of Industrial Economics Importance of the study of Industrial Economics;
- 2 Industrial Revolution; Industrialization in India; Index of Industrial Production (IIP)

- 3 Need for rapid industrialization; Obstacles to Industrialization
- 4 Business Organization: Definition; Types (Proprietorship, Partnership, Corporations and Limited Liability Companies); Firms: Meaning; Ownership; Objectives

UNIT-II Industrial Productivity and Finance

- 1 Meaning of Industrial Productivity
- 2 Factors affecting Industrial Productivity, Indicators of Industrial Productivity
- 3 Internal and External Sources of Industrial finance; Debt versus Equity
- 4 Major funding agencies -IDBI, IFCI, SFCs, SIDBI and Commercial Banks.

UNIT-III Industrial Growth Pattern

- 1 New Industrial Policy in India
- 2 Role of Public and Private Sector; Performance of Private and Public Sector in India
- 3 Large Scale Industries: Meaning; Advantages
- 4 Medium Small and Micro Enterprises (MSME)- Classification; Importance; Features

UNIT-IV Labour Economics and Labour market

- 1 Meaning and Definition of Labour Economics; Scope and Importance of Labour Economics
- 2 Major Labour Problems in India
- 3 Concept of Labour Market; Analysis of Demand and Supply of labour; Factors affecting demand and Supply of labour
- 4 Characteristics of labours Market in India.

UNIT-V Wages

- 1 Theories of Wage determination: Classical; Neo-Classical; Bargaining Theory
- 2 Types of wages in India; Wage Policies in India- Payment of Wages Act 1936, Minimum wages Act 1948, Equal Remuneration Act 1976, Payment of Bonus Act 1965 Wage Board: Meaning and Objectives; Wage Board in India.

UNIT-VI Labour in India and Social Security Measures

- 1 Working age population and labour force participation rate; Labour Force Participation Rate in India
- 2 Meaning of Industrial Disputes; Causes and effects of Industrial Disputes; Machinery of settling the Industrial Disputes in India
- 3 Social Security: Meaning; Scope; Objectives; Importance; Category of Social Security Measures; Social Security Schemes in India

Reference Books:

- 1 George, J. Borjas, (2013 6th edition) Labour Economics, McGraw Hill.
- 2 Hay, D. and Morris, D J (1979) Industrial Economics: Theory and Evidences, Oxford University Press, New Delhi.
- 3 Burthwal, R.R. (1985), Industrial economics, Wiley Eastern Ltd., New Delhi.
- 4 Singh, A. and Sadhu, A.N. (1988), Industrial Economics, Himalaya Publishing House.
- 5 Tyagi, B.P. (2009), Economics and social welfare-Revised Edition, Sage Publication, New Delhi.
- 6 Gupta, S.B., (2022), Audyogik Arthshastra, SBPD Publications.
- 7 Sinha, V.C., Shram Arthashastra, SBPD Publications.
- 8 Yadav, Ravi Prakash (2015) Social Security in India, Avishkar Publishers.

SEMESTER VIII

MAJOR COURSE - MJ 20 :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

MONETARY ECONOMICS AND FINANCIAL MARKETS

Theory: 60 Lectures

Course Objectives:

A clear understanding of the operations of money, interactions between aggregates and real aggregates, monetary policy interventions and their interactions with the rest of the economy is essential to realize how monetary forces operate through a multitude of channels viz., markets, non-markets, institutions and the State. This paper enables the students to understand the above in a systematic manner.

Module – I : Supply of Money

1. Approaches towards determination of money supply : Traditional Approach, Sukhmoy Chakarbarty Committee approach, RBI Approach to Money Supply & Recent charges.
2. Determinants of Money supply : High Powered Money and Money Multiplier.
3. Control of Money Supply : Policy Rates and Reserve Ratio.

Module – II : Demand for Money

1. Classical Approach to Demand for Money : Quantity Theory Approach (Fisher and Cash balance).
2. Keynes's demand for money.
3. Post Keynesian Approach to Demand for Money : Patinkin and Real Balance Effect, Friedman and modern quality theory.
4. Modern Approaches of Demand for Money – Baumol; and Tobin's *(introduction to Portfolio balance effect).

Module – III : Money and Capital Markets

1. Role and structure of money market in India; Instruments of Money market.
2. Sub market; Call money market, Treasury bill market, Discount market.
3. Securities market; Markets for derivatives; Future and options and other derivatives; Primary and secondary market for securities.
4. SEBI : Its impact on working of capital market in India, IRDA and its role in financial markets.

Module – IV : Foreign Exchange Markets

1. Exchange rate – fixed and floating exchange rates.
 2. Spot market and Forward market, Interest arbitrage.
 3. Foreign exchange market – exposure and management.
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SEMESTER VIII

RESEARCH METHODOLOGY :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 0

Instruction to Question Setter for

Semester Internal Examination (SIE: 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

RESEARCH METHODOLOGY

Theory: 60 Lectures

Course Objectives :

The main purpose to introduce to paper is to develop the research competency of the student at the highest level. This paper is expected to develop the aptitude of research, to describe, interpret and explain phenomena by relating it to other phenomena, thereby setting it within its proper context and by making its meaning or sense explicit through its chain of interconnections.

Module – I : Introduction to Research Process

1. Research : Meaning and Characteristics.
2. Types of Research; Methods of Research.
3. Pure and Applied Research : Qualitative, Quantitative and Mixed; Exploratory, Descriptive, Diagnostic, Evaluation, Action and Experimental Research; Historical Research; Surveys; case Study; Field Study.

Module – II : Steps of Research Process

1. Planning a Research : Identification of Research Problem; Defining the Research Problem; Theoretical Foundation; Review of Literature; Objectives; Hypotheses : Difference between a Proposition, a Hypothesis and a theory; Data Source; Sampling; Methodology; Reference and Documentation.
2. Need and Importance of Research in Economics.

Module – III : Statistical Methods - I

1. Simple Correlation : Karl Pearson's and Product Moment Method; Rank Correlation.
2. Standard Error of Estimates and Probable Error estimates; Partial and Multiple Correlation.
3. Regression Analysis : Regression Coefficients and its properties; Estimation of lines of Regression.

Module – IV : Statistical Methods - II

1. Addition and Multiplication theorems of Probability; conditional probability; Bayes theorem.
2. Random variables; Probability, mass and density functions.
3. Discrete and Continuous Probability Distributions.
4. Binomial, Poisson and Normal Distribution and their properties [without derivation].

Module – V : Statistical Decision Making

1. Sampling : Basic Concepts; Types; Sampling Distributions; Sampling Distribution of Means.
 2. Statistical Hypothesis, Hypothesis Testing; Type – I and Type – II errors.
 3. Null and Alternate Hypothesis, Formulation of Hypothesis, level of significance.
 4. Hypothesis testing based on t, F, z and chi-square distributions.
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SEMESTER I

MINOR COURSE – MN - 1A :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

MICRO ECONOMICS - I

Theory: 60 Lectures

Unit 1 : Introduction

- 1.1 : Subject Matter of Economics; Central Economic Problems.
- 1.2 : Micro and Macro Economics.

Unit 2 : Consumer Behaviour and Demand

- 2.1 : Cardinal Utility Analysis : Total and marginal Utility; Law of Diminishing Marginal Utility; Law of Equi-Marginal Utility; Consumer's Equilibrium.
- 2.2 : Ordinal Utility Analysis : Indifference Curves; Budget Constraints; Consumer's Equilibrium.
- 2.3 : Consumer's Surplus : Marshallian Approach.
- 2.4 : Law of Demand; Elasticity of Demand : Price, Income and Cross.

Unit 3 : Theory of Production

- 3.1 : Production Function : Short Run and Long Run.
- 3.2 : Law of variable Proportions; Returns to Scale.

Unit 4 : Theory of Costs and Revenue

- 4.1 : Concepts of Costs and their inter-relationship : Short Run and Long Run.
- 4.2 : Concepts of Revenue and their inter-relationship.

Unit 5 : Market Structure

- 5.1 : Equilibrium of the Firm and Industry under Perfect Competition.
- 5.2 : Monopoly : Price and Output Determination.

SEMESTER II

MINOR (VOCATIONAL STUDIES) – MN - 2A :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. **Group A** is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ENTREPREURSHIP - I

Theory: 60 Lectures

Unit 1 : Entrepreneur – Concepts and Approaches

Concepts and characteristics of Entrepreneur, Qualities of a successful Entrepreneur, Functions, Role and Importance of Entrepreneur.

Women Entrepreneur : Definition, Functions, Problems and Remedies; Role of Entrepreneur as an Innovator.

Unit 2 : Small Scale Industry and Entrepreneurship Development

Small Scale Industries in India : Meaning, Types and Characteristics of Small Scale Industries; Role and Impotence of Small and Cottage Industries in India; Problems of SS1 and Remedial Measures.

Entrepreneurship & Development Programmes [EDP] :

Objectives of EDP, Rationale of EDP, Significance and Role of EDP, Achievements of EDP.

Unit 3 : Business Ethics

Business Ethics : Meaning, Features, Types, Elements, Factors affecting Ethical Designs, Types of Management Ethics, Benefits; Unethical Behavior, Barriers to Management Ethics, Solution.

Entrepreneurship Motivation :

Objective and Characteristics of Motivation, Need and Importance of Motivation.

Unit 4 : Leadership

Definition, Characteristics, Importance, Qualities of a Good Leader.

SEMESTER III

MINOR COURSE – MN – 1B :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 11hr) + 75 (ESE: 31hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. Question No.2 will be **short answer type** of 5 marks. Group B will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be **two** group of questions. Group A is **compulsory** which will contain three questions. Question No.1 will be **very short answer type** consisting of five 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 fifteen marks each, out of which any four are to answer.

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

MONEY AND BANKING

Theory: 60 Lectures

Unit 1 : Money

- 1.1 : Money : Meaning & Function : Role of Money in Capitalistic, Socialistic & Mixed Economics.
- 1.2 : Quantity Theory of Money : Transactions Approach and Cash Balance Approach.

Unit 2 : Central Banking

- 2.1 : Objectives, Functions and Limitations of Central bank with reference of RBI.
- 2.2 : Quantitative and Qualitative Methods of Credit Control.

Unit 3 : Commercial Banking

- 3.1 : Meaning, Types, Functions and Principles of Commercial Banks.
- 3.2 : Process of Credit Creation.
- 3.3 Commercial banking in India : Evaluation of Banking Sector since Independence; Critical Appraisal of Commercial Banking after nationalization.

Unit 4 : Inflation

- 4.1 : Definition, Types, Causes and Effects of Inflation.
- 4.2 : Measures to Control Inflation.
- 4.3 : Concept of Inflationary Gap.

SEMESTER IV

MINOR (VOCATIONAL STUDIES) – MN – 2B :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

ENTREPREURSHIP - II

Theory: 60 Lectures

Unit 1 : Finance and Market Dynamics

Institutional Finance to Entrepreneurship, Introduction to market Dynamics, Sensing and Identification of Entrepreneurial Opportunities.

Unit 2 : Market Assessment

Scanning of Environment, Market Assessment, Selection and Setting up of an Enterprise, Business Planning.

Unit 3 : Project Work : Concepts

Project Work, Project Management, Selection of Product, Project Formulation and Report, Project Appraisal/ Resource Assessment.

Unit 4 : Facilities & Technologies

Facilities and Technologies for Starting an Enterprise, Production Management and Quality Control.

Readings :

1. Panda, Shiba Charan Entrepreneurship Development : New Delhi, Anmol Publications (Latest Edition)
2. Plsek Paul E. Creativity, Innovation and Quality (Eastern Economic Edition); New Delhi Prentice Hall of India ISBN 81-203-1690-8
3. SIDBI Reports on Small Scale Industries Sector.
4. Singh Nagendra P. Emerging Trends in Entrepreneurship Development, New Delhi ASSED
5. S S Khonka Entrepreneurial Development S, Chand & Co. Delhi.

SEMESTER V

MINOR COURSE – MN – 1C :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 11hr) + 75 (ESE: 31hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

INDIAN ECONOMICS

Theory: 60 Lectures

Unit 1 : Structure of Indian Economy

- 1.1 : Basic Features of Indian Economy
- 1.2 : Natural Resources : Land, Water and Forest Resources.
- 1.3 : Broad Demographic Features.

Unit 2 : Planning in India

- 2.1 : Objectives, Achievements and Failures of Planning; Analysis of Current Five Year plan.
- 2.2 : New Economic Reforms : Liberalization, Privatization and Globalization; their progress.

Unit 3 : Important Areas of Concern

- 3.1 : Poverty and Inequality;
- 3.2 : Problem of Unemployment;
- 3.3 : Problem of Rising Prices;

SEMESTER VII

MINOR COURSE – MN – 1D :

(Credits: Theory-04)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: Th (SIE + ESE) = 40

Instruction to Question Setter for

Semester Internal Examination (SIE 20+5=25 marks):

There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five 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 fifteen marks each, out of which any four are to answer.

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

DEVELOPMENT ISSUES OF INDIAN ECONOMY

Theory: 60 Lectures

Unit 1 : Agriculture

- 1.1 : Nature, Importance and Trends of Indian Agriculture.
- 1.2 : Land Reforms.
- 1.3 : New Agricultural Strategy and Green Revolution.
- 1.4 : Rural Credit.

Unit 2 : Industry

- 2.1 : Industrial Development during the Planning Period.
- 2.2 : Industrial Policies of 1948, 1956 and 1991.
- 2.3 : Large Scale Industries : Sugar, Iron and Steel, Jute and Cotton Textile Industries.
- 2.4 : Small Scale Industries : Growth, Importance and Problems.

Unit 3 : External Sector

- 3.1 : Role of Foreign Trade.
- 3.2 : Trends in Export and Import.
- 3.3 : Composition and Direction of India's Foreign Trade.