Government K.L. Arts & Commerce College
Bagbahara, Dist. Mahasamund (C.G.)
Affiliated to Pt. Ravishankar Shukla University Raipur (C.G.)
UGC Code:202052

AISHE Code:C-21751
Email:gcollegebgbr@gmail.com

Contact: 7707296171   Website- www.gklclgbgbr.in

Bagbahara, Date- 13.01.2022

No. Q-1/NAAC/2022

To,

Deputy Advisor
National Assessment and Accreditation Council,
P.O. Box No. 105, Janabharati Road,
Opp. NLSIU, Nagarbhavi, Bangalore- 560072

Subject- Related to Finding DVV Metric ID 1.1.3

Respected Sir/Madam,

It is certified that:-

1. all the courses given in the list are being conducted as per the syllabus prescribed by Pt. Ravishankar Shukla University. Revised course list is presented here.

2. Courses like Foundation English and Hindi are common in all UG programs but different course codes are given by Pt.Ravishkar Shukla University Raipur (C.G.) , so different course codes are shown in the course list.

2019-20	2018-2019	2017-18	2016-17	2015-16
178	157	140	140	140

Principal
Govt.K.L.Arts & Commerce College
Bagbahara, Dist.Mahasamund(C.G)

पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छत्तीसगढ़)

पाठ्यक्रम

बी.ए.-2 (कोड-102) B. A.-2 (Code-102)

बी.ए. क्लासिक्स-2 (कोड-062) B.A. CLASSICS-2 (Code-062)

परीक्षा : 2016-17

कुलसचिव पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छत्तीसगढ़) की ओर से

हिन्दी साहित्य

प्रथम प्रश्न पत्र

अर्वाचीन हिन्दी काव्य (पेपर कोड-0173)

अंक – 75

प्रस्तावना- आधुनिक काव्य आधुनिकता की समस्त विशेषताओं को समेटे हुए हैं । स्वतंत्रता प्राप्ति के पूर्व की भाव-भाषा, शिल्प, अन्तर्वस्तु संबंधी समस्त विकास धारा यहां सजीव रूप में देखी जा सकती है । इसे अनदेखा करना मनुष्य की विकास यात्रा को नजर अंदाज करना है । इस यात्रा के साक्षात्कार के लिए आधुनिक काव्य का अध्ययन अपेक्षित ही नहीं अपितु अनिवार्य है ।

पाठ्य विषय –

1.	मैथिलीशरण गुप्त	–	भारत-भारती की कविताएँ
2.	सूर्यकान्त त्रिपाठी निराला	–	(1) सखि वसन्त आया ।
			(2) वर दे, वीणा वादिनी वर दे ।
			(3) हिन्दी के सुमनों के प्रति पत्र ।
			(4) तोड़ती – पत्थर ।
			(5) राजे ने अपनी रखवाली की ।
3.	सुमित्रानंदन पंत	–	(1) बादल ।
			(2) परिवर्तन 2 पद
			(1. खोलता इधर जन्मलोचन 2. आज का दुख कल का आल्हाद)
			(3) ताज ।
			(4) झंझा में नीम ।
			(5) भारत माता ।
4.	माखन लाल चतुर्वेदी	–	(1) बलि पंथी से ।
			(2) साँझ और ढोलक की थापें ।
			(3) मैं बेच रही हूँ, दही ।
			(4) उलाहना ।
			(5) निःशस्त्र सेनानी ।
5.	स.ही. वात्स्यायन अज्ञेय	–	(1) सबेरे उठा तो धूप खिली थी ।
			(2) साम्राज्ञी का नैवेद्य दान ।
			(3) घर ।
			(4) चांदनी जी लो ।
			(5) दूर्वांचल ।

द्रुतपाठ हेतु कवियों का अध्ययन किया जाएगा, जिन पर लघूत्तरी प्रश्न पूछे जायेंगे –

1. अयोध्या सिंह उपाध्याय ''हरिऔध'' ।
2. सुभद्रा कुमारी चौहान ।   3.   श्रीकांत वर्मा ।

अंक विभाजन-

3 व्याख्याएं	–	21 अंक
2 आलोचनात्मक प्रश्न	–	24 अंक
5 लघुत्तरीय प्रश्न पत्र	–	15 अंक
15 वस्तुनिष्ठ / अति लघुत्तरीय प्रश्न	–	15 अंक
कुल अंक	–	**75 अंक**

B.A.-Bat-II

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इकाई विभाजन –

इकाई–1 व्याख्या

इकाई–2 गुप्त, निराला

इकाई–3 पंत, चतुर्वेदी, अज्ञेय

इकाई–4 द्रुतपाठ के कवि एवं आधुनिक काव्य धारा का इतिहास
(राष्ट्रीय काव्य धारा, छायावाद, प्रगतिवाद, प्रयोगवाद, नई कविता)

इकाई–5 वस्तुनिष्ठ/लघूत्तरीय प्रश्न (सम्पूर्ण पाठ्यक्रम से)

हिन्दी साहित्य
द्वितीय प्रश्न पत्र
हिन्दी निबंध तथा अन्य गद्य विधाएँ (पेपर कोड–0174)   अंक – 75

पाठ्य विषय–

व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक नाटक, पांच प्रतिनिधि निबंध और पाँच एकांकी का निर्धारण किया गया है ।

नाटक–   अंधेरी नगरी–भारतेन्दु हरिश्चन्द्र

निबंध–   1. क्रोध   –   आचार्य रामचन्द्र शुक्ल ।
2. बसन्त   –   डॉ. हजारी प्रसाद द्विवेदी ।
3. उस अमराई ने राम–राम कही है –   डॉ. विद्यानिवास मिश्र ।
4. काव्येषु नाट्यम रम्यम्   –   बाबू गुलाब राय ।
5. बेईमानी की परत   –   हरिशंकर परसाई

एकांकी– 1. औरंगजेब की आखिरी रात   –   डॉ. रामकुमार वर्मा
2. स्ट्राईक   –   भुवनेश्वर
3. एक दिन   –   लक्ष्मीनारायण मिश्र
4. दस हजार   –   उदयशंकर भट्ट
5. मम्मी ठकुराईन   –   डॉ. लक्ष्मीनारायण लाल

द्रुतपाठ के लिए तीन गद्यकारों का अध्ययन किया जायेगा, जिन पर लघुत्तरीय प्रश्न पूछे जायेंगे ।

1. राहुल सांकृत्यायन   2. महादेवी वर्मा   3. हबीब तनवीर

अंक विभाजन–   3 व्याख्याएं   –   21 अंक
2 आलोचनात्मक प्रश्न   –   24 अंक
5 लघूत्तरीय प्रश्न   –   15 अंक
15 वस्तुनिष्ठ / अति लघुत्तरीय प्रश्न –   15 अंक
कुल   –   75 अंक

इकाई विभाजन–

इकाई–1 व्याख्या

इकाई–2 अंधेरी नगरी एवं क्रोध, बसन्त, उस अमराई ने राम–राम कही है ।

इकाई–3 औरंगजेब की आखिरी रात, स्ट्राईक, एक दिन, दस हजार, मम्मी ठकुराईन

इकाई–4 द्रुतपाठ के गद्यकार–राहुल सांकृत्यायन, महादेवी वर्मा, हबीब तनवीर ।

इकाई–5 वस्तुनिष्ठ/अति लघूउत्तरीय प्रश्न (समग्र पाठ्य विषय से)

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राजनीतिक

प्रथम प्रश्न पत्र

पाश्चात्य राजनीतिक चिंतन (पेपर कोड-0183)

पू क – 75

इकाई-1 1. Plato प्लेटो – आदर्श राज्य की अवधारणा के विशेष संदर्भ में, शिक्षा, साम्यवाद, दार्शनि शासक।

2. Aristotle अरस्तू – राज्य, संविधानों का वर्गीकरण, दासता, क्रांति संबंधी विचार ।

इकाई-2 3. Machiavelli मेम्यारिली– मेम्यारिली का राज्य एवं शासन, धर्म, नैतिकता संबंधी चार एवं राजदर्शन को देन ।

Hobbes 4. हाब्स – सामाजिक समझौता संबंधी विचार

Locke 5. लांक – का सामाजिक समझौता संबंधी विचार

Rousseau 6. रूसो – रूसो का समाजिक समझौता संबंधी विचार, सामान्य इच्छा का सिद्धांत

इकाई-3

Bentham 7. बेंथम का उपयोगितावाद

J.S. Mill 8. जे.एस.मिल. – राज्य, स्वतंत्रता, अधिकार एवं प्रतिनिधि शासन संबंधी विचार

इकाई-4

Hegel 9. हीगल – हीगल के राज्य संबंधी विचार, द्वंद्ववाद

T.H. Green 10. टी.एच. ग्रीन – राज्य एवं शासन संबंधी विचार, स्वतंत्रता, राजदर्शन को देन

इकाई-5

Karl Mark 11. मार्क्स – का द्वंद्वात्मक भौतिकवाद, वर्ग संघर्ष का सिद्धांत, अतिरिक्त मूल्य का सिद्धांत, हास की आर्थिक व्याख्या, मार्क्स की देन ।

संदर्भ ग्रंथ –

1.	के.एन. वर्मा	– राजदर्शन
2.	प्रभुदत्त शर्मा	– पाश्चात्य एवं आधुनिक राजनीतिक चिंतन का इतिहास
3.	जीवन मेहता	– राजनीतिक चिंतन का इतिहास
4.	बाबूलाल फाडिया	– राजनीतिक चिंतन का इतिहास
5.	गेटल	– हिस्ट्री ऑफ पॉलिटिकल प्वाइंट
6.	फोस्टर एण्ड जोन्स	– मास्टर ऑफ पॉलिटिकल प्वाइंट, पार्ट 1 : 2
7.	कोकर	– रिसेन्ट पॉलिटिकल प्वाइंट
8.	एस. मुकर्जी एवं एस. रमास्वामी	– ए हिस्ट्री ऑफ पॉलिटिकल प्वाइंट, प्लेटो टू मार्क्स
9.	वार्कर	– ग्रीक पॉलिटिकल ब्यौरी
10.	सेबाइन	– हिस्ट्री ऑफ पॉलिटिकल ब्यौरी ।

B.A.-Part-II

(14)

प्राचार्य
स्व. ख. झ. कला एवं वाणिज्य
महाविद्यालय, बमबाहस
जिला– महासमुन्द (छ. ग.)

राजनीति शास्त्र

प्रश्न पत्र – द्वितीय

तुलनात्मक शासन एवं राजनीति (पेपर कोड-0184)

(ब्रिटेन, अमेरिका, चीन, स्विटरजैंड के विशेष संदर्भ में)

पूर्णांक – 75

इकाई–1 तुलनात्मक राजनीति का अर्थ, प्रकृति, क्षेत्र एवं समस्याये ।

तुलनात्मक राजनीति के अध्ययन के उपागम : राजनीतिक व्यवस्था का उपागम–डेविड ईस्टन एवं आमण्ड एवं पावेल के अनुसार ।

संवैधानिक परम्परायें एवं संविधान की विशेषतायें ।

इकाई–2 संवैधानिक संरचना-कार्यपालिका का अर्थ, प्रकार, कार्य शक्तियों का केन्द्रण, तुलनात्मक विवेचन ।

इकाई–3 संवैधानिक संरचना-विधायिका- संगठन, कार्य, द्विसदनीय व्यवस्थापिका का पक्ष विपक्ष, तुलनात्मक अध्ययन ।

इकाई–4 संवैधानिक संरचना-न्यायपालिका संगठन, कार्य, स्वतंत्रता, महत्व, विधि का शासन एवं न्यायिक पुनराविलोकन ।

इकाई–5 राजनीतिक, संस्कृति एवं राजनैतिक ।

समाजीकरण की अवधारणा, राजनीतिक दल-विशेषताएँ एवं महत्व, दबाव समूह, अर्थ, प्रकार, परिभाषा एवं महत्व ।

राजनीतिक प्रक्रिया में नारी की भूमिका ।

संदर्भ ग्रंथ –

1.	जैन एवं फाडिया	–	तुलनात्मक शासन एवं राजनीति
2.	प्रभुदत्त शर्मा	–	तुलनात्मक राजनीति
3.	एस.सूरी	–	तुलनात्मक राजनीति के सिद्धांत
4.	आशा गुप्ता	–	तुलनात्मक शासन एवं राजनीति
5.	जे.सी. जौहरी	–	तुलनात्मक राजनीति
6.	सी.बी. ग्रेना	–	तुलनात्मक राजनीति एवं राजनैतिक संस्थाएं
7.	राय एवं सिंह	–	तुलनात्मक राजनीति
8.	एस.आर. माहेश्वरी	–	तुलनात्मक राजनीति
9.	आर.बी.एस. जैन	–	तुलनात्मक राजनीति
10.	जे.सी. जौहरी	–	कम्परेटिव्ह पॉलिटिक्स
11.	विद्या भूषण	–	कम्परेटिव्ह पॉलिटिक्स
12.	डि. डियोन	–	कम्परेटिव्ह- गवर्नमेंट एण्ड पॉलिटिक्स
13.	एस.ई. फाइनर	–	कम्परेटिव्ह गवर्नमेंट
14.	एच. फाइनर	–	व्योरी एण्ड प्रेक्टिस ऑफ माडर्न गवर्नमेंट

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B.A.-Part-II

ECONOMICS

PAPER - I

MACRO ECONOMICS

(Paper Code-0181)

UNIT-I   National Income & Social Accounts Concept and Measurement of National Income; National Income identities with government and international trade; Sectors of National Accounts; Green accounting Say's Law of Markets and the classical theory of employment; Keyne's objection to the classical theory; Aggregate demand and aggregate supply functions; The principle of effective demand.

UNIT-II   Consumption function - Average and marginal propensity to consume; Factors influencing consumption spending; The investments multiplier and its effectiveness in LDCs; Theory of investment - Autonomous and induced investment; Marginal efficiency of capital; Rate of interest classical savings theory & Investment - ex-post and ex-ante, Equality & Equilibrium.

UNIT-III   Nature and characteristics of trade cycle; Hawtrey's monetary theory; Hayek's over investment theory; Keynes' view on trade cycle; The concept of accelerator; Samuelson and Hicks multiplier, accelerator model, Control of trade cycles.

UNIT-IV   International Trade - Inter-regional and international trade, Comparative advantage and opportunity Cost, Heckser Ohlim Theory its main feature assumptions & limitations. Term of Trade. Tariffs & Quotas concept of optimum tariff.

Balance of trade & Balance of Payment- Concept & Components of BOP, Equilibrium & disequilibrium in BOP Varius measures to correct deficit in BOP, Relative merits & demerits of devalautaion. Foreign Trade Multiplier.

UNIT-V   Functions of IMF, World Bank and WTO, Reform of the international monetory system with special reference to India.

Foreign Trade in India recent Changes in the Composition and direction of foreign trade. Causes & affects of persistent deficit in Bop the Measures adopted by the government to correct the deficit after 1991 Partial & Full Convertibility of Rupee, Instruments of export promotion & Recent Export & Import Policies of India & Role of Maltinational Corporations in India.

BASIC READING LIST -

- Ackley, G. (1976) - Macro Economics; Theory and Policy, Mcmillan Publishing Company, Newyork.
- Day, A.C.L. (1960) - Outline of Monetary Economics, Oxford University Press Oxford.
- Gupta, S.B. (1994)- Monetary Economics, S. Chand and Co., Delhi
- Heijdra, B.J. and F.V. Ploeg (2001) - Foundations of Modern Macro-economics, Oxford University Press, Oxford.
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- Shapiro, E. (1996) - Macroeconomic Analysis, Galgotia Publications, New Delhi .

B.A.-Part-II

(17)

PRINCIPAL

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READING LIST -

- Ackley, G. (1976), Macroeconomics : Theory and Policy, Macmillan publishing Company, New York.
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- Gupta, S.B. (1994)- Monetary Economics, S. Chand and Co., Delhi
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- Shapiro, E. (1996) - Macroeconomic Analysis, Galgotia Publications, New Delhi.
- Dillard, D. (1960)- The Economics of John Mayanand Keynes, Crossby Lockwood and Sons, London.
- Hanson, A.H. (1953), A Guide to Keynes, McGraw Hill, New York.
- Higgins, B. (1963), Economic Development; Principles, Problems and Policies, Central Book Depot, Allahbad.
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- Lucas, R. (1981), Studies in Business Cycle Theory, MIT Press, Cambridge, Massachusetts.
- Mier, G.M. and R.E. Baldwin (1957), Economic Development; Theory, History and Policy Wiley & Sons Inc. ; New York.
- Powelson, J.P.C. (1960), National Income and Flow of Funds Analysis, McGraw Hill, New York.
-

ECONOMICS

PAPER - II

MONEY, BANKING AND PUBLIC FINANCE

(Paper Code-0182)

UNIT-I   Basic concepts : Money - meaning and functions, Gresham's law; Role of money in Capitalist, Socialist and Mixed economics; Quantity theory of money- Cash transaction and cash balance approaches; Value of Money, Inflation, deflation and reflation defination, types, causes and effects of inflation on different sectors of the economy; Demand pull and cost push inflation; Measures to control inflation. Trade off between inflation & unemployment.

UNIT-II   Commercial banking- meaning and types; Functions of commercial banks The process of credit creation prupose and limitations; Liabilities and assets of banks; Evolution of commercial banking in India after independence; A critical appraisal of the progerss of commercial banking after Nationalization; Recent reforms in banking sector in India. Functions of a central bank; Quantitative and qualitative methods

इतिहास

प्रश्न पत्र – प्रथम

(भारत का इतिहास सन् 1206 से 1761 ई. तक)

(पेपर कोड–0179)

उद्देश्य – इस पाठ्यक्रम का उद्देश्य विद्यार्थियों को मध्यकालीन भारत के इतिहास के प्रमुख राजनीतिक, सामाजिक, आर्थिक एवं सांस्कृतिक पक्षों से परिचित कराना है जो कि यू.जी.सी. मानदंडों के अनुरूप है ।

इकाई–1
1. सल्तनत कालीन एवं मुगलकालीन इतिहास के स्त्रोत
2. दास वंश – ऐबक, इल्तुतमिश, रजिया, बलबन
3. खिलजी वंश – अलाउद्दीन खिलजी

तुगलक वंश – मोहम्मद बिन तुगलक, फिरोजशाह तुगलक
4. तैमूर का भारत आक्रमण

इकाई–2
1. मुगल साम्राज्य की स्थापना – बाबर

शेरशाह सूरी की प्रशासन व्यवस्था
2. अकबर की राजपूत नीति
3. मुगल शासकों की धार्मिक नीति – अकबर से औरंगजेब तक
4. राजनीतिक संस्थाएं एवं प्रशासन

इकाई–3
1. सल्तनत कालीन सामाजिक, आर्थिक दशा
2. मुगल कालीन सामाजिक, आर्थिक दशा
3. धार्मिक एवं सांस्कृतिक दशा – भक्ति आन्दोलन
4. सूफीवाद

इकाई–4
1. सल्तनत कालीन कला एवं स्थापत्य
2. मुगलकालीन कला एवं स्थापत्य
3. सल्तनतकालीन शिक्षा एवं साहित्य
4. मुगलकालीन शिक्षा एवं साहित्य

इकाई–5
1. विजय नगर राज्य – कृष्णदेव राय
2. बहमनी राज्य
3. शिवाजी प्रशासन
4. तृतीय पानीपत युद्ध – कारण एवं परिणाम

अनुशंसित ग्रन्थ –

1. श्रीवास्तव ए.एल.   –   भारत का इतिहास (अंग्रेजी अनुवाद)
2. श्रीवास्तव ए.एल.   –   दिल्ली सल्तनत (अंग्रेजी अनुवाद)
3. श्रीवास्तव ए.एल.   –   मुगलकालीन भारत (अंग्रेजी अनुवाद)
4. हबीबुल्लाह   –   भारत में मुस्लिम शासन की बुनियाद
5. मजूमदार, राय चौधरी एवं दत्त –   भारत का वृहत इतिहास खंड – 2

B.A.-Part-II.

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6.	पंजाबी बी. के.	–	भारत का इतिहास (1206–1761) (म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल)
7.	हबीब एवं निजामी	–	दिल्ली सल्तनत
8.	वर्मा हरिशचन्द	–	मध्यकालीन भारत (750–1540)
9.	शर्मा कालूराम एवं व्यास प्रकाश	–	मध्य कालीन भारतीय संस्कृति
10.	सक्सेना आर.के.	–	दिल्ली सल्तनत
11.	राधेशरण	–	भारत की सामाजिक एवं आर्थिक संरचना और संस्कृति के मूल तत्व (आदिकाल से 1950 ईस्वी तक) (म.प्र. हिन्दी ग्रंथ अकादमी भोपाल)
12.	पाण्डेय ए.बी.	–	पूर्व मध्यकालीन भारत
13.	पांडेय ए.बी.	–	उत्तर मध्यकालीन भारत
14.	ईश्वरी प्रसाद	–	मुगलकालीन भारत
15.	श्रीवास्तव एच.एस.	–	मुगलकालीन शासन व्यवस्था
16.	सरदेसाई जी.एस.	–	मराठों का नवीन इतिहास खंड – 2
17.	सरकार जे.एन.	–	शिवाजी और उनका युग
18.	त्रिपाठी आर.पी.	–	मुगल साम्राज्य का इतिहास और पतन
19.	मित्तल ए.के.	–	यूनीफाइड इतिहास (प्रारंभ से 1761 ई. तक)
20.	मित्तल ए.के.	–	यूनीफाइड इतिहास प्राचीन काल से 1950 ईस्वी तक
21.	Dey, U.N.	–	Mughal Government
22.	Habibulla, A.D.M.	–	Foundation of Muslim Rule in India
23.	Habib & Nizami	–	Comprehensive History of India
24.	Majumdar, Roy Choudhary & Dutt	–	An Advanced History of India Vol-II
25.	Mehta	–	Advanced study in the Medival History of India
26.	Pandey A.B.	–	Early Medieval India
27.	Pandey A.B.	–	Medieval India
28.	Prasad Ishwari	–	Medieval India
29.	Sarkar, J.N.	–	Shivaji and his Time

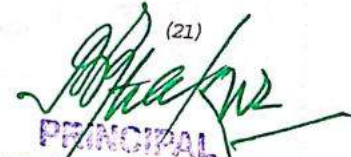# इतिहास

प्रश्न पत्र – द्वितीय

(विश्व का इतिहास, सन् 1789 से 1871 ई. तक)

(पेपर कोड-0180)

उद्देश्य – इस पाठ्यक्रम का उद्देश्य विद्यार्थियों को विश्व इतिहास की प्रमुख घटनाओं के अवगत कराना है ।

इकाई-1
1. फ्रांस की क्रांति – नेशनल कन्वेन्शन से आतंक का राज्य तक
2. डायरेक्टरी शासन

B.A.-Part-II

SOCIOLOGY

PAPER - I

SOCIETY IN INDIA (Paper Code-0185)

UNIT-I View about Indian Society.

The Classical views : Verna, Ashram Karma and Dharma

Field views : M.N. Shrinivas and S.C. dubey

Significance and ineterface of classical and field views

UNIT-II The Structure and Composition of Indian Society

Structure : Villages, Towns, Cities and Rural - urban,

Linkage composition : Tribes, Dalits, Women and Minorities

UNIT-III Basic Institutions of Indian Society

Caste system, kinship, family, family marriage class, changing dimensic ..

UNIT-IV Familial Problems

Dowry, domestic violence, divorce, intra-interenerational conflict problem c elderly

UNIT-V Social Problems

Casteism, Regionalism, Communalism, corruption, youth unrest.

SOCIOLOGY

PAPER - II

CRIME AND SOCIETY (Paper Code-0186)

UNIT-I Conception and types of crime

Early Explanation - Classical, Positives, psychological.

UNIT-II Social structure and Anomie

criminality - suicide

Organized crime, white collar crime

Causes, consequences and remedies of Terrorism.

UNIT-III Indian Social Problems

Nature of Social change and crime in India Social Diso-Denization. Alcohol e. Drug Addiction, beggary.

UNIT-IV Punishment - Objectives and forms.

Major theories of punishment

Modern correctional concepts probation, parole open prison.

UNIT-V Correctional process-

Role of police and Judiciary in India Development of Jail reforms in India ciology of Prison.

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प्राचार्य
शास. ज. ह. कला एवं वाणिज्य
महाविद्यालय, झगबाहरा
जिला- महासमुन्द (छ. ग.)
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B.A.-Part-II

हिन्दी साहित्य

प्रथम – प्रश्न पत्र

(प्राचीन हिन्दी काव्य)   अंक 75

(पेपर कोड–0103)

उद्देश्य एवं प्रस्तावना–

प्राचीन से तात्पर्य है – आधुनिक काल से पूर्व का काल । सही अर्थ में हिन्दी भाषा और साहित्य का विकास आदिकाल से शुरू होता है । इसमें धार्मिक तथा ऐतिहासिक दो प्रकार का साहित्य मिलता है, जो प्रबंध, मुक्तक, रासो, फागु, चरित, सुभाषित आदि विविध । काव्यरूपों में अभिव्यंजित है । मध्यकालीन साहित्य की पृष्ठभूमि के रूप में इसे प्रतिष्ठापित किया जाता है ।

मध्यकालीन काव्य में भक्तिकाव्य, जहां लोक जागरण को स्वर देने वाला है, वहीं रीतिकाल अपने लौकिक–श्रृंगारिका, परिदृश्य में तत्कालीन सामाजिक, सांस्कृतिक, राजनीतिक स्थितियों को बेलौस अभिव्यंजित करता है । अत: भाषा, संस्कृति, विचार, मानवता, काव्यत्व, काव्यरूपता, लौकिकता-पारलौकिकता, आदि दृष्टियों से इसका अध्ययन अत्यावश्यक है ।

पाठ्य विषय –

1. कबीर (कबीर – कांतिकुमार जैन) प्रारंभिक 50 साखियाँ)

2. जायसी–संक्षिप्त पद्मावत–श्यामसुंदर दास) नागमती वियोग वर्णन

3. सूर (भ्रमर गीत सार – सं. आचार्य रामचन्द्र शुक्ल) प्रारंभिक 25 पद

4. तुलसी – ''रामचरित मानस'' के अयोध्याकाण्ड से प्रारंभिक 25 दोहे चौपाई, छंद सहित ।

5. घनानन्द (घनानन्द – सं. विश्वनाथ प्रसाद मिश्र) प्रारंभिक 25 छन्द द्रुत पाठ हेतु निम्नांकित तीन कवियों का अध्ययन किया जावेगा – जिसमें से किन्हीं दो पर लघूत्तरीय प्रश्न पूछे जायेंगे –

    1. विद्यापति

    2. रहीम

    3. रसखान

अंक विभाजन–

1. 3 व्याख्याएँ   30 प्रतिशत

2. आलोचनात्मक प्रश्न   30 प्रतिशत

3. लघूत्तरीय प्रश्न   20 प्रतिशत

4. वस्तुनिष्ठ प्रश्न   20 प्रतिशत

B.A.-Part-I   (12)

हिन्दी साहित्य

द्वितीय - प्रश्न पत्र

हिन्दी कथा साहित्य

पूर्णांक 75

(पेपर कोड-0104)

उद्देश्य एवं प्रस्तावना-

गद्य की प्रमुख विधाओं का इतना द्रुत विकास इनकी लोकप्रियता का प्रमाण प्रस्तुत करता है । इसमें आधुनिक जीवन, अपनी विविध कवियों के साथ यथार्थ रूप में अभिव्यंजित हुआ है । जीवन की अनुभूतियाँ, संवेदनाओं तथा विविध परिस्थितियों के साक्षात्कार के लिए इनका अध्ययन सर्वथा अपेक्षित है ।

पाठ्य विषय -

व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक उपन्यास एवं आठ कहानीकारों की एक-एक प्रतिनिधि कहानी का अध्ययन आवश्यक है ।

उपन्यास	1.	गबन	–	प्रेमचंद
कहानी	1.	प्रेमचंद	–	कफन
	2.	जयशंकर प्रसाद	–	आकाश दीप
	3.	यशपाल	–	परदा
	4.	फणीश्वरनाथ रेणु	–	ठेस
	5.	मोहन राकेश	–	मलवे का मालिक
	6.	भीष्म साहनी	–	चीफ की दावत
	7.	राजेन्द्र यादव	–	बिरादरी बाहर
	8.	रागेय राघव	–	गदल

द्रुत पाठ के लिए निम्नांकित तीन कथाकारों का अध्ययन अपेक्षित है, जिनमें से किन्हीं दो पर लघूत्तरीय प्रश्न पूछे जावेंगे –

1. उपेन्द्रनाथ अश्क,   2. बाल शौरि रेड्डी   3. शिवानी

अंक विभाजन -3/ व्याख्याएँ 30 प्रतिशत

2/ आलोचनात्मक प्रश्न	30 प्रतिशत
5/ लघुत्तरीय प्रश्न	20 प्रतिशत
20/ वस्तुनिष्ठ प्रश्न	20 प्रतिशत

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B.A.-Part-I

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इतिहास

प्रश्न पत्र – प्रथम

(भारत का इतिहास प्रारम्भ से 1206 ई. तक)

HISTORY OF INDIA FROM THE BEGINNING TO 1206 A.D.

(पेपर कोड-0109)

उद्देश्य – इस पाठ्यक्रम का उद्देश्य विद्यार्थियों को प्राचीन भारत के इतिहास के प्रमुख राजनीतिक, सामाजिक, आर्थिक एवं सांस्कृतिक पक्षों से परिचित कराना है जो कि यू.जी.सी. मानदंडों के अनुरूप है ।

इकाई-1
1. भारतीय इतिहास के स्त्रोतों का सर्वेक्षण
2. भारत की भौगोलिक विशेषताएँ
3. प्रागैतिहासिक – पूर्व पाषाण से नवपाषाण युग तक सभ्यता एवं संस्कृति
4. हड़प्पा सभ्यता – निर्माता, प्रसार, नगर योजना, राजनीतिक, सामाजिक, आर्थिक संरचना

इकाई-2
1. ऋग्वैदिक काल– राजनीतिक, आर्थिक, धार्मिक
2. उत्तर वैदिक काल – राजनीतिक, सामाजिक, आर्थिक, धार्मिक
3. महाकाव्य काल – सभ्यता एवं संस्कृति
4. ईसा पूर्व छठवी शताब्दी का भारत तथा बौद्ध एवं जैन धर्म

इकाई-3
1. मगध साम्राज्य का उदय
2. सिकन्दर का आक्रमण और उसका प्रभाव
3. मौर्य साम्राज्य की स्थापना – चन्द्रगुप्त मौर्य एवं अशोक – अशोक के धम्म
4. मौर्यकालीन प्रशासन अर्थव्यवस्था एवं कला तथा संस्कृति

इकाई-4
1. मौर्योत्तरकाल – शुंग, कुषाण एवं सातवाहन
2. संगमयुग – साहित्य, संस्कृति
3. चोल एवं पाण्डय
4. गुप्त साम्राज्य – प्रशासन, आर्थिक, सामाजिक, सांस्कृतिक दशा

इकाई-5
1. पल्लव, चालुक्य, वर्धन, वाकाटक, गुर्जर-प्रतिहार, पाल, सेन, राष्ट्रकूट
2. भारत का दक्षिण पूर्व एशिया एवं श्रीलंका से सम्बन्ध
3. मोहम्मद बिन कासिम, गजनवी एवं गोरी का आक्रमण
4. नारी की स्थिति – विवाह, सती प्रथा, परदा प्रथा, देवदासी प्रथा, जाति व्यवस्था, दास प्रथा

संदर्भ ग्रन्थ –

1.	रतिभानु सिंह नाहर	– प्राचीन भारतीय इतिहास एवं संस्कृति
2.	शांता शुक्ला	– भारत का राजनीतिक इतिहास (राजपूत कालीन भारत)
3.	द्विजेन्द्र नारायण एवं श्रीमाली	– प्राचीन भारत
4.	ओम प्रकाश	– प्राचीन भारत
5.	बी.एन. लूनिया	– प्राचीन भारतीय संस्कृति
6.	एस.आर. शर्मा	– प्राचीन भारत – प्रागैतिहासिक युग से 1200 ई. तक
7.	K.L. Khurana	– Ancient India from Earliest Time to 1206 A.D.
8.	K.L. Khurana	– History of India from Earliest Time to 1526 A.D.

B.A.-Part-I

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9. Vincent Smith   –   Oxford History of India.
10. भार्गव   –   प्राचीन भारत
11. L. Prasad   –   Ancient India - Indus Volley Civilization to 1200 A.D.

इतिहास

प्रश्न पत्र – द्वितीय

विश्व का इतिहास (1453 से 1789 ई. तक)

(पेपर कोड-0110)

इकाई–1
1. सामन्तवाद का पतन एवं आधुनिक युग का प्रारम्भ
2. पुनर्जागरण
3. धर्म सुधार आन्दोलन
4. प्रति धर्म सुधार आन्दोलन

इकाई–2
1. तीस वर्षीय कारण, परिणाम तथा प्रभाव
2. राष्ट्रीय राज्यों का उदय स्पेन, फ्रांस
3. राष्ट्रीय राज्यों का उदय. इंग्लैण्ड, रूस
4. पोलैण्ड का विभाजन

इकाई–3
1. आधुनिक पाश्चात्य जगत के आर्थिक आधार
2. वाणिज्यवाद एवं व्यापारिक क्रान्ति
3. औद्योगिक क्रान्ति
4. उपनिवेशवाद का प्रारम्भ

इकाई–4
1. इग्लैण्ड में गृह युद्ध : घटनाएं
2. इग्लैण्ड में गृह युद्ध : कारण एवं परिणाम
3. गौरव पूर्ण क्रान्ति (1688)
4. क्रेमलीन का शासन

इकाई–5
1. लुई चतुर्दश – गृह नीति
2. लुई चतुर्दश – विदेश नीति
3. अमेरिका का स्वतंत्रता संग्राम
4. फ्रांस की क्रान्ति के कारण एवं नेशनल असेम्बली

संदर्भ ग्रंथ –

1. बी. एन. मेहता–   अर्वाचीन यूरोपढ़
2. बी.आई. पाल   –   आधुनिक यूरोप
3. K.L. Khurana   –   History of Modern World.
4. Khurana And Sharma   –   Modern Europe 1453-1789 A.D.

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B.A.-Part-I

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PRINCIPAL
Govt.K L.Arts & Comm.College
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ECONOMICS

PAPER - I

MICRO ECONOMICS

(Paper Code-0111)

UNIT-1 Introduction - Definitions Nature and scope of Economics, Methodology in Economics. Utility - Cardinal and Ordinal approaches, Indifference curve, Consumer's equilibrium (Hicks and slutsky), Giffin goods, Compensated demand, Demand - Law of Demand, Elasticity of demand - Price, income and cross, elasticity Consumer's surplus, Engel curve.

UNIT-2 Theory of production and cost - Production decision, Production function, Iso-quant, Factor substitution, Law of variable proportions, Returns to scale, Economies of scale, Different concepts of cost and their interrelation, Equilibrium of the firm, expansion path.

UNIT-3 Market structure-perfect and imperfect markets, Equilibrium of a firm-Perfect competition, Monopoly and price discrimination, Measure of monopoly power, Monopolistic competition, Duopoly, Oligopoly, Taxation and equilibrium of a firm, Notion of controlled and administered prices.

UNIT-4 Factor pricing-Marginal productivity theory of distribution, Theories of wage determination, wages and collective bargaining, wage differentials, Rent - Scarcity Rent, differential rent, Quasi rent, Modern Rent Theroy, Interest Classical and Keynesian Theories, Modern Theory, Profits - Innovation, Risk bearing and Uncertainty theories.

UNIT-5 Wel fare economics - Problems in measuring welfare, Classical welfare economics, Pareto's criteria, value judgement, Concept of a social welfare function, Compensation principle - Kaldor, Hicks.

BASIC READING LIST -

1. Bach, G. L. (1977) Economics, Prentice Hall of India, New Delhi.

2. Gauld, J.P. and Edward P. L. (1996), Microeconomic Theory, Richard Irwin, Homewood.

3. Henderson J. and R. E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.

4. Heathfield and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan. London.

5. Koutsoyiannis, A. (1990), Modern Microeconomics, Macmillan.

6. Lipsey, R. G. and K. A. Chrystal (1999) Principles of Economics (9th Edition), Oxford University Press, Oxford.

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Bagbahar, Distt.

PAPER - II

INDIAN ECONOMY

(Paper Code-0112)

UNIT-1 Towards a Market Economy - Changes in the land system. Commercialization of agriculture, Policy of discriminating protection and Industrial development, Monetary and currency developments, Central and Commercial Banking developments.

Indian Economy at the Time of Independence, Backward economy, Stagnant economy, Other salient features, planning exercises in India - National Planning Committee, Bombay Plan, People's Plan. Gandhian Plan, The Planning Commission.

UNIT-2 Structure of Indian Economy - Basic features, Natural resources - Land, water and forest resources, Broad demographic features - Population size and growth rates, Sex composition, Rural - urban migration, Occupational distribution, Problem of over population, Population policy, Infra - structure development, National income.

UNIT-3 Planning in India - Objectives, Strategy; Broad achievements and failures, Current Five Year Plan - Objectives, Allocation and targets, New Economic Reforms - Liberalization, Privatization and globalization. Agriculture - Nature and importance, Trends in agricultural production and productivity, Factors determining productivity, Land reforms, New agricultural strategies and green revolution, Rural credit, Agricultural marketing.

UNIT-4 Industry - Industrial development during the planning period, Industrial policy of 1948, 1956, 1977 and 1991. Industrial licencing policy - MRTP Act, FERA and FEMA, Growth and problems of small scale industries, Role of public sector enterprises in India's industrilization.

UNIT-5 External Sector - Role of foreign trade, trends in exports and imports, Composition and direction of India's foreign trade, Balance of payments crisis and the new economic reforms - Export promotion measures and the new trade policies. Important areas of concern - Poverty, inequality and unemployment, Rising Prices.

BASIC READING LIST -

1. Datt, R. and K. P. M. Sudharam (2001) Indian Economy S. Chand & Company Ltd. New Delhi.

2. Dhingra, I. C. (2001), The Indian Economy E..nment and Policy, Sultan Chand & Sons. New Delhi.

3. Dutt. R. C. (1950) The Economic History of India Under Early British Rule. Low Price Publications. Delhi.

4. Kumar, D. (Ed.) (1982), The Cambridge Economic History of India, Volume II. 1957-1970. Orient Longman Ltd. Hyderabad.

5. Misra, S. K. and v. K. Puri (2001), Indian Economy - Its Development Experience, Himalaya Publication House, Mumbai.

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B.A.-Part-I

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PRINCIPAL
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Bagbahara Distt-Mahasamund (C.G.)

SOCIOLOGY

PAPER - I

INTRODUCTION TO SOCIOLOGY

M.M. : 75

(Paper Code-0115)

UNIT-1 The Meaning of Sociology - The Sociological perspective - Sociology and social sciences - The Scientific and humanistic Orientations ot Sociological Study. Basic concepts - Society, Community, institution, association, group social structure, status and role.

UNIT-2 Institution, Family and Kinship, religion, Eduction, Politics. The Individual and society - Society. Culture and socialisation - Relation between individual and society - Social control, norms, values.

UNIT-3 Social Stratification and mobility Meaning forms and theories.

UNIT-4 Social Change Meaning and type evolution and progress factors of social change.

UNIT-5 Introduction to appliecd Sociology and Social Policy and action - Sociology and development, Sociology and professions.

ESSENTIAL READINGS :-

1   Bottomore T. B., Sociology - A guide to Problems and Literature, Bombay. George Allen and unwin (India) 1972.

2   Inkeles, Alex, What is sociology ? New Delhi, Prentice Hall of India 1987.

3   Jayram, N., Introductory Sociology, Madras Macmillan India 1988.

4   Johnson Harry M., Sociology of systematic Introduction New Delhi Allied Publishers1995.

PAPER - II

FOUNDATIONS OF SOCIOLOGICAL THOUGHT

M.M. : 75

(Paper Code-0116)

UNIT-1 The Pioneers : emergence of Sociology.

Comle : Positivism - Spencer - Social Drwinism, Superorganic evolution

UNIT-2 The Classical tradition Durkheim - Social Solidarity and Suicide. Weber authority and the protestant Ethic and the spirit of capitalism.

UNIT-3 Marx : Materialist Conception of history and class struggle.

UNIT-4 Pareto : Circulation of elites and logical and nonlogical action.

UNIT-5 Development of Sociological thought in India :-

Mahatma Gandhi Ahinsa, Satya Graha,

Radha Kamal Mukerjee - The Concept of value.

ESSENTIAL READINGS -

Barres H.E. : Introduction to the history of sociology chicago the university of chicago press 1959.

Coser Lewis A : Master of sociological thought New york Harcourt Brace Jovanovich 1979.

Singh, yogendra - Indian sociology - social conditioning and emerging frends. New Delhi vistaar 1986.

Zeitlin, Irving - (Indian edition) Rethinking sociology : A critigue of contemporary thoiry Jarpur Rawal 1998.

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B.A.-Part-I

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PRINCIPAL
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राजनीति विज्ञान

प्रथम प्रश्न पत्र

राजनीति सिद्धांत

पूर्णांक 75

(पेपर कोड-0113)

इकाई–1 राजनीति विज्ञान – परिभाषा प्रकृति, क्षेत्र, अध्ययन पद्धतियाँ, परम्परागत और व्यवहार परक रचना । राजनीतिक सिद्धांत, महत्व ।

सत्ता एवं प्राधिकार – अर्थ, परिभाषा, विशेषताएँ एवं संबंध ।

इकाई–2 राज्य – अर्थ, आवश्यक तत्व, राज्य की उत्पत्ति के विभिन्न सिद्धांत ।

राज्य – एक प्रभावी परिपेक्ष्य में ।

इकाई–3 सम्प्रभुता, अर्थ, विशेषताएँ, सिद्धांत, महत्व ।

नागरिकता, अधिकार, स्वतंत्रता – अर्थ, परिभाषा, विशेषताएँ एवं सिद्धांत ।

इकाई–4 समानता एवं न्याय – अर्थ, परिभाषा, विशेषताएँ, संबंध ।

लोकतंत्र – अर्थ, परिभाषा, विशेषताएँ, आवश्यक परिस्थितियाँ । लोकतंत्र को चुनौतियाँ ।

इकाई–5 विकास एवं कल्याणकारी राज्य – अवधारणा, विशेषताएँ, कार्य, उपलब्धियाँ, चुनौतियाँ ।

सामाजिक परिवर्तन के सिद्धांत –अर्थ, परिभाषा, विशेषताएँ

अनुगंसित पुस्तकें–

1.	जी. एन. सिंह	–	फंडामे. प्लस ऑफ पोलिटिकल साइंस एन्ड ऑर्गेनाइजेशन ।
2.	डी. हेल्ड	–	मॉडल्स आफ डेमोक्रेसी पोलिटिकल थ्योरी एवं मार्डन ट्रेड
3.	आगी वाईम ई.	–	पोलिटिकल थ्योरी ।
4.	डी. मिलर	–	सोशल जस्टिस, सिटीजनशिप एन्ड नेशनल आइडेन्टिटीज
5.	एस. एम. ओकिन	–	जस्टिस जेंडर एन्ड दी फैमली
6.	हरिहर राय एवं सिंह	–	राजनीति शास्त्र के नये आयाम
7.	डॉ. बाबूलाल फाड़िया	–	राजनीति शास्त्र के सिद्धांत
8.	डॉ. ओम नागपाल	–	राजनीति विज्ञान के मूल तत्व ।
9.	डॉ. बी. आर पुरोहित	–	राजनीति शास्त्र के मूल सिद्धांत ।
10.	एस. गया ग्वाली	–	पोलिटिकल थ्योरी आइडियाज एन्ड कांसेप्ट

द्वितीय प्रश्न पत्र

राज्य शासन एवं राजनीति

अंक 75

(पेपर कोड-0114)

इकाई–1 भारतीय संविधान का निर्माण एवं इसके स्रोत – भारतीय संविधान की आधार भूत विशेषताएँ, प्रस्तावना । मूल अधिकार, मौलिक कर्त्तव्य एवं राज्य के नीति निर्देशक तत्व

B.A.-Rat-1

PRINCIPAL
Govt K L Arts & Comm College

NEW CURRICULUM OF B.SC. PART II
CHEMISTRY

The new curriculum will comprise of three papers of 33, 33 & 34 marks each and practical work of 50 marks. The curriculum is to be completed in 180 working days as per the UGC norms & conforming to the directives of the Govt. of Chhattisgarh. The Theory papers are of 60 hrs. each duration & the practical work of 180 hrs. duration.

PAPER - I
INORGANIC CHEMISTRY   M.M. 33
(Paper Code - 0845)

UNIT-I **CHEMISTRY OF ELEMENTS OF FIRST TRANSITION SERIES**

Characteristic properties of d-block elements. Properties of the elements of the first transition series, their binary compounds and complexes illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II **CHEMISTRY OF ELEMENTS OF SECOND & THIRD TRANSITION SERIES**

General characteristics, comparative treatment with their 3d-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and streochemistry.

UNIT-III **A.** **OXIDATION AND REDUCTION**

Use of redox potential data analysis of redox cycle, redox stability in water-Frost, Latimert & Pourbaix diagrams. Principles involved in the extraction of the elements.

B. **COORDINATION COMPOUNDS**

Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds, vcalencey bond theory of transition metal complexes.

UNIT-IV **A.** **CHEMISTRY OF LANTHANIDE ELEMENTS**

Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

B. **CHEMISTRY OF ACTINIDES**

General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from uranium, similarities between the later actinides and the later lanthanides.

UNIT-V **A.** **ACID AND BASES**

Arrhenius, Bronsted-Lowry, the Lux-flood, solvent system and Lewis concepts of acids and bases.

N. **NON-AQUEOUS SOLVENTS**

Physical properties of a solvent, types of solvents and their general   06 HRS.
characteristics, reaction in non-aqueous solvents with reference to liquid ammonia and liquid sulphur dioxide.

REFERENCE BOOKS :

1. Basic Inorganic Chemistry, F.A. Cotton, G. Wilkinson and P.L. Gaus, Wiley

B.Sc.-II

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2. Concise Inorganic Chemistry, J.D. Lee, ELBS.
3. Concepts of models of Inorganic Chemistry, B. Douglas, D. Mc Daniel and J. Alexander, John Wiley.
4. Inorganic Chemistry, D.E. Shriver, P.W. Atkins and C.H. Langford, Oxford.
5. Inorganic Chemistry, W.W. Porterfield. Addison - Wesley.
6. Inorganic Chemistry, A.G. Sharp, ELBS.
7. Inorganic Chemistry, G.L. Miessler and D.A. Tarr, Prentice Hall.
8. Advanced Inorganic Chemistry, Stayas Prakash.
9. Advanced Inorganic Chemistry, Agarwal & Agarwal.
10. Advanced Inorganic Chemistry, Purl & Sharma, S. Naginchand
11. Inorganic Chemistry, Madan, S, Chand
12. Aadhunik Akarbanic Rasayan, A.K. Shrivastav & P.C. Jain, Goel Pub.
13. Ucchattar Akarbanic Rasayan, Satya Prakash & G.D. Tuli, Shyamlal Prakashan
14. Ucchattar Akarbanic Rasayan, Puri & Sharma.
15. Selected topic in Inorgaic Chemistry by Madan Malik, & Tuli, S. Chand.

PAPER - II

ORGANIC CHEMISTRY

60 Hrs. MM. 33

(Paper Code - 0846)

UNIT-I ALCOHOLS

A. Dihydric alcohols - nomenclature, methods of formation, chemical reactions of vicinal glycols, oxidative cleavage [$Pb(OAc)_4$ and HIO_4] and pinacol - pinacolone rearrangement.

B. Trihydric alcohols - nomenclature and methods of formation, chemical reactions of glycerol.

PHENOLS

A. Structure and bonding, in phenols, physical properties and acidic character. Comparative acidic strength of alcohols and phenols, resonance stabilization of phenoxide Ion. Reactions of phenols, acylation and carboxylation.

B. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, Hauben - Hoesch reaction, Lederer - Manasse reaction and Reimer-Tiemann reaction.

EPOXIDES

Synthesis of epoxides. Catalysed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides. Anti 1,2 dihydroxylation of alkenes via epoxides. Crown eithers.

UNIT-II ALDEHYDES AND KETONES

A. Nomenclature and Structure of the carbonyls group. Synthesis of aldehydes and ketones using 1,3 - dithianes, synthesis of ketones from nitriles.

Mechanism of nucleophilic additions to carbonyls group Benzoin, Aldol, Perkin and Knoevenagel condensations. Condensations with ammonia and its derivateves, Wittig reaction, Mannich reaction.

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B. Use of acetate as protecting group, Oxidation of aldehydes, Baeyer - Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen Condensation, Wolff-Kishner reaction, LiAlH$_4$ and NaBH4 reduction. Halogenation of enolizable ketones.

An introduction to α,β unsaturated aldehydes and ketones.

UNIT-III A. CARBOXYLIC ACIDS

05 PDS.

Structure and bonding, Physical properties, acidity of carboxylic acids, effects of substituents on acid strength. Hell-Volhard Zeilinsky reaction. Reduction of carboxylic acids. Mechanism of Decarboxylation.

Methods of formation and chemical reactions of unsaturated mono carboxylic acids. Di carboxylic acids : methods of formation and effect of heat and dehydrating agents.

B. SUBSTITUTED CARBOXYLIC ACIDS

Hydroxy and Halo-substituted Acids.

C. CARBOXYLIC ACID DERIVATIVES

Structure of acid chlorides, esters, amides and acid anhydrides. Relative stability of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Mechanisms of acid and base catalyzed esterification and hydrolysis.

UNIT-IV ORGANIC COMPOUNDS OF NITROGEN

A. Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reduction in acidic, neutral and alkaline medium.

B. Reactivity, Structure and nomenclature of amines, physical properties. Stereochemistry of amines. Separation of mixture of primary, secondary and tertiary amines. Structural features affecting basicity of amines. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel - phthalimide reaction, Hofmann bromamide reaction, Reactions of amines, electrophilic aromatic substitution in aryl amines, reactions of amines with nitrous acid. Synthetic transformations of aryl diazonium salts, azo coupling.

UNIT-V HETEROCYCLIC COMPOUNDS

A. Introduction

Molecular orbital picture and aromatic character of pyrrole, furan, thiophene and pyridine, methods of synthesis and chemical reactions with emphasis on the mechanism of electrophilic substitution. Mechanism and nucleophilic substitution reaction in pyridine derivatives. Comparison of basicity of pyridine, Piperidine and pyrrole.

B. Preparation and reaction of Indole, quinoline and isoquinoline and with special reference to Fisher Indole synthesis and skraup synthesis and Bisher-Napieralski synthesis, Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

B.Sc.-II

Amino acids and Peptides :

A. Classification, Structure and stereochemistry of amino acids. Acid-base behaviour, isoelectric point and electrophoresis. Preparation and reaction of amino acids.

B. Structure and nomenclature of peptides. Peptide synthesis, solid - phase peptide synthesis.

REFERENCE BOOKS :

1. Organic Chemistry, Morrison and Boyd, Prentice-Hall.
2. Organic Chemistry, L.G. Wade Jr. Prentice-Hall.
3. Fundamentals of Organic Chemistry, Solomons, John Wiley
4. Organic Chemistry, Vol. I, II, III, S.M. Mukherjee, S.P. Singh and R.P. Kapoor, Wiley-Eastern (New-Age)
5. Organic Chemistry, F.A. Carey, McGraw Hill
6. Introduction to Organic Chemistry, Struiweisser, Heathcock and Kosover, Macmillan.
7. Organic Chemistry, P.L. Soni
8. Organic Chemistry, Bahl & Bahl
9. Organic Chemistry, Joginder Singh
10. Carbanic Rasayan, Bashi & Bahi
11. Carbanic Rasayan, R.N. Singh, S.M.I. Gupta, M.M. Bakodia & S.K. Wadhwa
12. Carbanic Rasayan, Joginder Singh

PAPER - III

PHYSICAL CHEMISTRY
α

(Paper Code - 0847)

60 Hrs. M.M. 34

12 Hrs.

UNIT-I   A.   **Thermodynamics - I**

Fundamental of thermodynamics system, surroundings etc. Types of systems, intensive and extensive properties, state and path functions thermodynamic operations Internal energy, enthalpy, Heat capacity of gases at constant volume and at constant pressure and their relationship.

First Law of Thermodynamics limitation of first law. Joule-Thompson expansion, inversion temperature of gases. Calculation of w, q, dU & dH for the liquification expansion of ideal gases under isothermal and adiabatic conditions.

B.   **Thermo chemistry**

Standard state, - Hess's law of heat summation. Enthalpy of reaction at constant pressure and constant volume. Enthalpy of neutralizations. Enthalpy of combustion, Enthalpy of formation, Calculation of Bond enthalpy. Elirchhoff's equation.

UNIT-II   A.   **Thermodynamics-II**

Second Law of Thermodynamics : Spontaseous process need of second law, statements of Carnot cycle and effciency of heat engine, Carnot theorem. Thermodynamic state of temperature.

Concept of entropy : entropy change in a reversible and irreversible process, Entropy change in insothermal reversible expansion of an ideal gas, Entropy

change in isothermal mixing of ideal gases, physical signification of entropy.

B. Gibbs and Helmholtz free energy variation of G and A with pressure, volume temperature, Gibbs Helmholtz equation.

UNIT-III PHASE EQUILIBRIUM

A. Gibbs Phase rule, Phase components and degree of freedom, Limitation of phase rule.

Applications of phase rule to one component system - water system, suplhur system.

Application of phase rule to two component systems : pb-Ag system, Zn, Mg system, ferric chloride-water system, desilverization of ____ congruent and incongruent, melting point, eutectic point.

Three component systems : solid solution liquid pairs.

Liquid liquid mixture : (Partially miscible liquids) : phenol-water, trimethylamine-water nicotine systems, constant temperature, azeotrops.

B. Nerst distribution law, Henry's law, application, solvent extraction.

UNIT-IV ELECTROCHEMISTRY-I   10 HRS.

A. Electrolytic Conductance : Specific and equivalent conductance, measurement of equivalent conductance, effect of dilution on conductance, kohlrausch's law; application of kohlrausch's law in determination of dissociation constant of weak electrolyte, solubility of sparingly soluble electrolyte, absolute velocity of ions, ionic product of water, conductometric titration.

B. Theories of strong electrolytes ; limitations of ostwald dilution law, weak and strong electrolyte, Debye-Huckel- Onsagar (DHO) equation for strong electrolyte, relaxation and electrophoretic effect.

C. Migration of ions : Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-V ELECTROCHEMISTRY-II

A. Electrochemical cell or Galvenic cell : reversible and irreversible cells   10 HRS.
conventional representation of electrochemical cells, EMF of the cell, effect of temperature on EMF of the cell, Nernst equation, calculation of   G, Δ H and S for cell reaction.

B. Single electrode potential : standard hydrogen electrode, calomel electrode quinhydrone electrode, redox electrodes, electrochemical series.

C. Concentration cells with & without transport, liquid junction potential, application of concentration cell in determining valency of ions, solubility product, activity coefficient.

D. Determination of pH and pka using hydrogen and quinhydrone electrode potentiometric titrations, buffer solutions; Henderson-Hazel Equation, Hydrolysis of salts, Corrosion : type theories and prevention.

REFERENCE BOOKS :

1. Physical Chemistry, G.M. Barrow, International student edition-McGraw Hill
2. University general chemistry, C.N.R. Rao, Macmillan.

B.Sc.-II

PHYSICS

Objectives :

Present course is aimed to provide ample knowledge of basics of physics which are relevant to the understanding of modern trends in higher physics.

The first paper is aimed at preparing the background of thermodynamics and statistical physics essential for any advanced study of physics of condensed matter and radiations.

The second paper is mainly concerned with a course on geometrical and Physical optics and the laser Physics. It deals with important phenomenon like inter-ference, diffraction and polarisation with stress on the basic nature of light. It also introduces the basics of laser physics with some of its important applications.

The experiments are based mostly on the contents of the theory papers so as to provide comprehensive insight of the subject.

Scheme of Examination :

1. There shall be two theory papers of 3 hours duration each and one practical paper of 4 hours duration. Each paper shall carry 50 marks.

2. Each theory paper will comprise of 5 units. Two questions will be set from each unit and the student will have the choice to answer one out of two.

3. Numerical problems of about 30 percent will compulsorily be asked in each theory paper.

4. In practical paper each students has to perform experiments during examination.

5. Practical examination will be of 4 hours duration. The distribution of practical marks will be as follows :

Experiments	:	15 + 15 = 30
Viva-Voce	:	10
Internal Assessment	:	10
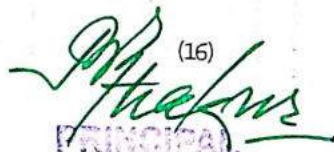
PAPER - I
THERMODYNAMICS, KINETIC THEORY AND STATISTICAL PHYSICS
(Paper Code - 0843)

UNIT-I The laws of thermodynamics : The Zeroth law, concept of path function and point function, various indicator diagrams, work done by and on the system, first law of thermodynamics, internal energy as a state function, reversible and irreversible change, carnot theorem and the second law of thermodynamics. Different versions of the second law. Claussius theorem inequality. Entropy, Change of entropy in simple cases (i) Isothermal expansion of an ideal gas (ii) Reversible isochoric process (iii) Free adiabatic expansion of an ideal gas. Entropy of the universe. Principle of increase of entropy. The thermodynamic scale of temperature, its identity with the perfect gas scale. Impossibility of attaining the absolute zero, third law of thermodynamics.

UNIT-II Thermodynamic relationships : Thermodynamic variables, extensive and intensive, Maxwell's general relationships, application to Joule-Thomson cooling and adiabatic cooling in a general system, Van der Waals gas, Clausius-Clapeyron heat equation.

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Thermodynamic potentials and equilibrium of thermodynamical systems, relation with thermodynamical variables. Cooling due to adiabatic demagnetization, production and measurement of very low temperatures. Blackbody radiation : Pure temperature dependence, Stefan-Boltzmann law, pressure of radiation, Special distribution of BB radiation, Wien's displacement law, Rayleigh-Jean's law, the ultraviolet catastrophy, Planck's quantum postulates, Planck's law, complete fit with experiment.

UNIT-III   Maxwellien distribution of speeds in an ideal gas : Distribution of speeds and of velocities, experimental verification, distinction between mean, rms and most probable speed values. Doppler broadening of spectral lines.

Transport phenomena in gases : Molecular collisions, mean free path and collision cross sections. Estimates of molecular diameter and mean free path. Transport of mass, momentum and energy and interrelationship, dependence on temperature and pressure.

Liquifaction of gases : Boyle temperature and inversion temperature. Principle of regenerative cooling and of cascade cooling, liquifaction of hydrogen and helium. Refrigeration cycles, meaning of efficiency.

UNIT-IV   The statistical basis of thermodynamics : Probability and thermodynamic probability, principle of equal a priori probabilities, statistical postulates. Concept of Gibb's ensemble, accessible and inaccessible states. Concept of phase space, canonical phase space, Gamma phase space and mu phase space. Equilibrium before two systems in thermal contact, probability and entropy, Boltzmann entropy relation. Boltzmann canonical distribution law and its applications, law of equipartition of energy. Transition to quantum statistics : 'h' as a natural constant and its implications, cases of particle in a one-dimensional box and one-dimensional harmonic oscillator.

UNIT-V   Indistinguishability of particles and its consequences, Bose-Einstein & Fermi-Dirac conditions, Concept of partition function, Derivation of Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac Statistics Through Canonical partion function. Limits of B.E. and F-D statistics to M-B statistics. Application of BE statistics to black body radiation, Application of F-D statistics to free electrons in a metal.

TEXT AND REFERENCE BOOKS :

1   B.B. Laud, "Introduction to Statistical Mechanics" (Macmillan 1981)

2   F. Reif : "Statistical Physics" (Mcgraw-Hill, 1998).

3   K, Haung : "Statatistical Physics" (Wiley Eastern, 1988).

4   Thermal and statistical Physics : R.K. Singh, Y.M. Gupta and S. Sivraman

5   Physics (Part-2) : Editor, Prof : B.P. Chandra, M.P. Hindi Granth Academy.

PAPER - II

WAVES, ACOUSTICS AND OPTICS
(Paper Code - 0844)

UNIT-I   Waves in media : Speed of transverse waves on a uniform string, speed of longitudinal waves in a fluid, energy density and energy transmission in waves, typical

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measurements. Waves over liquid surface : gravity waves and ripples. Group velocity and phase velocity, their measruements.

Harmonics and the quality of sound ; examples. Production and detection of ultrasonic and infrasonic waves and applications.

Reflection, refraction and diffraction of sound : Acoustic impedance of a medium, percentage reflection & refraction at a boundary, impedence matching for transducers, diffraction of sound, principle of a sonar system, sound ranging.

UNIT-II Fermat's Principle of extremum path, the aplanatic points of a sphere and other applications.

Cardinal points of an optical system, thick lens and lens combinations. Lagrange equation of magnification, telescopic combinations, telephoto leneses.

Monochromatic aberrations and their reductions ; aspherical mirrors and schmidt corrector plates, aplanatic points, oil imersion objectives, meniscus lens.

Optical instruments : Entrance and exit pupils, need for a multiple lens eyepiece, common types of eyepieces. (Ramsdon and Hygen's eyepieces)

UNIT-III Interference of light : The principle of superpositions, two slit interference, coherence requirement for the sources, optical path retardations, lateral shift of fringes, Rayleigh refractometer Localised fringes ; thin films. Haldinger fringes : fringes of equal inclination. Michelson interferometer, its application for precision deformination of wavelength, wavelength difference and the width of spectral lines, Twymann. Green interferometer and its uses, intensify distribution in multiple beam interference. Tolansky fringes, Fabry-Perot interferometer and etalon.

UNIT-IV Fresnel half-period zones, plates, straight edge, rectilinear propagation, Fraunhefer diffraction : Diffraction at a slit, half-period zones, phasor diagram and integral calculus methods, the intensity distribution, diffraction at a circular aperture and a circular disc, resolution of images, Rayleigh criterion, resolving power of telescope and microscopic systems.

Diffraction gratings : Diffraction at N parellel slits, intensity distribution, plane diffraction grating, relection grating and blazed gratings, Concave grating and different mountings, resolving power of a grating and comparison with resolving powers of prism and of a Fabry-Perot etalon.

Double refraction and optical rotation : Refraction in uniaxial crystals, Phase retardation plates, double image prism. Rotation of plane of polarisation, origin of optical rotation in liquids and in crystals.

UNIT-V Laser system : Purity of a spectral line, coherence length and coherence time, spatial coherence of a source, Einstein's A and B coefficients, Spontaneous and induced emissions, conditions for laser action, population inversion, Types of Laser : Ruby and, He-Ne and Semiconductor lasers.

Application of lasers : Application in comunication, Holography and non linear optics. (Polarization P including higher order terms in E and generation of harmonics).

TEXT AND REFERENCE BOOKS :

1 A.K. Ghatak, 'Physical Optics'

2 D.P. Khandelwal, Optical and Atomic Physics' (Himalaya Publishing House, Bombay,

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MATHEMATICS

There shall be three compulsory papers. Each paper of 50 marks is divided into five units and each unit carry equal marks.

PAPER - I
ADVANCED CALCULUS
(Paper Code - 0848)

UNIT-I   Definition of a sequence. Theorems on limits of sequences. Bounded and monotonic sequences. Cauchy's convergence criterion. Series of non-negative terms. Comparison tests, Cauchy's integral test, Ratio tests, Raabe's, logarithmic, De Morgan and Bertrand's tests. Alternating series, Leibnitz's theorem. Absolute and conditional covergence.

UNIT-II   Continuity, Sequential continuity, Properties of continuous functions, Uniform continuity, Chain rule of differentiability, Mean value theroems and their geometrical interpretations. Darboux's intermediate value theorem for derivatives Taylor's theorem with various forms of remainders.

UNIT-III   Limit and continuity of functions of two variables, Partial differentiation Change of variables, Euler's theorem on homogeneous functions, Taylor's theorem for functions of two variables, Jacobians.

UNIT-IV   Envelopes, Evolutes, Maxima, minima and saddle points of functions, two variables, Lagrange's multiplier method.

UNIT-V   Beta and Gamma functions, Double and triple integrals, Dirichet's integrals, Change of order of intergration in double integrals.

REFERENCES :

1. Gabriel Klaumber, Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.

2. T.M. Apostol, Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.

3. R.R. Goldberg, Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.

4. D. Soma Sundaram and B. Choudhary, A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

5. P.K. Jain and S.K. Kaushik, An introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.

6. Gorakh Prasad, Differential Calculus, Pothishala Pvt. Ltd., Allahabad.

7. Murray R. Spiegel, Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.

8. Gorakh Prasad, Integral Calculus, Pothishala Pvt. Ltd., Allahabad.

9. S.C. Malik, Mathematical Analysis, Wiley Eastern Ltd., New Delhi.

10. O.E. Stanaitis, An Introduction to Sequences, Series and Improper Integrals, Holden-Dey, Inc., San Francisco, California.

11. Earl D. Rainville, Infinite Series, The Macmillan Company, New York.

12. Chandrika Prasad, Text Book on Algebra and Theory of Equations, Pothishala Pvt. Ltd., Allahabad.

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13. N. Piskunov, Differential and Integral Calculus, Peace Publishers, Moscow.
14. Shanti Narayan, A Course of Mathematical Analysis, S.Chand and Company, New Delhi.

PAPER - II

DIFFERENTIAL EQUATIONS
(Paper Code - 0849)

UNIT-I. Series solutions of differential equations- Power series method, Bessel and Legendre, Functions and their properties-convergence, recurrence and generating relations, Orthogonality of functions, Sturm-Liouville problem, Orthogonality of eigen-functions, Reality of eigen values, Orthogonality of Bessel functions and Legendre polynomials.

UNIT-II Laplace Transformation - Linearity of the Laplace transformation, Existence theorem for Laplace transforms, Laplace transforms of derivatives and integrals, Shifting theorems, Differentiation and integration of transforms, Convolution theorem, Solution of integral equations and systems of differential equations using the Laplace transformation.

UNIT-III Partial differential equations of the first order, Lagrange's solution, Some special types of equations which can be solved easily by methods other than the general method, Charpit's general method of solution.

UNIT-IV Partial differential equations of second and higher orders, Classification of linear partial differential equations of second order, Homogeneous and non-homogeneous equations with constant coefficients, Partial differential equations reducible to equations with constant coefficients, Monge's methods.

UNIT-V Calculus of Variations - Variational problems with fixed boundaries- Euler's equation for functionals containing first order derivative and one independent variable, Externals, Functionals dependent on higher order derivatives, Functionals dependent on more than one indepedent variable, Variational problems in parametric form, invariance of Euler's equation undercoordinates transformation.

Variational Problems with Moving Boundaries - Functionals dependent on one and two functions, One sided variations.

Sufficient conditions for an Extremum - Jacobi and Legendre conditions, Second Variation, Variational principle of least action.

REFERENCES :

1 Erwin Kreyszig, Advanced Engineering Mathematics, John Wiley & Sons, Inc., New York, 1999.
2 D.A. Murray, Introductory Course on Differential Equations, Orient Longman, (India), 1967.
3 A.R. Forsyth, A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4 Lan N. Sneddon, Elements of Partial Differential Equations, McGraw-Hill Book Company, 1988.
5 Francis B. Hildenbrand, Advanced Calculus for Applications, Prentice Hall of India Pvt. Ltd., New Delhi, 1977.
6 Jane Cronin, Differential equations, Marcel Dekkar, 1994.

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7. Frank Ayres, Theory and Problems of Differential Equations, McGraw-Hill Book Company, 1972.

8. Richard Bronson, Theory and Problems of Differential Equations, McGraw-Hill, Inc., 1973.

9. A.S. Gupta, Calculus of variations with-Applications, Prentice-Hall of India, 1997.

10. R. Courant and D. Hilbert, Methods of Mathematical Physics, Vots. I & II, Wiley-Interscience, 1953.

11. I.M. Gelfand and S.V. Fomin, Calculus of Variations, Prentice-Hill, Englewood Cliffs (New Jersey), 1963.

12. A.M. Arthurs, Complementary Variational Principles, Clarendon Press, Oxford, 1970.

13. V. Komkov, Variational Principles of Continuum Mechanics with Engineering Applications, Vol. I, Reidel Publ. : Dordrecht, Holland, 1985.

14. T. Oden and J.N. Reddy, Variational Methods in Theoretical Mechanics, Springer-Verlag, 1976.

PAPER - III

MECHANICS

(Paper Code - 0850)

STATICS

UNIT-I   Analytical conditions of Equilibrium, Stable and unstable equilibrium, virtual work, Catenary.

UNIT-II   Forces in three dimensions, Poinsot's central axis, Null lines and planes, Dynamics.

UNIT-III Simple harmonic motion, Elastic strings, velocities and accelerations along radial and transverse directions, Projectile, Central orbits.

UNIT-IV   Kepler's laws of motion, velocities and acceleration in tangential and normal directions, motion on smooth and rough plane curves.

UNIT-V   Motion in a resisting medium, motion of particles of varying mass, motion of a particle in three dimensions, acceleration in terms of different co-ordinate systems.

REFERENCES :

1. S.L. Loney, Statics, Macmillan and Company, London.

2. R.S. Verma, A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.

3. S.L. Loney, An Elementary Treatise on the Dynamics of a particle and of rigid bodies, Cambridge University Press, 1956.

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BOTANY

PAPER - I

DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS
(Paper Code - 0861)

M.M. : 50

UNIT-I.
1. Characteristics of seed plants ; evolution of the seed habit ; seed plants with (angiosperms) and without (gymnosperms) fruits ; fossil and living seed plants.

2. General features of gymnosperms and their classification ; evolution and diversity of gymnosperms ; geological time scale, fossilization and fossil gymnosperms.

UNIT-II
3. Morphology of vegetative and reproductive parts ; anatomy of roots, stem and leaf, reproduction and life cycle of Pinus, Cycas and Ephedra.

UNIT-III
4. Angiosperms : origin and evolution, some examples of primitive angiosperms.

5. Angiosperms taxonomy : brief history, aims and fundamental components; identification, keys taxonomic literature.

6. Botanical nomenclature : Principles and rules; taxonomic ranks; type concept; principle of priority.

UNIT-IV
7. Classification of angiosperms ; salient features of the systems proposed by Bentham and Hooker and Engler and Prantl.

8. Major contributions of cytology, phytochemistry and taximetrics to taxonomy.

UNIT-V
9. Diversity of flowering plants : General account of the families Ranunculaceae, Brassicaceae, Malvaceae, Rutaceae, Fabaceae, Apiaceae, Acanthaceae, Apocynaceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

PAPER - II

STRUCTURE DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS
(Paper Code - 0862)

M.M. 50

UNIT-I.
1. The basic body plan of a flowering plant : modular type of growth.

2. Diversity in plant form in annuals, biennials and perennials ; convergence of evolution of tree habit in gymnosperms, monocotyledons and dicotyledons ; trees-largest and longest-lived organisms.

UNIT-II
3. The shoot system : the shoot apical meristem and its histological organization ; vascularization of primary shoot in monocotyledons and dicotyledons ; formation of internodes, branching pattern ; monopodial and sympodial growth ; canopy architecture ; cambium and its functions ; formation of secondary xylem, a general account of wood structure in relation to conduction of water and minerals ; characteristics of growth rings, sapwood and heart wood ; role of woody skeleton ; secondary phloem - structure-function relationships, periderm.

UNIT-III
4. Leaf : origin, development, arrangement and diversity in size and shape ; internal structure in relation to photosynthesis and water loss ; adaptations to water stress ; senescence and abscission.

5. The root system : the root apical meristem ; differentiation of primary and secondary tissues and their roles ; structural modification for storage, respiration, reproduction and for interaction with microbes.

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UNIT-IV 6. Flower : a modified shoot ; structure, development and varieties of flower, functions, structure of anther and pistil, the male and female gametophytes ; types of pollination ; attractions and rewards for pollinators ; pollen-pistil interaction, self incompatibility, double fertilization, formation of seed-endosperm and embryo ; fruit development and maturation.

UNIT-V 7. Significance of seed : suspended animation ; ecological adaptation ; unit of genetic recombination and replenishment, dispersal strategies.

8. Vegetative reproduction : vegetative propagation, grafting, economic aspects.

PRACTICAL SCHEME

Time : 4 Hrs.   M.M. : 50

1.	Plant Description	08
2.	Gymnosperm	07
3.	Anatomy	07
4.	Embryology	04
5.	Spotting (1-5 Spots)	10
6.	Field Report	04
	(Local Flora : Rainy/Winter/Summer Season)	
7.	Viva-Voce	05
8.	Sessional	05

Total Marks : 50

BOTANY (PRACTICAL)
SUGGESTED LABORATORY EXERCISES

ANGIOSPERMS

The following species are suitable for study. This list is only indicative. Teachers may select plants available in their locality.

1. Ranunculaceae : Ranunculus, Delphinium
2. Brassicaceae : Brassica, Alyssum, Iberis, Coronoupus
3. Malvaceae : Hibiscus, Abutilon
4. Rutaceae : Murraya, Citrus
5. Fabaceae : Faboideae : Lathyrus, Cajanus, Melilotus, Trigonella, Caesalpinioideae ; Cassia, Caesalpinia ; Mimosoideae ; Prosopis, Mimosa, Acacia.
6. Apiaceae : Coriandrum, Foeniculum, Anethum
7. Acanthaceae : Adhatoda, Peristrophe
8. Apocynaceae : Vinca, Thevetia, Nerium
9. Asclepiadaceae : Calotropis
10. Solanaceae : Solanum, Withania, Datura
11. Euphorbiaceae : Euphorbia, Phyllanthus
12. Lamiaceae : Ocimum, Salvia
13. Chenopodiaceae : Chenopodium, Beta
14. Liliaceae : Asphodelus, Asparagus
15. Poaceae : Avena, Triticum, Hordeum, Poa, Sorghum

GYMNOSPERMS

CYCAS

i. Habit, armour of leaf bases on the stem (if specimen is not available show photograph), very young leaf (circinate vernation) and old foliage leaves, scale leaf, bulbils, male cone (specimen), microsporophyll, megasporophyll, mature seed.

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ZOOLOGY
PAPER - I
ANATOMY & PHYSIOLOGY
(Paper Code - 0863)

M.M. : 50

UNIT-I   Comparative Anatomy of various organ systems of vertebrates.
1. Integument and its derivatives : structure of scales, hair and feathers.
2. Alimentary canal and digestive glands in vertebrates.
3. Respiratory Organs
     Gills and lung, Air-Sac in birds

UNIT-II
1. Endoskeleton-Limbs, girdles and vertebrae.
2. Circulatory System - Evolution of heart and aortic arches.
3. Urinogenital System - Kidney and excretory ducts.

UNIT-III
1. Nervous System - General plan of brain and spinal cord.
2. Endocrine glands - classification and histology.
3. Gonads and genital ducts.

UNIT-IV
1. Digestion and absorption of dietary components.
2. Physiology of heart, Cardiac cycle and ECG.
3. Blood Coagulation.
4. Respiration-Mechanism and control of breathing.

UNIT-V
1. Excretion-Physiology of excretion, Osmoregulation.
2. Physiology of Muscle contraction.
3. Physiology of nerve impulse, Synaptic transmission.
4. Ear and Eye - structure and function.

LIST OF RECOMMENDED BOOKS :

1. Conn, Stumpy RK, Bruening and D.C. : Outlines of Biochemistry.
2. Gaviong : Review of Medical Physiology.
3. Eckest, R. : Animal Physiology (W.H. Freeman)
4. Hildbrand : Analysis of Vertebrate structure
5. Kingsley : Outlines of Comparative Anatomy (Central Book Depot)
6. Rouer & Parsons : The Vertebrate Body, (Saunders)
7. Walta & Gyles : Biology of the Vertebrates (Macmillan)

PAPER - II
VERTEBRATE ENDOCRINOLOGY, REPRODUCTIVE BIOLOGY BEHAVIOUR, EVOLUTION AND APPLIED ZOOLOGY
(Paper Code - 0864)

UNIT-I
1. General Characters of Hormones.
2. Hormone Receptor
3. Biosynthesis and secretion of thyroid, Adrnal ; Ovarian and testicular hormones.
4. Endocrine disorder due to hormones and other gland.

UNIT-II
1. Reproductive cycle in vertebrate.
2. Menustration, Lactation and pregnancy.
3. Mechanism of parturition.
4. Hormonal regulation of gametogenesis.
5. Extra embryonic membrane.

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i.   study through permanent slides - normal root (T.S.), stem (T.S.) (if sections are not available show photographs), ovule (L.S.).

ii. Study through hand sections or dissections - coralloid root (T.S.), rachis (T.S.), leaflet (V.S.), microsporophyll (V.S.), pollen grains (W.M.).

PINUS

i.   Habit, long and dwarf shoot showing cataphylls and scale leaves, T.S. wood showing growth rings, male cone, 1st year, 2nd year female cones, winged seed.

ii. Study through permanent slides - root (T.S.), female cone (L.S.), ovule (L.S.), embryo (W.M.) showing polycotyledonous condition.

Study through hand sections or dissections - young stem (T.S.), old stem (wood) (T.L.S. and R.L.S.), needle (T.S.), male cone (L.S.), male cone (T.S.), pollen grains (W.M.).
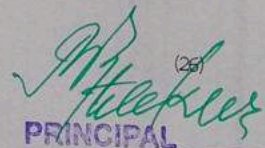
EPHEDRA

i.   Habit and structure of whole male and female cones.

ii. Permanent slides - female cone (L.S.)

iii. Hand sections/dissections-node (L.S.), internode (T.S.), macerated stem to see vessel structure, epidermal peel mount of vegetative parts to study stomata, male cone (T.S. and L.S.), pollen grains.

SUGGESTED LABORATORY EXERCISES :

Embryology, Anatomy and Vegetative Propogation etc.

1.   Study of commonly occuring dicotyledonous plant (for example Solanum nigrum or Kalanchoe) to understand the body plan and modular type of growth.

2.   Life forms exhibited by flowering plants (by a visit to a forest or a garden), study of tree like habit in cycads, bamboos, banana, traveller's tree (Ravenala madagasariensis) or yucca and comparison with ture trees as exemplified by conifers and dicotyledons.

3.   L.S. shoot tip to study the cytohistological zonation and origin of leaf primordia.

4.   Monopodial and Sympodial types of branching in stems (especially rhizomes).

5.   Anatomy of primary and secondary growth in monocots and dicots using hand sections (or prepared slides), structure of secondary phloem and xylem, Growth rings in wood, Microscopic study of wood in T.S., T.L.S. and R.L.S.

6.   Field study of diversity in leaf shape, size, thickness, surface properties, internal structure of leaf, structure and development of stomata (using epidermal peels of leaf).

7.   Anatomy of the root, Primary and secondary structure.

8.   Examination of a wide range of flowers available in the locality and methods of their pollination.

9.   Structure of anther, microsporogenesis (using slides) and pollen grains (using whole mounts), pollen viability using in vitro pollen germination.

10. Structure of ovule and embryo sac development (using serial sections)

11. Test of self-incompatibility (using Petunia axillaris, Brassica campestris, B. olderacea or suitable available material) using field pollinations.

12. Nuclear and cellular endosperm, embryo development in monocots and dicots (using slides/dissections).

13. Simple experiments to show vegetative propagation (leaf cuttings in Bryophyllum, Sansevieria, Begonia, stem cuttings in rose, salix, money plant, sugarcane and Bougainvillea).

14. Germination of non-dormant and dormant seeds.

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GROUP - I

FINANACIAL ACCOUNTING

(Paper Code-1113)

PAPER - I

M.M. 75

OBJECTIVE

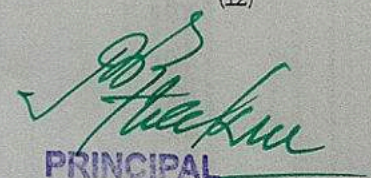To Impart basic accounting knowledge as applicable to business.

COURSE INPUTS

UNIT-I   Meaning and Scope of Accounting : Need, development, and definition, objectives of accounting, difference between Book-keeping and accounting; Branches of accounting; Accounting Principles,

Accounting Standard : International accounting Standard only outlines, Accounting standard in India.

Accounting Transaction : Accounting cycles Journal Rules of debit & Credit, Compound Journal Entry opening Entry Relationship between Journal & ledger, Capital & Revenue: Classification of Income & Expenditure and Receipt.

UNIT-II   Final accounts; Trial balance; Manufacturing account; Trading account; Profit and loss account; Balance sheet; Adjustment entries.

Rectification of errors; Classification of errors; Location of errors; Rectification of errors; Suspense account; Effect on profit.

UNIT-III Depreciation, Provisions, and Reserves: Concept of depreciation; Causes of depreciation; Depreciation, depletion amortization, Depreciation accounting; Methods of recording depreciation; Methods for providing depreciation; Depreciation of different assets; Depreciation of replacement cost; Depreciation policy; as per Indian accounting Standard : Provisions and Reserves. Accounts of Non-Trading Institutions

UNIT-IV   Special Acconting Areas :

Branch Accounts : Dependent branch : Debtors system, stock and debtor system ; Hire-purchase and instalment purchase system ; Meaning of hire-purchase contract; Legal provision regarding hire-purchase contract; Accounting records for goods of substantial sale values, and accounting records for goods of small values; Instalment purchase system ; After sales service.

UNIT-V   a   Partnership Accounts : Essential characteristics of partnership ; Partnership deed : Final accounts; Adjustments after closing the accounts ; Fixed fluctuating capital ; Goodwill ; AS-10 ; Joint Life Policy ; Change in Profit Sharing Ratio.

          b   Reconstitution of a partnership firm-Admission of a partner ; Retirement of a partner; Death of a partner; Dissolution of a firm; Accounting Entries; Insolvency of partnership firm-Modes of dissolution of a firm;Accounting entries; Insolveney of parters distribution.

SUGGESTED READINGS :

1   Anthony, R.N. and Reece, J.S.: Accounting Principles; Richard Irwin Inc.

2   Gupta, R.L. and Radhaswamy, M: Financial Accounting ; Sultan chand and Sons, New Delhi.

3   Monga J.R. Ahuja Girish, and Sehgal Ashok : Financial Accounting ; Mayur Paper Back, Noida.

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4. Shukla. M.C., Grewal T.S., and Gupta, S.C.: Advanced Accounts; S.Chand & Co. New Delhi.
5. Compendium of Statement and Standards of Accounting : The Institute of Chartered Accountants of India, New Delhi.
6. Agrawala A.N. Agrawala K.N.: Higher Sciences of Accountancy : Kitab Mahal, Allahabad.
7. उच्चतर लेखांकन : राणा एवं अन्य : म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल
8. उच्चतर लेखांकन : वसु एवं दास : (अंग्रेजी)
9. उच्चतर लेखांकन : हनीफ एवं मुखर्जी (अंग्रेजी)
10. वित्तीय लेखांकन : अग्रवाल एवं मंगल : यूनिवर्सल पब्लिकेशन
11. वित्तीय लेखांकन : एस.एम. शुक्ला : साहित्य भवन आगरा

BUSINESS MATHEMATICS
(Paper Code-1114)
PAPER - II   M.M. 75

OBJECTIVE

The objective of this course is to enable the students to have such minimum knowledge of Mathematics as is applicable to business and economic situations.

COURSE INPUTS

UNIT-I   Calculus (Problems and theorems involving trigonometrical ratios are not to be done).

Differentiation : Partial derivatives up to second order; Homogeneity of functions and Euler's theorem;

Maxima and Minima; Cases of one variable involving second or higher order derivatives; logarithm's.

UNIT-II   Matrices and Determinants : Definition of a matrix; Types of matrices; Algebra of matrices; Properties of determinants; Calculation of values of determinants upto third order; Adjoint of a matrix, elementary row or column operations; Finding inverse of a matrix through adjoint and elementary row or column operations; Solution of a system of linear equations having unique solution and involving not more than three variables.

UNIT-III   Linear Programming-Formulation of LPP : Graphical method of solution ; Problems relating to two variables including the case of mixed constraints; Cases having no solution, multiple solutions, unbounded solution and redundant constraints.

Transportation Problem, Ratio & Proportion.

UNIT-IV   Compound interest and Annuities : Certain different types of interest rates; Concept of present value and amount of a sum ; Types of annuities; Present value and amount of an annuity, including the case of continuous compounding ; Valuation of simple loans and debentures; Problems relating to sinking funds.

UNIT-V   Averages, Percentages, Commission Brokerage, Profit and loss.

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PRINCIPAL
Govt.K.L.Arts & Comm.College

GROUP - II

BUSINESS COMMUNICATION (Paper Code-1115)

PAPER - I   M.M. 75

OBJECTIVE

The Objective of this course is to develop effective business communication skills among the students.

COURSE INPUTS

UNIT-I Introducing Business Communication : Definitions, concept and Significance of communication, Basic forms of communicating; Communication models and process principles of effective communication; Theories of communication; Audience analysis.

Self-Development and Communication : Development of positive personal attitudes, SWOT analysis; Vote's model of interdependence; Whole communication.

UNIT-II Corporate Communication : Formal and informal communication networks; Grapevine; Miscommunication (Barriers) ; Improving communication.

Practices in business communication : Group discussions; Mock interviews; Seminars; Effective listening exercises; Individual and group presentations and reports writing.

UNIT-III Writing Skills : Planning business messages; Rewriting and editing; The first draft; Reconstructing the final draft; Business letters and memo formats; Appearance request letters; Good news and bad new letters; Persuasive letters; Sales letters; Collection letters; Office memorandum.

UNIT-IV Report Writing : Introduction to a proposal, short report and formal report, report preparation.

Oral Presentation : Principles of oral presentation, factors affecting presentation, sales presentation, training presentation, conducting surveys, speeches to motivate, effective presentation skills.

UNIT-V Non-Verbal Aspects of Communicating.

Body language : Kinesics, Proxemics, Para language..

Effective listening : Principles of effective listening; Factors affecting listening exercises; Oral, written, and video sessions.

Interviewing Skills : Appearing in interviews; Conducting interviews; Writing resume and letter of application.

Modern Forms of Communicating : Fax; E-mail; Video conferencing; etc.

International Communication : Cultural sensitiveness and cultural context; Writing and presenting in international situations; Inter-cultural factors in interactions; Adapting to global business.

SUGGESTED READINGS :

1   Bovee and Thill : Business Communication Today ; Tata McGraw Hill, New Delhi.

2   Ronald E. Dulek and John SFielder : Principles of Business Communication; Macmillan Publishing Company, London.

3   Randall E. Magors; Business Communication : Harper and Row New York.

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4   Webster's Guide to Effective letter writing ; Harper and Row, New York.
5   Balasubramanyam : Business Communications ; Vikas Publishing House, Delhi.
6   Kaul : Business Communication ; Prentice Hall, New Delhi.
7   Kaul : Effective Business Communication : Prentice Hall, New Delhi.
8   Patri VR : Essentials of Communication ; Greenspan Publications, New Delhi.
9   Senguin J : Business Communication ; The Real World and Your Career, Allied Publishers, New Delhi.
10. Robinson, Netrakanti and Shintre : Communicative Competence in Business English ; Orient Longman, Hyderabad.

BUSINESS REGULATORY FRAMEWORK (Paper Code-1116)

PAPER - II
M.M. 75

OBJECTIVE
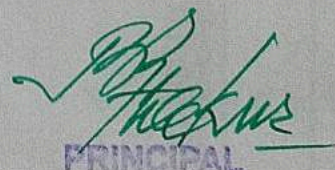
The objective of this course is to provide a brief idea about the framework of Indian business laws.

COURSE INPUTS

UNIT-I   Law of Contract (1872) : Nature of contract ; Classification; Offer and acceptance; Capacity of parties to contract, free consent, Considerations, Legality of object; Agreement declared void; Performance of contract; Discharge of contract; Remedies for breach of contract.

UNIT-II   Special Contracts : Indemnity ; Guarantee; Bailment and pledge; Agency.

UNIT-III Sale of Goods Act 1930 : Formation of contracts of sale; Goods and their classification, price, Conditions, and warranties; Transfer of property in goods; Performance of the contract of sales; Unpaid seller and his rights, sale by auction; Hire purchase agreement.

UNIT-IV   Negotiable Instrument Act 1881 : Definition of negotiable instruments; Features; Promissory note; Bill of exchange & cheque; Holder and holder in the due course; Crossing of a cheque, types of crossing; Negotiation; Dishonuor and discharge of negotiable instrument.

UNIT-V   The Consumer Protection Act 1986 : Sailent features; Definition of consumer; Grievance redressal machinery;

          Foreign Exchange Management Act 2000 : Definitions and main provisions, Right to Information Act 2005 (Main Provisions).

SUGGESTED READINGS :

1   Desai T.R. Indian Contract Act, Sale of Goods Act and Partnership Act; S.C. Sarkar & Sons Pvt. Ltd. Kolkata.
2   Khergamwala J.S.: The Negotiable Instruments Act; N.M.Tripathi Pvt. Ltd. Mumbai.
3   Singh Avtar : The Principles of Mercantile Law; Eastern Book Company, Lucknow.
4   Kuchal M.C. Business Law; Vikas Publishing House, New Delhi.
5   Kapoor N.D. Business Laws, Sultan Chand & Sons, New Delhi.
6   Chandha P.R. : Business Law; Galgotia, New Delhi.

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BUSINESS ENVIRONMENT (Paper Code-1117)

PAPER - I

M.M. 75

OBJECTIVE

This course aims at acquainting the students with the emerging issues in business at the national and international level in the light of the policies of liberalization and globalization.

COURSE INPUTS

UNIT-I   Indian Business Environment : Concept, components, and importance

Economic Trends (overview) : Income ; Savings and investment ; Industry ; Trade and balance of payments, Money ; Finance ; Prices.

UNIT-II   Problems of Growth : Unemployment ; Poverty; Regional imbalances ; Social injustice; Inflation ; Parallel economy ; Industrial sickness.

UNIT-III Role of Government : Monetary and fiscal policy ; Industrial policy ; Industrial licensing. Privatization; Devaluation; Export-Import policy; Regulation of foreign investment; Collaborations in the light of recent changes.

UNIT-IV   Review of Presious Plans, the current five Year Plan, major Policy, Resources Allocation.

UNIT-V   International Environment : international trading environment (overview); Trends in world trade and the problems of developing countries; Foreign trade and economic growth; International economic groupings; International economic institutions - GATT, WTO World Bank, IMF; FDI, Counter trade.

SUGGESTED READINGS :

1   Sundaram & Black : The International Business Environment ; Prentice Hall, New Delhi.

2   Agrawal A.N. : Indian Economy ; Vikas Publishing House, Delhi.

3   Khan Farooq A : Business and Society : S. Chand., Delhi.

4   Dutt R. and Sundaram K.P.M. ; Indian Economy : S. Chand, Delhi.

5   Misra S.K. and Puri V.K. : Indian Economy : Himalaya Publishing House, New Delhi.

6   Hedge Lan : Environmental Economics; Macmillan, Hampshire.

7   Dutt Ruddar : Economic Reforms in India - A Critique : S. Chand, New Delhi.

BUSINESS ECONOMICS (Paper Code-1118)

PAPER - II
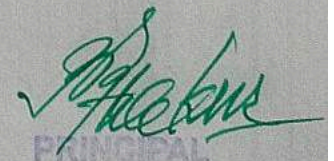
M.M. 75

OBJECTIVE

This course is meant to acquaint the students with the principles of Business Economics as are applicable in business.

COURSE INPUTS

UNIT-I   Introduction : Basic problems of an economy ; Working of price mechanism.

Elastcity of Demand : Concept and measurment of elasticity of demand ; Price, income

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आधार पाठ्यक्रम

प्रश्न पत्र – प्रथम

हिन्दी भाषा

पूर्णांक – 75

(पेपर संख्या 1111)

नोट :

1. प्रश्न पत्र 75 अंक का होगा ।

2. प्रश्न पत्र अनिवार्य होगा ।

4. इसके अंक श्रेणी निर्धारण के लिए जोड़े जावेंगे ।

5. प्रत्येक इकाई के अंक समान होंगे ।

पाठ्य विषय –

इकाई–1 पल्लवन, पत्राचार तथा अनुवाद एवं पारिभाषिक शब्दावली ।

इकाई–2 मुहावरे-लोकोक्तियाँ, शब्दशुद्धि, वाक्य शुद्धि, शब्द ज्ञान-पर्यायवाची, विलोम, अनेकार्थी, समश्रुत (समानोचरित) अनेक शब्दों के लिए एक शब्द ।

इकाई–3 देवनागरी लिपि की विशेषता, देवनागरी लिपि एवं वर्तनी का मानक रूप ।

इकाई–4 कम्प्यूटर में हिन्दी का अनुप्रयोग, हिन्दी में पदनाम ।

इकाई–5 हिन्दी अपठित, संक्षेपण, हिन्दी में संक्षिप्तीकरण ।

पाठ्य क्रम के लिए पुस्तकें –

1. भारतीयता के स्वर साधन धनंजय वर्मा   –   म. प्र. ग्रंथ अकादमी ।

2. नागरी लिपि और हिन्दी   –   अनंत चौधरी – ग्रंथ अकादमी पटना ।

3. कम्प्यूटर और हिन्दी   –   हरिमोहन – तक्षशिला प्रकाशन, दिल्ली ।

FOUNDATION COURSE

PAPER - II

ENGLISH LANGUAGE (Paper Code-1112)   M.M. 75

UNIT-1 Basic Language skills : Grammar and Usage.

Grammar and Vocabulary based on the prescribed text.
To be assessed by objective / multiple choice tests.

(Grammar - 20 Marks
Vocabulary - 15 Marks)

UNIT-2 Comprehension of an unseen passage.   05

This should imply not only (a) an understanding of the passage in question, but also (b) a grasp of general language skills and issues with reference to words and usage

B.Com. Part-I   (10)

COMPULSORY

Group - I - Accounting

PAPER - I

CORPORATE ACCOUNTING

(Paper Code-1133)

Max. M. 75

Min. M. 25

OBJECTIVE

This course enable the students to develop awareness about corporate accounting in conformity with the provisions of companies Act.
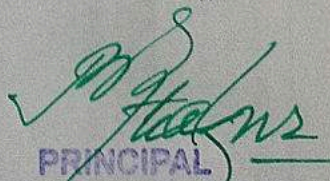
COURSE INPUTS

UNIT-I   Issue, Forfeiture, and Re-issue of Shares : Redemption of preference shares; Issue and redemption of debentures.

UNIT-II   Final Accounts; Excluding computation of managerial remuneration, and disposal of profit, Liquidation of Company.

UNIT-III Valuation of Goodwill and Shares.

UNIT-IV   Accounting for Amalgamation of Companies as per Indian Accounting Standard 14; Accounting for internal reconstruction - excluding intercompany holdings and re-construction schemes.

UNIT-V   Consolidated Balance Sheet of holding companies with one subsidiary only. Final Account of Banking Companies.

SUGGESTED READINGS :

1.   Gupta R.L., Radhaswamy M; Company Accounts; Sultan Chand & Sons, New Delhi.

2.   Maheshwari S.N. Corporate Accounting; Vikas Publishing House, New Delhi.

3.   Monga J.R., Ahuja, Girish and Sehgal Ashok : Financial Accounting; Mayur Paper Backs, Noida.

4.   Shukla M.C., Grewal T.S. and Gupta S.C. : Advanced Accounts; S. Chand & Co., New Delhi.

5.   Moore C.L. and Jaedicke R.K. : Managerial Accounting; South Western Publishing Co. Cincinati, Ohio.

6.   Dr. S.M. Shukla, Sahitya Bhawan Agra.

7.   Dr. Hanif & Mukerjee - Published Mac Millan.

8.   Dr. Mangal Mehta & Agrawal Published - Indore.

9.   Dr. Karim Khanuja - Published - Agra.

B.Com.-Part-II

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COMPULSORY

Group - I - Accounting

PAPER - II

COST ACCOUNTING (Paper Code-1134)

Max. M. 75

OBJECTIVE

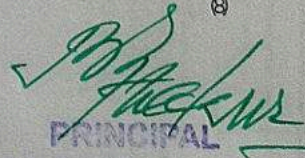This course exposes the students to the basic concepts and the tools used in cost accounting.

COURSE INPUTS

UNIT-I   Introduction : Nature and scope of cost accounting ; Cost concepts and classfication; Methods and techniques; Installation of costing system; Concept of cost audit. Accounting for Material : Material Control; Concept and techniques; Pricing of material issues; Treatment of material losses.

UNIT-II   Accounting for Labour : Labour cost control procedure; Labour turnover; Idle time and overtime; Methods of wage payment - time and piece rates; Incentive schemes. Accounting for overheads; Classification and departmentalization; Absorption of overheads; Determination of overhead rates; Under and over absorption, and its treatment.

UNIT-III Cost Ascertainment : Unit costing; Job, batch and contract costing.

UNIT-IV   Operating costing; Process Costing - excluding inter - process profits, and joint and by - products.

UNIT-V   Cost Records : Intergal and non - integral system; Reconciliation of cost and financial accounts; Break Even Point.

SUGGESTED READINGS :

1. Arora M.N. : Cost Accounting - Principles and Practice; Vikas, New Delhi.

2. Jain S.P. and Narang K.L. : Cost Accounting; Kalyani New Delhi.

3. Anthony Robert, Reece, et al : P:rinciples of Management Accounting; Richard D. Irwin Ire. Illinois.

4. Horngren, Charles, Foster and Datar : Cost Accounting - A Mangerial Empasis; Prentice - Hall of India, New Delhi.

5. Khan M.Y. and Jain P.K; Management Accounting; Tata McGraw Hill.

6. Kaplan R.S. and Atkinson A.A. : Advanced Management Accounting; Prentice India International.

7. Tulsian P.C.; Practical costing : Vikas, New Delhi.

8. Maheshwari S.N. : Advanced Problems and Solutions in Cost Accounting; Sultan Chand, New Delhi.

9. M.L. Agrawal : Sahitya Bhawan Agra.

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Group - II - Business Management

PAPER - I

PRINCIPLES OF BUSINESS MANAGEMENT
(Paper Code-1135)

Max. M. 75

OBJECTIVE

This Course familiarizes the students with the basics of principles of management.
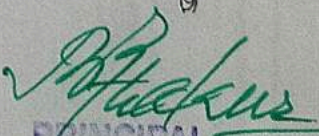
COURSE INPUTS

UNIT-I Introduction : Concept, nature, process, and significance of management; manage-ment roles (Mintzberg); An overview of functional areas of management; Development management thought; Classical and neo-classical systems; Concept approaches.

UNIT-II Planning : Concept, process and types. Decision making - concept and Bounded rationality; Management by objectives; Corporate planning; Environment analysis and diagnosis; Strategy formulation.

UNIT-III Organizing : Concept, nature, process and significance; Authority and resident relationships; Centralization and decentralization; Departmentation; Organization structure - forms and contingency factors.

UNIT-IV Motivating and Leading People at work : Motivation - concept; Theories Herzberg, McGregor, and Ouchi; Financial and non- financial incentives.

Leadership - concept and leadrship styles; Leadership theories (Tannenb Schmidt.); Likert's System Management;

Communication - nature, process, networks, and barriers, Effective Communication.

UNIT-V Managerial Control : Concept and process; Effective control system; Technical control - traditional and modern.

Management of Change : Concept, nature, and process of planned Resistance to change; Emerging horizons of management in a environment.

SUGGESTED READINGS :

1. Drucker peter F : Management Chanllenges for the 21st Century; Butterworth Heinemann, Oxford.

2. Weihrich and Koontz, et al : Essentials of Management; Tata McGraw Hill, New Delhi.

3. Fred Luthans : Orniztion Behaviour; McGrow Hill, New York.

4. Louis A Allen : Management and Organisation; McGrow Hill, Tokyo.

5. Ansoff H.I. : Corporate Strategy; McGrow Hill, New York.

6. Hampton,. David R. : Modern Management; McGrow Hill, New York.

7. Dr. R.C. Agrawal, Agra.

8. Dr. S.C. Saxena, Agra.

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Bagbahara, Distt.-Mahasamund (C.G.)

COMPULSORY

Group - II - Business Management
PAPER - II
COMPANY LAW
(Paper Code-1136)

Max. M. 75

OBJECTIVE

This objective of this course is to provide basic knowledge of the provisions Companies Act. 1956, along with relevant case law.

COURSE INPUTS

(The Companies Act, excluding provisions relating to accounts and audit sections, a agents and secretaries and treasurers Sections 324 - 388E, arbitration, compare arrangements and reconstructions - section 389-396.)

UNIT-I   Corporate personalities; Kinds of Companies, Nature & Scope, promotion on and incorporation of companies.

UNIT-II   Memorandum of Association; Articles of Association; Prospectus, Shares; share capital - transfer and transmission.

UNIT-III   Capital management - borrowing powers, mortgages and charges, debentures. Directors - Managing Director, whole time director, Appointment, Remuneration, and duties.

UNIT-IV   Company meetings - kinds, Notice, quorum, voting, proxy, resolutions, minutes.

UNIT-V   majority powers and minority rights; Prevention of oppression and mismanagement. Winding up - kinds and conduct.

SUGGESTED READINGS :

1   Gower L.C.B. : Principles of Modern Company Law; Stevens & Sons, London.

2   Ramaiya A. : Guide to the companies Act; Wadhwa & Co. Nagpur.

3   Singh Avtar : Company Law; Eastern Book Co., Lucknow.

4   Kuchal M.C. : Modern India Company Law; Shri Mahavir Books, Noida.

5   Kapoor N.D. : Company Law - Incorporating the Provisions of the comanies Amendment Act, 2000 Chand & Sons, New Delhi.

6   Bagrial A.K. : Company Law; Vikas Publishing House, New Delhi.

7   Dr. S.M. Shukla.

8   Dr. R.C. Agrawal.

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Group - III - Applied Economics

PAPER - I

BUSINESS STATISTICS

(Paper Code-1137)

Max. M. 75

OBJECTIVE

It enable the students to gain understanding of statistical techniques as are applicable to business.

COURSE INPUTS

UNIT-I   Introduction : Statistics as a subject; Descriptive Statistics - compared to Inferential Statistics; Types of data; Summation operation; Rules of Sigma E operations, Analysis of University Data; Construction of a frequency distribution; Concept of central tendency.

UNIT-II   Dispersion - and their measures; Partition values; Moments; Skewness and measures; Kurtosis and measures.

UNIT-III   Analysis of Bivariate Data : Linear regression two variables and correlation.

UNIT-IV   Index Number; Meaning, types, and uses; Methods of Constructing price and quantity indices (simple and aggregate); Tests of adequacy; Chain - base index numbers; Base shifting, splicing and deflating; Problems in constructing index numbers; Consumer price index. Analysis of Time Series : Cause of Variation in time series data; Components of a time series; Decomposition - Additive and Multiplicative models; Determination of trend - Moving Averages Method and method of least squares (including linear, second degree, parabolic, and exponential trend); Computation of seasonal indices by simple averages, ratio - to - trend, ratio - to - moving average, and link relative methods.

UNIT-V   Forecasting and Methods : Forcasting - concept, types and importance; General approach to forecasting; Methods of forecasting; demand; Industry Vs Company sales forecast; Factors affecting company sales. Theory of Probability : as a concept; The three approaches to defining probability; Addition and multiplication laws of probability; Conditional Probability; Bayes' Theorem; Expectation and Variance of a random variable.

COMPULSORY

Group - III - Applied Economics

PAPER - II

FUNDAMENTALS OF ENTREPRENEURSHIP

(Paper Code-1138)

Max. M. 75

OBJECTIVE

It Provides exposure to the students to the entrepreneurial culture and industrial growth so as to preparing them to set up and manage their own small units.
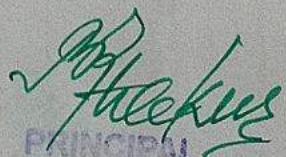
COURSE INPUTS

UNIT-I Introduction : The entrepreneur; Definition; Emergence of entrepreneurial class; Theories of entrepreneurship; Role of socio - economic environment; Characteristics.

UNIT-II Promotion of a Venture; Opportunities analysis; External environmental analysis economic, social and technological; Competitive factors; Legal requirements for establishment of a new unit, and raising of funds; Venture capital sources and documentation required.

UNIT-III Entrepreneurial Behavior : Innovation and entrepreneur; Entrepreneurial behavior and Psycho - Theories, Social responsibility.

UNIT-IV Entrepreneurial Development Programs (EDP) : EDP, their role, relevance, and achievements; Role of Government in organizing EDPs; Critical evaluation.

UNIT-V Role of Entrepreneur : Role of an entrepreneur in economic growth as an innovator, generation of employment opportunities, complementing and supplementing economic growth, bringing about social stability and balanced regional development of industries; Role in export promotion and import substitution, forex earnings, and augmenting and meeting local demand.

SUGGESTED READINGS :

1. Tandon B.C. : Environment and Entrepreneur; Chugh Publications, Allahabad.

2. Siner A David : Entrepreneurial Megabuks; John Wiley and Sons, New York.

3. Srivastava S.B. : A Practical Guide to industrial Entrepreneurs; Sultan Chand and Sons, New Delhi.

4. Prasanna Chandra : Project Preparation, Appraisal, Implementation; Tata McGrow Hill, New Delhi.

5. Pandey I.M. : Venture Capital - The Indian Experience; Prentice Hall of India.

6. Holt : Entrepreneurship - New Venture Cration; Prentice Hall of India.

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B.Com.-Part-II

हिन्दी भाषा

भाग-दो, आधार पाठ्यक्रम

प्रश्न पत्र – प्रथम

(पेपर कोड 1131)

पूर्णांक – 75

खण्ड-क

निम्नलिखित 5 लेखकों के एक-एक निबंध पाठ्यक्रम में सम्मिलित होंगे –   अंक–30

1.	महात्मा गांधी	–	सत्य और अहिंसा
2.	विनोबा भावे	–	ग्राम सेवा
3.	आचार्य नरेन्द्र देव	–	युवकों का समाज में स्थान
4.	वासुदेव शरण अग्रवाल	–	मातृ-भूमि
5.	भगवतशरण उपाध्याय	–	हिमालय की व्युत्पत्ति
6.	हरि ठाकुर	–	डॉ. खूबचंद बघेल

खण्ड-ख

हिन्दी भाषा और उसके विविध रूप   अंक–20

- कार्यालयीन भाषा
- मीडिया की भाषा
- वित्त एवं वाणिज्य की भाषा
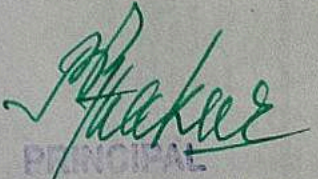- मशीनी भाषा

खण्ड-ग

अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद   अंक–25

हिन्दी की व्यवहारिक कोटियाँ–

रचनागत प्रयोगगत उदाहरण, संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण, समास, संधि एवं संक्षिप्तियां, रचना एवं प्रयोगगत विवेचन !

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B.Com.-Part-II

⑤

ENGLISH LANGUAGE (Paper Code-1132)

B.A. / B.Sc. / B.COM. / B.H.Sc. - II

M.M. 75

The question paper for B.A./B.Sc./B.Com./B.H.Sc., English Language and cultural valuers shall comprise the following units :

UNIT-I Short answer questions to be assed by (Five short answer questions of three marks each)
15 Marks

UNIT-II (a) Reading comprehension of an unseen passage 05 Marks

(b) Vocabulary

UNIT-III Report-Writing 10 Marks

UNIT-IV Expansion of an idea 10 Marks

UNIT-V Grammar and Vocabulary based on the prescribed text book. 20+15 Marks

Note : Question on all the units shall asked from the prescribed text which will comprise specimens of popular creative/writing and the following it any

(a) Matter & technology

(i) State of matter and its structure

(ii) Technology (Electronics Communication, Space Science)

(b) Our Scientists & Institutions

(i) Life & work of our eminent scientist Arya Bhatt. Kaurd Charak Shusruta, Nagarjuna, J.C. Bose and C.V. Raman, S. Rmanujam, Homi J. Babha Birbal Sahani.

(iii) Indian Scientific Institutions (Ancient & Modern)

Books Prescribed :

Foundation English for U.G. Second Yaer - Published by M.P. Hindi Granth Academy, Bhopal.

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B.Com.-Part-II

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आधार पाठ्यक्रम

हिन्दी भाषा

(पेपर कोड–0891)

प्रथम प्रश्न पत्र   पूर्णांक – 75

(बी.ए., बी.एस.सी., बी.एच.एस-सी., बी.काम., तृतीय वर्ष के पुनरीक्षित

एकीकृत आधार पाठ्यक्रम एवं पाठ्य सामग्री का संयोजन)

।। सम्प्रेषण कौशल, हिन्दी भाषा और सामान्य ज्ञान ।।

आधार पाठ्यक्रम की संरचना और अनिवार्य पाठ्य पुस्तक– हिन्दी भाषा एवं समसामयिकी– का संयोजन इस तरह किया गया है कि सामान्य ज्ञान की विषय वस्तु– विकासशील देशों की समस्याओं– के माध्यम और साथ-साथ हिन्दी भाषा का ज्ञान और उसमें सम्प्रेषण कौशल अर्जित किया जा सके । इसी प्रयोजन से व्याकरण की अन्तर्वस्तु को विविध विधाओं की संकलित रचनाओं और सामान्य ज्ञान की पाठ्य सामग्री के साथ अन्तर्गुम्फित किया गया है । अध्ययन-अध्यापन के लिए पूरी पुस्तक की पाठ्य सामग्री है और अभ्यास के लिये विस्तृत प्रश्नावली है । यह प्रश्नपत्र भाषा का है अतः पाठ्य सामग्री का व्याख्यात्मक या आलोचनात्मक अध्ययन अपेक्षित नहीं है । पाठ्यक्रम और पाठ्य सामग्री का संयोजन निम्नलिखित पाँच इकाइयों में किया जाता है । प्रत्येक इकाई को दो भागों में विभक्त किया गया है ।

इकाई – 1   (क) भारत माता : सुमित्रानंदन पंत, परशुराम की प्रतीज्ञा : रामधारी सिंह दिनकर, बहुत बड़ा सवाल : मोहन राकेश, संस्कृति और राष्ट्रीय एकीकरण : योगेश अटल ।

(ख) कथन की शैलियाँ : रचनागत उदाहरण और प्रयोग ।

इकाई –2   (क) विकासशील देशों की समस्यायें, विकासात्मक पुनर्विचार, और प्रौद्योगिकी एवं नगरीकरण ।

(ख) विभिन्न संरचनाएँ ।

इकाई – 3   (क) आधुनिक तकनीकी सभ्यता, पर्यावरण प्रदूषण तथा धारणीय विकास ।

(ख) कार्यालयीन पत्र और आलेख ।

इकाई – 4   (क) जनसंख्या : भारत के संदर्भ में और गरीबी तथा बेरोजगारी ।

(ख) अनुवाद ।

इकाई – 5   (क) ऊर्जा और शक्तिमानता का अर्थशास्त्र ।

(ख) घटनाओं, समारोहों आदि का प्रतिवेदन और विभिन्न प्रकार के निमंत्रण-पत्र ।

मूल्यांक योजना : प्रत्येक इकाई से एक-एक प्रश्न पूछा जायेगा । प्रत्येक प्रश्न में आंतरिक विकल्प होगा । प्रत्येक प्रश्न के 15 अंक होंगे । प्रत्येक इकाई दो-दो खंड (क्रमशः 'क' और 'ख' में) विभक्त है, इसलिए प्रत्येक प्रश्न के भी दो भाग, (क्रमशः 'क' और 'ख') होंगे । 'क' अर्थात पाठ एवं सामान्य ज्ञान से संबद्ध प्रश्न के अंक 8 एवं 'ख' अर्थात भाषा एवं सम्प्रेषण कौशल से संबद्ध प्रश्न के अंक 7 होंगे । इस प्रकार पूरे प्रश्न पत्र के पूर्णांक 75 होंगे ।

Foundation Course - III

English Language

(Paper Code-1152)

B.A./B.Sc./B.Com./B.H.Sc./III

M.M. 75

The question paper for B.A./B.Sc./B.Com./B.H.Sc. III Foundation course, English Language and General Answers shall comprise the following items :

Five question to be attempted, each carrying 3 marks.

UNIT-I   Essay type answer in about 200 words. 5 essay type question to be asked three to be attempted.   15

UNIT-II   Essay writing   10

UNIT-III   Precis writing   10

UNIT-IV   (a)   Reading comprehension of an unseen passage   05

         (b)   Vocabulary based on text   10

UNIT-V   Grammar Advanced Exercises   25

Note :   Question on unit I and IV (b) shall be asked from the prescribed text. Which will comprise of popular create writing and the following items. Minimum needs housing and transport Geo-economic profile of M.P. communication Educate and culture. Women and Worm in Empowerment Development, management of change, physical quality of life. War and human survival, the question of human social value survival, the question of human social value, new Economic Philosophy Recent Diberaliation Method) Demoration docontralisation (with reference to 73, 74 constitutional Amendment.

Books Prescribed :

Aspects of English Language And Development - Published by M.P. Hindi Granth Academy, Bhopal.

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COMPULSORY CORE COURSE

PAPER - I

INCOME TAX

(Paper Code-1153)

M.M. 75

OBJECTIVE

It enables the students to know the basics of Income Tax Act and its implications.

COURSE INPUTS

UNIT-I Basic Concepts : Income, agricultural Income, casual income, assessment year, previous year, gross total income, total income, person.

Basis of charge : Scope of total income, residence and tax liability, income which does not form part of total income.

UNIT-II Heads of Income : Salaries; Income from house property.

UNIT-III Profit and gains of business or profession, including provisions relating to specific business; Capital gains, Income from other sources.

UNIT-IV Computation of Tax Liabilty : Set-off and carry forward of losses; Deduction from gross total income.

Aggregation of income; Computation of total income and tax liability of and individual, H.U.F., and firm.

UNIT-V Tax Management : Tax deduction at source; Advance payment of tax; Assessment procedures; Tax planning for individuals.

Tax evasion, Tax Avoidance and Tax planning.

Tax Administration : Authorities, appeals, penalties.

Suggested Reading :

1. Singhania V.K. : Students Guide to Income Tax; Taxmann, Delhi.

2. Prasad, Bhagwati : Income Tax Law & Prectice; Wily Publication, New Delhi.

3. Mehrotra H.C. : Income Tax Law & Accounts : Sahitya Bhawan, Agra.

4. Girish Ahuja and Ravi Gupta : Systematic approach to income tax : Sahitya Bhawan Publications, New Delhi.

5. Chandra Mahesh and Shukla D.C. : Income Tax Law and Practice; Pragati Publications, New Delhi.

6. R.K. Jain : Income Tax & Law (Hindi & English) Shahitya Bhawan, Publication, Agra,

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PAPER - II
INDIRECT TAXES
(Paper Code-1154)

M.M. 75

OBJECTIVE

This course aims at imparting basic knowlege about major indirect taxes.

UNIT-I Central Excise : Nature and scope of Central Excise; Important terms and definitions under the Central Excise Act; General procedures of central excise; Clearance and excisable goods; Concession to small scale industry under Central Excise Act.

UNIT-II State Excise, CENVAT.

Detail study of State Excise during calculation of Tax.

UNIT-III Customs : Role of customs in international trade; Important terms and definitions goods; Duty; Exporter; Foreign going vessel; Aircraft goods; Import; Import Manifest; Importer; Prohibited goods; Shipping bill; Store; Bill of lading; Export manifest; Letter of credit; Kinds of duties - basic, auxillary, additional or coutervailing; Basics of levy-advalorem, specific duties; Prohibition of export and import of goods, and provisions regarding notified & specified goods; Import of goods - Free import and restricted import; Type of import - import of cargo, import of personal baggage, import of stores.

Clearance Procedure - For home consumption, for warehousing for re-export; Clearance procedure for import by post; Prohibited exports; Canalised exports; Export against licensing; Type of exports export of cargo, export of baggage; Export of cargo by land, sea, and air routes.

UNIT-IV Central Sales Tax : Important terms and difinitions under the Central Sales Tax Act 1956 - Dealer, declared good, place of business, sale, sale price, turnover, year, appropriate authority; Nature and scope of Central Sales Tax Act; Provisions relating to inter-state sales; Sales in side a state; Sales/purchase in the course of imports and exports out of India. Registration of dealers and procedure thereof; Rate of tax; Exemption of subsequent sales; Determination of turnover.

UNIT-V State Commercial Tax (Chhattisgarh) Definition, Registration, Tax liability, Procedure of Computation & Collection of Tax, Penalties & Prosicution calculation of Tax. VAT-Preliminary Knowledge.

Suggested Reading :

1. Malhotra & Goyal (Hindi & English).
2. Shripal Saklecha. - अप्रत्यक्ष कर
3. Commercial Tax Act. (C.G.)
4. Central Excise Act.
5. Sales Tax Act.

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MANAGEMENT ACCOUNTING

(Paper Code-1155)

M.M. 75

OBJECTIVE

This course provides the students an understanding of the application of accounting techniques for management.

COURSE INPUTS

UNIT-I   Management Accounting : Meaning, nature, scope, and functions of management accounting; Role of managment accounting in decision making; Management accounting vs financial accounting; Tools and techniques of management accounting; Financial statement; Objectives and methods of financial statements analysis; Ratio analysis; Classification of ratios - Profitability ratios, turnover ratios, liquidity ratios, turnover ratios; Advantages of ratio analysis; Limitations of accounting ratios.

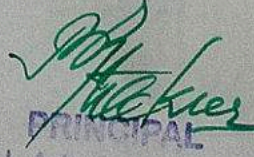UNIT-II   Funds Flow Statement as per Indian Accounting Standard 3, cash flow statement.

UNIT-III Absorption and Marginal Costing : Marginal and differential costing as a tool for decision making - make or buy; Change of product mix; Pricing, Break-even analysis; Exploring new markets; Shutdown decisions.

UNIT-IV   Budgeting for profit Planning and control : Meaning of budget and budgetary control; Objectives; Merits and limitations; Types of budgets; Fixed and flexible budgeting; Control ratios; Zero base budgeting; Responsibility accounting; Performance budgeting.

UNIT-V   Standard Costing and Variance Analysis : Meaning of standard cost and standard costing; Advantages and application; Variance analysis - material; Labour and overhead (Two-way analysis); Variances.

Suggested Reading :

1.   Arora M.N. : Cost Accounting - Principles and Practice, Vikas, New Delhi.

2.   Jain S.P. & Narang K.L. : Cost Accounting; Kalyani, New Delhi.

3.   Anthony, Rogert & Reece, at al : Principles of Management Accounting; Richard Irwin Inc.

4.   Horngren, Charles, Foster and Datar et al : Cost Accounting - A Managerial Emphasis; Prentice Hall, New Delhi.

5.   Khan M.Y. and Jain P.K. : Management Accounting : Tata McGraw Hill, New Delhi.

6.   Kaplan R.S. and Atkonson A.A. : Advanced Management Accounting; Printice Hall India, New Delhi.

7.   J.K. Agrawal & R.K. Agrawal : Jaipur (English & Hindi).

8.   Dr. M.R. Agrawal : Minakshi Prakashan Meruth.

9.   Dr. S.P. Gupta - Agra (Hindi & English).

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AUDITING

(Paper Code-1156)

M.M. 75

OBJECTIVE

This course aims at imparting knowlege about the principles and methods of auditing and their applications.

COURSE INPUTS

UNIT-I Introduction : Meaning and objectives of auditing; Types of audit; Internal audit.

Audit Process : Audit programme; Audit note books; Working papers and evidences.

UNIT-II Internal Check System : Internal control.

Audit Procedure : Vouching : Verification of assets and liabilities.

UNIT-III Audit of Limited Companies :

a   Company auditor - Appointment, powers, duties, and liabilities.

b   Divisible profits and dividend.

c   Auditor's report - standard report and qualified report.

d   Special audit of banking companies.

e   Audit of educational institutions.

f   Audit of Insurance companies.

UNIT-IV Investigation : Investigation; Audit of non profit companies,

a   Where fraud is suspected, and

b   When a running a business is proposed.

c   Varifications & Valuation of assets.

UNIT-V Recent Trends in Auditing : Nature and significance of cost audit; Tax audit; Management audit. Company auditing - Qualification, Appointment, Resignation and liabilities.

Suggested Reading :

1.   Gupta KaPal : Contemporary Auditing : Tata Mcgraw Hill, New Delhi.

2.   Tandon B.N. : Principles of Auditing : S. Chand & Co., New Delhi.

3.   Pagare Dinkar : Principles and Practice of Auditing : Sultan Chand, New Delhi.

4.   Sharma T.R. : Auditing Principles and Problems, Sahitya Bhawan, Agra.

5.   Shukla S.M. : Auditing - Shahitya Bhavan, Agra, (Hindi)

6.   Batliboy : Auditing.

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OPTIONAL GROUP A
Combination - I (Finance Area)
PAPER - I
FINANCIAL MANAGEMENT
(Paper Code-1157)

M.M. 75

OBJECTIVE

The objective of this course is to help students understand the conceptual framework of financial management.

COURSE INPUTS

UNIT-I Financial Management : Financial goals; Profit vs wealth maximization; Financial functions-investment, financing, and dividend decisions; Financial planning.

UNIT-II Capital Budgeting : Nature of investment decisions, Investment evaluation criteria, payback period, accounting rate of return, net present value, internal rate of return profitability index; NPV and IRR comparison.

UNIT-III Cost of Capital : Significance of cost of capital; Calculating cost of debt; Preference shares, equity capital, and retained earnings; Combined (weighted) cost of capital.

Operating and financial Leverage : Their measure; Effects on profit, analyzing alternate financial plans, combined financial and operating leverage.

UNIT-IV Capital Structure : Theories and determinates.

Dividend Policies : Issues in dividend policies; Walter's model; Gordon's model; M.M. Hypothesis, forms of dividends and stability in dividends, determinats.

UNIT-V Management of Working Capital : Nature of working capital, significance of working capital, operating cycle and factors determining of working capital requirements, Management of working capital - cash, receivables, and inventories.

Suggested Reading :

1. Van Home J.C. : Financial Management and Policy; Prentice Hall of India, New Delhi.
2. Khan M.Y. and Jain P.K. : Financial Management, Text and Problems; Tata McGrow Hill, New Delhi.
3. Prasanna Chandra L Financial Management Theory and practice; Tata McGrow Hill, New Delhi.
4. Pandey I.M. : Financial Management Vikas Publishing Hous, New Delhi.
5. Brigham E.F. Gapenski L.C., and Ehrhardt M.C. : Financial Management - Theory and Practice; Harcourt College Publishers, Singapore.
6. Bhalla V.K. : Modern Working Capital Management, Anmol Pub. Delhi.
7. वित्तीय प्रबंध : एस. सी. जैन
8. वित्तीय प्रबंध : अग्रवाल एवं अग्रवाल, रमेश बुक डिपो, जयपुर
9. वित्तीय प्रबंध : एस. डी. सी. शर्मा, मेरठ

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OPTIONAL GROUP A

(Finance Area)

PAPER - II

FINANCIAL MARKET OPERATIONS

(Paper Code-1158)

M.M. 75

OBJECTIVE

This course aims at acquainting the students with the working of financial markets in India.

COURSE INPUTS

UNIT-I   Money Market : Indian money market's composition and structure; (a) Acceptance houses, (b) Discount houses and (c) Call money market; Recent trends in Indian money market.

UNIT-II   Capital Market : Security market - (a) New issue market, (b) Secondary market; Functions and role of stock exchange; listing procedure and legal requirements; Public issue - pricing and marketing; Stock exchanges - National Stock Exchange and over the counter exchanges.

UNIT-III   Securities contract and Regulations Act : Main provisions.

     Investors Protection : Grievancesconcerning stock exchange dealings and their removal; Grievance cells in stock exchanges; SEBI; Company Law Board; Press; Rmedy through courts.

UNIT-IV   Functionaries on Stock Exchanges : Brokers, sub brokers, market makers, jobbers, portfolio consultants, institutional investors, and NRIs.

UNIT-V   Financial Services : Marchant banking - Functions and roles; SEBI guide-lines; Credit rating - concept, functions, and types.

Suggested Reading :

1. Chandler M.V. and Goldfeld S.M. : Economics of money and Banking, Harper and Row, New Delhi.

2. Gupta Suraj B. Monetary Economics; s. chand and Co. New Delhi.

3. Gupta Suraj B. Monetary Planning in India; Oxford, Delhi.

4. Bhole L.M. : Financial Markets and Institutions : Tata McGrow Hill, New Delhi.

5. Hooda R.P. : Indian Securities Market - Investors view point; Excell Books, New Delhi.

6. R.B.I. : Functions and Working.

7. R.B.I. : Report in Currency and Finance.

8. R.B.I. : Report of the Committee to Review the working of the Monetary system : Chakravarty committee.

9. R.B.I. : Report of the Committee on the Financial System, Narsimham Committee.

10. वित्तीय बाजारों की कार्यप्रणाली – साहित्य भवन पब्लिकेशन, आगरा

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B.Com.-Part-III

CHEMISTRY

The new curriculum will comprise of Three papers of 33,33, & 34 marks each and Practical work of 50 marks. The curriculum is to be completed in 180 working days as per the UGC norms & conforming to the directives of the Govt. of Chhattisgarh. The theory papers are of 60 hrs. each duration & the practical work of 180 hrs. duration.

PAPER - I (Paper Code-0895)
INORGANIC CHEMISTRY   M.M. 33

UNIT-I   METAL-LIGAND BONDING IN TRANSITION METAL COMPLEXES

Limitations of valence bond theory, an elementary idea of crystal field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal field parameters.

Thermodynamic and kinetic aspects of metal complexes.

A brief outline of thermodynamic stability of metal complexes and factors affecting the stability, subsitiution reactions of square planar complexes.

UNIT-II   MAGNETIC PROPERTIES OF TRANSITION METAL COMPLEXES

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin only formula, L-S coupling, correlation of μs and μ eff. values, orbital contribution to magnetic moments, application of magnetic moment data for 3d metal complexes. Electronic spectra of Transition Metal Complexes.

Types of electronic transitions, selection rules for d-d transitions, spectroscopic ground states, spectro-chemical series. Orgel-energy level diagram for d^1 and d^2 states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-III   ORGANOMETALLIC CHEMISTRY $[Ti(H_2O)_6]^{3+}$

Definition, nomenclature and classification of organo metallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al, Hg, Sn, & Ti, A brief account of metal-ethylenic complexes and homogeneous hydrogenation, monouclear carbonyls and nature of bodning in metal carbonyls.

UNIT-IV   BIOINORGANIC CHEMISTRY

Essential and trace elements in biological processes, metalloporphyrins with special reference to hemoglobin and myoglobin. Biological role of alkali and alkaline earth metals with special reference to Ca^{21}, nitrogen fixation.

UNIT-V   HARD AND SOFT ACIDS AND BASES (HSAB)   07 HRS.

Classification of acids and bases as hard and soft. Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis
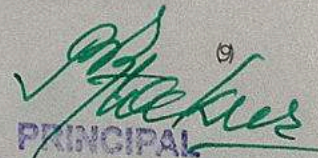
Silicones and Phosphazenes

Silicons and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

REFERENCE BOOKS :

1. Basic Inorganic Chemistry, F.A. Cotton, G. Wilkinson and P.L. Gaus, Wiley
2. Concise Inorganic Chemistry, J.D. Lee, ELBS.
3. Concepts of models of Inorganic Chemistry, B. Douglas, D. McDaniel and J. Alexander, John Wiley
4. Inorganic Chemistry, D.E. Shriver, P.W. Atkkins and C.H. Langford, Oxford.

B.Sc.-III

5. Inorganic Chemistry, W.W. Porterfield, Addison-Wesley.
6. Inorganic Chemistry, A.G. Sharp, ELBS.
7. Inorganic Chemistry, G.L. Miessler and D.A. Tarr, Prentice Hall.
8. Advanced Inorganic Chemistry, Satyas Prakash.
9. Advanced Inorganic Chemistry, Agarwal & Agarwal.
10. Advanced Inorganic Chemistry, Puri & Sharma, S. Naginchand.
11. Inorganic Chemistry, Madan, S. Chand & Co.
12. Adhunik Akarbanic Rasayan, A.K. Shrivastav & P.C. Jain, Goel Pub.
13. Ucchattar Akarbanic Rasayan, Satya Prakash & G.D. Tuli, Shyamlal Prakashan
14. Ucchattar Akarbanic Rasayan, Puri & Sharma.

PAPER - II (Paper Code-0896)
ORGANIC CHEMISTRY

M.M. 33

UNIT-I   A.   ORGANICMETALLIC COMPOUNDS

Organomegenesium compounds : Grignard reagents-formation, structure and chemical reactions. Organozinc compounds : formation and chemical reactions. Organolithium compounds : formation and chemical reactions.

B.   Organosulphur Compounds

Nomenclature, structural features, methods of formation and chemical reactions of thiols, thioethers, sulphonic acids, sulphonamides and sulphaguanidine.

Organic Synthesis via Enolates

Active methylene groupalkylation of diethylmalonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate : the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.

UNIT-II   BIOMOLECULES

A.   Carbohydrates :

Configration of monosaccharides, threo and erytho diastereomers. Formation of glycosides ethers and esters Determination of ring size of monosaccharides. Cyclic structure of D(+) glucose. Structure of ribose and deoxyribose. An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

B.   Proteins and Nucleic acids

Classification and structure of protein levels of protein structure, protein denaturation / renaturation, Constituents of amino acids Ribonucleicsids and ribounucleotieds, double helical structure of DNA.
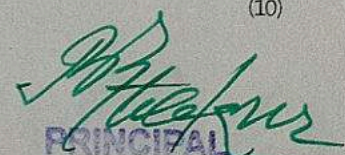
UNIT-III   A.   Synthetic Polymers

Addition or chain growth polymerization. Free radical vinyl polymerization, Ziegler-Natta polymerization, Condensation or Step growth polymerization, Polyesters, polyamides, phenols- formaldehyde resins, urea- formaldehyde resins, epoxy resins and polyurethanes, natural and synthetic rubbers.

B.   Synthetic Dyes

Colour and constitution (Electronic Concept). Classification of Dyes. Chemistry of dyes. Chemistry and synthesis of Methyl Orange, Congo Red, Malachite Green, Crystal Violet, Phenolphthalein, fluorescein, Alizarine and Indigo.

UNIT-IV   SPECTROSCOPY

A.   Mass spectroscopy : mass spectrum fragmentation of functional groups.

B.Sc.-III

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B. **InfraRed Spectroscopy** : IR absorption Band their position and intensity, Identification of IR spectra.

C. **UV-Visible Spectroscopy** : Beer Lambert's law, effect of Conjugation λ_{max} Visible spectrum and colour.

D. Anthocyanin as natural colouring matter (Introduction only)

E. Application of Mass, IR, UV-Visible Spectroscopy to organic molecules.

UNIT-V A. **NMR Spectroscopy** : Introduction to NMR. Shielding and Number of signal in PMR, Chemical shift and characteristic values, spiltting of Signals and Coupling constant. Application to organic molcules.

B. ^{13}**CMR Spectroscopy** : Principal & Application.

C. **Magnetic Resonance Imaging (MRI)** - Introductory idea.

REFERENCE BOOKS :

1. Organic Chemistry, Morrison and Boyd, Prentice-Hall
2. Organic Chemistry, L.G. Wade Jr., Prentice-Hall
3. Fundamentals of Organic Chemistry, Solomons, John Wiley
4. Organic Chemistry, Vol.I, II, III, S.M. Mukherjee, S.P. Singh and R.P. Kapoor, Wiley-Eastern (New-Age)
5. Organic Chemistry, F.A. Carey, McGraw Hill
6. Introduction to Organic Chemistry, Streiweisser, Heathcock and Kosover, Macmillan
7. Organic Chemistry, P.L. Soni
8. Organic Chemistry, Bahi & Bahl
9. Organic Chemistry, Joginder Singh
10. Carbanic Rasayan, Bashi & Bahi
11. Carbanic Rasayan, R.N. Singh, S.M.I. Gupta, M.M. Bakodia & S.K. Wadhwa
12. Carbanic Rasayan, Joginder Singh.
13. Carbanic Resayan, P.L., Soni.
14. Corbanic Rasayan, Bhagchandani, Sahitya Bhawan Publication.
15. Rasayan Vigyan, Bhatnagar, Arun Prakashan.

PAPER - III (Paper Code-0897)
PHYSICAL CHEMISTRY
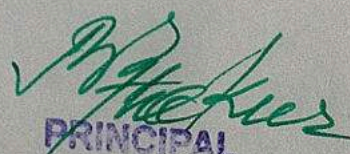
M.M. 34

UNIT-I **QUANTUM MECHANICS**

Black body radiation, Plank's radiation law, photoelectric effect, Compton effect. DeBroglie's idea of matter waves, experimental verification Heisenberg's uncertainty principle, Sinosoidal wave equation, Operators : Hamiltonian operator, angular momentum operator, laplacian operators postulate of quantum mechanics Eigen values, Eigen function. Schrodinger time independed wave equation physical significance of ψ and ψ² . Applications of schrodinger wave equation : particle in one dimensional box Hydrogenation (separation into three equation's) radial wave function and angular wave function.

UNIT-II **QUANTUM MECHANICS-II**

Quantum mechanical approach of molecular orbit theory; basic idea criteria for forming M.O and A.O, LCAO approximation, formation of H^{2+} ion, calculation of energy levels from wave functions bonding and antibonding wave functions concept of σ and π

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PHYSICS

Objectives :

Present course is aimed to provide ample knowledge of basics of Physics which are relevant to the understanding of modern trends in higher physics.

The first paper is aimed at preparing the back ground of modern physics which includes the relativistic and quantum ideas mainly councerned with atomic, molecular and nuclear physics. It consistutes an essential pre-requisite for better understanding of any branch of physics.

The second paper is mainly concerned with Solid State Physics, Solid State Devices and Electronics. This course is quite important from the applicational aspects of modern electronic devices. It also forms the basis of advance electronics including communication technology to be covered at higher level.

The experiments are based mostly on the contents of the theory papers so as to provide comprehensive insight of the subject.

Scheme of Examination :

1. There shall be two theory papers of 3 hours duration each and one practical paper of 4 hours duration. Such paper shall carry 50 marks.

2. Each theory paper will comprise of 5 units. Two questions will be in each unit and the student will have the choice to answer one out of the two.

3. Numerical problems of about 30 percent will compulsorily be asked in each theory paper.

4. In practical paper each student has to perform two experiments during examination.

5. Practical examination will be of 4 hours duration. The distribution of practical marks will be as follows.

Experiments : 15 + 15 = 30, Viva-voce :10

Internal Assessment - 10.

PAPER - I (Paper Code-0893)
RELATIVITY, QUANTUM MECHANICS, ATOMIC MOLECULAR AND NUCLEAR PHYSICS.

UNIT-I Reference systems, inertial frames, Galilean invariance and conservation laws, propogation of light, Michelson-Morley experiment, search for ether.

Postulates for the special theory of ralativity, Lorentz tranformations, length contraction, time dilation, velocity additon theorem, variation of mass with velocity, mass-energy equivalence, particle with zero rest mass, Compton effect.

UNIT-II Origin of the quantum theory : Failure of classical physics to explain the phenomena such as black-body spectrum, photoelectric effect.

Wave-particle duality and uncertainty principle : de Broglie's hypothesis for matter waves : the concept of wave and group velocities, evidence for diffraction & interference of particles, experimental demonstration of mater waves. Davisson and Germer's experiment.

Consequence of de Broglie's concepts, quantisation in hydrogen atom, energies of a particle in a box, wave packets.

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PAPER-II (Paper Code-0894)

SOLID STATE PHYSICS, SOLID STATE DEVICES AND ELECTRONICS

UNIT-I Amorphous and crystalline solids, Elements of symmetry, seven crystal system, Cubic lattices, Crystal planes, Miller indices, Laue's equation for X-ray diffraction, Bragg's Law. Bonding in solids, classification. Cohesive energy of solid.

Madelung constant, evaluation of Parameters.

Specific heat of solids, classical theory (Dulong-Petit's law). Einstein and Debye theories. Vibrational modes of one dimensional monoatomic lattice, Dispersion relation, Brillouin Zone.

UNIT-II Free electron model of a metal, Solution of one dimensional Schrodiner equation in a constant potential. Density of states. Fermi Energy, Energy bands in a solid (Kronig-Penny model without mathematical details). Metals, Insulator and Semiconductors. Hall effect.

Dia, Para and Ferromagnetism. Langevin's theory of dia and para-magnetism. Curie-Weiss's Law. Qualitative description of Ferromagnetism (Magnetic domains), B-H. curve and Hysteresis loss.

UNIT-III Intrinsic semiconductors, carrier concentration in thermal equlibrium, Fermi level, Impurity semiconductor, doner and acceptor levels, Diode equation, junctions, junction breakdown, Depletion width and junction capacitance, abrupt junction, Tunnel diode, Zener diode. Light emitting diode, solar cell, Bipolar transistors, pnp and npn transistors, characteristics of transistors, different configurations, current amplification factor, FET.

UNIT-IV Half and full wave rectifier, rectifier efficiency ripple factor, Bridge rectifier, Filters, Inductor filter, T and N filters, Zener diode, regulated power supply.

Applications of transistors.

Bipolar Transistor as amplifier.

Single stage and CE small signal amplifiers, Emitter followers, Transistoras power amplifier, Transistor as oscillator, Wein-Bridge Oscillator and Hartley oscillator.

UNIT-V Introduction to computer organisation, time sharing and multi programming systems, window based word processing packages, MS Word.

Introduction to C programming and application to simple problems of arranging numbers in ascending / descending orders : sorting a given data in an array, solution of simultaneous euation.

BOOKS RECOMMENDED :

1. Introduction to solid state physics : C.Kittel
2. Solid State Physics : A.J. Dekkar
3. Electronic Circuits : Mottershead
4. Electronic Circuits : Millman and Halkias
5. Semiconductor Devices : S.M. Sze
6. Computer fundamental : balaguara Swami

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PRINCIPAL
Govt.K L.Arts & Comm.College
Bagbahara, Distt.-Mahasamund (C.G.)

MATHEMATIS

There shall be three theory papers. Two compulsory and one optional Each paper carrying 50 marks is divided into five units and each unit carry equal marks.

PAPER - I (Paper Code-0898)
ANALYSIS

REAL ANALYSIS

UNIT-I Series of arbitrary terms. Convergence, divergence and Oscillation. Abel's and Dirichlet's test. Multiplication of series. Double series.

Partial derivation and differentiability of real-valued functions of two variables. Schwarz and Young's theorem. Implicit function theorem.

Fourier series. Fourier expansion of piecewise monotonic functions.

UNIT-II Riemann integral. Intergrability of continuous and monotonic functions. The fundamental theorem of integral calculus. Mean value theorems of integral calculus.

Improper integrals and their convergence, Comparison tests. Abel's and Dirichlet's tests. Frullani's integral. Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

COMPLEX ANALYSIS

UNIT-III Complex numbers as ordered pairs. Geometric representation of Complex numbers. Stereographic projection.

Continuity and differentiability of Complex functions. Analytic functions. Cauchy-Riemann equations. Harmonic functions.

Elementary functions. Mapping by elementary functions.

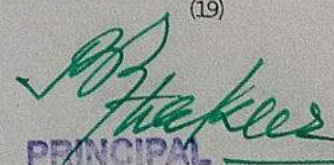Mobius transformations. Fixedpoints, Cross ratio. Inverse points and critical mappings. Conformal mappings.

METRIC SPACES

UNIT-IV Definition and examples of metric spaces. Neighbourhoods, Limit points, Interior points, Open and closed sets, Closure and interior. Boundary points, Sub-space of a metric space. Cauchy sequences, Completeness, Cantor's intersection theorem. Contraction principle, Construction of real numbers as the completion of the incomplete metric space of rationals. Real numbers as a complete ordered field.

UNIT-V Dense subsets. Baire Category theorem. Separable, second countable and first countable spaces. Continuous functions. Extension theorem. Uniform continuity, Isometry and homeomorphism. Equivalent metrics. Compactness, Sequential compactness. Totally bounded spaces. Finite intersection property. Continuous functions and compact sets, Connectedness, Components, Continuous functions and connected sets.

REFERENCES :

1. T.M. Apostol, Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
2. R.R. Goldberg, Real Analysis, Oxford & IBH publishing Co., New Delhi, 1970.
3. S. Lang, Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary, A First Coarse in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5. Shanti Narayan, A Course of Mathematical Analysis, S. Chand & Co. New Delhi.

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Govt. K L. Arts & Comm. College
Bagbahara. Distt.-Mahasamund (C.G.)

6. P.K. Jain and S.K. Kaushik, An introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.

7. R.v. Churchill & J.W. Brown, Complex Variables and Applications, 5*" Edition, McGraw-Hill, NewYork, 1990.

8. MarkJ. Ablowitz & A.S.Fokas, Complex Variables : Introduction and Applications, Cambridge University Press, South Asian Edition, 1998.

9. Shanti Narayan, Theory of Functions of a Complex Variable, S. Chand & Co., New Delhi.

10. E.t. Copson, Metric Spaces, Cambridge University Press, 1968.

11. P.K. Jain and K. Ahmad, Metric Spaces, Narosa Publishing House, New Delhi, 1996.

12. G.F. Simmons, Inroductin to Topology and Modern Analysis, McGraw-Hill, 1963.
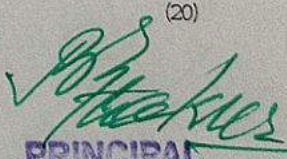
PART - II (Paper Code-0899)
ABSTRACT ALGEBRA

UNIT-I Group-Automorphisms, inner automorphism. Automorphism groups and their computations, Conjugacy relation, Normaliser, Counting principle and the class equation of a finite group. Center for Group of prime-order, Abelianizing of a group and its universal property. Sylow's theorems, Sylow subgroup, Structure theorem for finite Abelian groups.

UNIT-II Ring theory-Ring homomorphism. Ideals and Quotient Rings. Field of Quotients of an Integral Domain, Euclidean Rings, Polynomial Rings, Polynomials over the Rational Field. The Eisenstien Criterion, Polynomial Rings over Commutative Rings, Unique factorization domain. R unique factorisation domain implies so is R [x1, x2 ..... xn] Modules, Submodules, Quotient modules, Homomorphism and Isomorphism theorems.

UNIT-III Definition and examples of vector spaces. Subspaces. Sum and direct sum of subspaces, Linear span. Linear dependence, independence and their basic properties. Basis. Finite dimensional vector spaces. Existence theoremfor bases. Invariance of the number of elements of a basis set. Dimension. Existence of complementary subspace of a subspace of a finite dimensional vector space. Dimension of sums of subspaces. Quotient space and its dimension.

UNIT-IV Linear transformations and their representation as matrices. The Algebra of linear transformations. The rank nullity theorem. Change of basis. Dual space. Bidual space and natural isomorphism. Adjoint of a linear transformation. Eigenvalues and eigenvectors of a linear transformation. Diagonalisation. Annihilator of a subspace. Bilinear, Quadratic and Hermitian forms.

UNIT-V Inner Product Spaces-Cauchy-Schwarz inequality. Orthogonal vectors. Orthogonal Complements. Orthonormal sets and bases. Bessel's inequality for finite dimensional spaces. Gram-Schmidt Orthogonalization process.

REFERENCES :

1. I.N. Herstein, Topics in Algebra, Wiley Eastern Ltd., New Delhi, 1975.

2. N. Jacobson, Basic Algebra, Vols. I & II. W.H. Freeman, 1980 (also published by Hindustan Publishing Company).

3. Shanti Narayan, A Text Book of Modern Abstract Algebra, S.Chand & Co. New Delhi.

4. K.B. Datta, Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.

5. P.B. Bhattacharya, S.K. Jain and S.R. Nagpal, Basic Abstract Algebra (2"" Edition) Cambridge University Press, Indian Edition, 1997.

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