## Savitribai Phule Pune University

# T.Y.B.Sc. Defence and Strategic Studies Syllabus from academic year - 2015 -16

For both the semester following five courses will be compulsory. (Core Courses)

Sr. No.		Semester III	Semester IV		
	Paper No.	Title of the Paper	Paper No.	Title of the Paper	
1.	DS 301	India's Foreign and Defence Policy	DS 401	Internal Security of India.	
2.	DS 302	Defence Economics	DS 402	Trends in India's Defence Expenditure	
3.	DS 303	Research Methodology	DS 403	Project Report	
4.	DS 304	Science, Technology and National Security	DS 404	Information Warfare and Cyber Security	
5.	DS 305	Defence Planning and Management in India	DS 405	Defence Production and Logistics in India	

# \* Students must select one paper from each group. (Total Group 4 and Choose anyone from each group )

Group -I	DS 306(A)	Military and Media	DS 406(A)	Defence Journalism and National Security
	DS 306(B)	Armed Conflicts and Human	DS 406(B)	Gender Based Conflicts and
		Rights		Human Rights
Group	DS 307(A)	Disaster Management	DS 407(A)	Role of the Armed Forces in
-II	DS 307 (B)	Global Security I		Disaster Management
			DS407 (B)	Global Security II
Group	DS 308(A)	Indian Military Strategy	DS 408(A)	Indian Military Strategy
- III		(1857-1947)		(1947-2014)
	DS 308(B)	Indian Military Strategy	DS 408(B)	Indian Military Strategy
		(1630-1680)		(1680-1818)
Group	DS 309(A)	Regional Security System	DS 409(A)	United Nations Organisation
- IV				
	DS 309(B)	Strategic Environment of	DS 409(B)	India's Maritime Security
	ĺ	Indian Ocean	, ,	

Note: - Students will be opting 5 (core papers)+4(optional papers) = Total 9 courses per semester.

## T. Y. B.Sc. DS-301 India's Foreign and Defence Policy

**Aim:-** Students will study about the evolution and characteristics' of India's Foreign and Defence Policies and different issues involved students in framing the policies.

#### **Semester III**

1. Foreign policies: Meaning ,Definition and Concept	(04)
2. Characteristics ,principles and objectives of Foreign policy	(04)
3. Evolution of Foreign policy since 1947-to till date	(04)
4. Determinant Factors of Foreign policy	(04)
5. Defence Policies: Meaning; Definition and Concept	(04)
6. Characteristics ,Principles and objectives of Defence policy	(04)
7. Evolution of Defence policy since 1947-to till date	(04)
8. Determinant Factors of Defence policy	(04)
9. Analysis of India's Nuclear policy and doctrine	(08)
	<b>Total</b> (40)

- 1. Sen Gautam, "India's Security consideration in nuclear age" (New Delhi-Atlantic 1986)
- 2. Dr Khare Vijay, Strategic and security thoughts of Dr.Babasaheb Ambetkar" Scholars press Germany-2014
- 3. Haksar P. N, India's Foreign Policy and its problem (Delhi-Atlantic 1993)
- 4. K. Subramaniam, Our national security Economic and scientific, Research Foundation- New Delhi-1972
- 5. Rahul Roy Choudury, India's Maritime security, Knowledge world, New Delhi-2000
- 6. Thakkar Usha and Kulkarni Mahesh, India in World affairs: Towards the 21<sup>st</sup> century, Himalaya Mumbai, 1999.
- 7. M.S.Rajan, World order and The united nations Organisation, kanishka, New delhi-1998

## T. Y. B.Sc. DS-302 Defence Economics

**Aims: -** To provide elementary knowledge pertains to Defence Expenditure, Planning and programming.

#### Semester I

1.	Rational of Arms Production in the Third world countries	(05)
2.	Elements of War Potential	(05)
3.	Determinants of Defence expenditure	(05)
4.	Defence and Development	(05)
5.	Link between Economy and Defence Expenditure	(05)
6.	Link between war and Industrial power	(05)
7.	Merits and Demerits of War and peace time Economy	(05)
8.	Sources of Finance (Domestic and Foreign)	(05)

**Total (40)** 

- 1. Laxmi Y, Trends in Defence Expenditure, New Delhi, ADS 1988
- 2. Ron Mathew, Defence Production in India, New Delhi, ABC-1989
- 3. Alok Ghosh, Indian Economy; Its Nature & Problem, New Book Hall-Kolkata-1994
- 4. S. K. Mishra & V.K. Puri , Indian Economy, Himalaya Publishing House-1998,New Delhi.
- 5. K.Subramanyam. Perspectives in Defence Planning, Abhinav Publshing Company, New Delhi-1972
- 6. Raju G. C.Thomas, The Defence of India –A budgetary perspective of strategy and politics, The Macmillan Company of India, New Delhi
- 7. A. N. Agarwal Economic Mobilization of National Defence, Asia Publishing House, London 1968 V. N. Shrinivas, Budgeting for Indian Defence, New Delhi, K W Publishers, 2008
- 8. Amiya Kumar Ghosh, Defence Budgeting & Planning in India: The Way Forward, New Delhi, 2006
- 9. Alain C. Einthoven & K. Wayne Smith, How much is Enough ?,Shaping the Defence Budget 1961-1969s ,New Delhi, RAND Corporation
- 10. H.C. Bhatia, Public Finance (Ed), Vikas Publishing House, New Delhi -2006
- 11. S. P. Ganguly, Fundamentals of Government Budgetary in India,3rd Ed ,New Delhi, Concept Publishing Co.-2007
- 12. Jaswant Sing, Defending India, Chennai, MacMillan India Ltd, 1999
- 13. H. B. Mishra, Defence Programmes of India, Delhi, Author press, 2000

## T. Y. B.Sc. DS- 303 RESEARCH METHODOLOGY

	Ta4al (40)
10. Research report- Rationale, Style & Structure and Precautions	(06)
9. Sources of Information and Data- collection, analysis and interpretation of data	(06)
8. Hypothesis and Research Design	(04)
7. Selection of Problems.	(05)
6. Systematic process and steps in research	(04)
5. Conceptualization in research survey of literature	(02)
4. Role and scope of research in Security Studies	(04)
3. Advantages of Scientific research.	(02)
2. Aims and objectives of research	(02)
1. Introduction, meaning, definitions, significance and characteristics of research	(05)

### Total (40)

- 1. Khan J A 'Research Methodology' APH Publications New Delhi, 2006
- 2. Junker, B. H., Field Work; An Introduction to the Social Sciences, Chicago, University of Chicago Press, 1960. 209 p.
- 3. Kippur J.N. October 27, 1997. "The State of Postgraduate Education and Research in India" University News, 35 (43), 9-12.
- 4. Meehan, E. J., Explanation in Social Sciences; A system paradigm, Homewood, IIIinois : Dorsey Pr., 1968. 18 p.
- 5. Williams, F., Reasoning with Statistics; Simplified Examples in Communications Research, New York, Holt, Rinehart and Winston, 1968, ix, 182 p.
- 6. Yadav M.S., Menon S.B. and Kumar P.A. 1981."Educational Research as Scientific Inquiry" Ibid, 7(1), 110-116.
- 7. Yadav M.S., Roy S. and Lakshmi T.K.S. 1985."Research and Teaching" Journal of Higher Education, 10(3), 170-184.
- 8. Young, P. V., Scientific Social Surveys and Research; An Introduction to the Background, Content, Methods, Principles and Analysis of Social Studies, 2<sup>nd</sup> ed., Bombay, Asia Publishing House 1961, 540 p.

## T. Y. B.Sc. DS: 304 Science, Technology and National Security

Aim: To study the role of science and technology and national security.

## 1. Impact of Science and technology on society and warfare (12)- Science and technology concepts and relation with national security - Impact of major technological breakthrough on society - Impact of major technological breakthrough and its strides in military technological revolution 2. Armament Technology: (12)- Small arms technology - Armored Vehicles Technology - Submarines and Aircraft Carrier - Aircraft, Rocket, Missile and Space Vehicle 3. Technology development: (12)- By indigenous means-by public and private sectors - By transfer of technology: Its political, military and economic impact - Advantages of foreign collaboration and joint military technological venture 4. Application of Dual Use Technologies (04)**Total (40)**

- 1. Rehman A' Science, Technology and Society', People Publisher's House, New Delhi 1972
- 2. Branson Jack, Technology and the Multinational Lexington Books, 1978
- 3. John Erickson (Ed.), The Military Technical Revolution: Its Impact on Strategic and Foreign Policy: New York, Fredrick A Prager, 1966
- 4. Maksey, Kenneth The Technology in War: The impact of Science on weapon development and modern battle: NY Printice Hall, 198
- 5. Mann T S, Transfer of Technology, Himalaya Publishing House Mumbai, 1982
- 6. Jasbir R K , Hand book of Military Science and Armament Technology: Natraj Publication,
  Dehradun 1987
- 7. Rao Bhaskar D, 'Military Conversion- Impact on Science and Technology" Discovery Publishing House, New Delhi, 2003
- 8. Khan JA, "Probing War and Warfare," APH Publishing Corporation, New Delhi, 2005

# T. Y. B.Sc.DS-305 Defence Planning and Management in India

**Aim:** - To appraise the students with the application of management practices in the Armed Forces.

1.	Defence Management-Concept, Salient Features, Nature and scope	(05)
2.	Application of Management in the Armed Forces	(05)
3.	Industrial Management vs. Military Management	(05)
4.	Principles of Management	(05)
5.	Application and Strength of war Principles in corporate Management	(05)
6.	Human Resource Management in Armed Forces	(05)
7.	Team Building in armed forces	(05)
8.	Role of Leadership in the Defence Management and Development	
	Of Battle Dynamism in the current scenario	(05)

**Total (40)** 

- John Downey, Management in the armed Forces, EBD Educational Pvt Ltd, Dehradun India, 1987
- 2. Andre Beaufre, Strategy for Tomorrow, Mac Donald Press, London, 1974
- 3. Defence Management, An Annual Journal of College of Defence Managemnet, Secundarbad
- 4. Mishra H B, Defence Management in India, Author Press, New Delhi, 2000
- 5. A L Venkateshwaran, Defence Organization in India, Publication Division, Government of India, New Delhi, 1967
- 6. Ron Mathews, Defence Production in India, ABC, New Delhi, 1989
- 7. Raju G C Thomas, The Defence of India: A Budgetary Perspective of Strategy and politics, MacMillan Publication, New Delhi, 1978
- 8. Sam-C-Sarekesian, The Military Industrial Complex-A Reassessment, Sage publication, 1972
- 9. Maj. Gen Pratap Narain (Retd), Indian Arms Bazar, Shilpa Publication, New Delhi, 1998
- 10. Annual reports of The Ministry of Defence, Government of India
- 11. Brig. Pramod Sasius, Military Logistics-Third Dimensions, manas publication, New Delhi, 2000

## T. Y. B.Sc. DS-306 (A) Military and Media (Optional)

**Aim:** - To make aware of the students about the role of media in the management of National Security. Also, provide knowledge how to be responsible Defence Journalist.

1.	Introduction-Basic Concept, Characteristics' and Types	(05)
2.	Evolution and Development of Defence Journalism	(05)
3.	Theory of communication	(05)
4.	Laws and Role of Media in Communication	(05)
5.	Essential information for Defence Journalist	(05)
6.	Difficulties and limitations of Defence Journalism	(05)
7.	Ingredients in Defence Journalism	(05)
8.	Scope of Defence Journalism	(05)

**Total (40)** 

- 1. Sangeeta saxena, Defence Journalism in India, New Delhi, Manas Publications, 1997
- 2. M. V. Desai and Seventi Ninan (ed) Beyond Those headlines, New Delhi, Allied Publication
- 3. P. P. Singh and Dr. A. K. Nayak, Future of mass communication, New Delhi, Manas
- 4. Publications ,2008
- 5. A. K. Nayak and S.K Sing, Professional Journalism, New Delhi, Manas Publications ,2008
- 6. P. P. Singh and S. Kumar Singh, World Encyclopedia of Mass Communication, New Delhi, Manas Publications, 2008
- 7. Jan R Hakemulder and Fay AC de Jonge, media Ethics and Laws, New Delhi, Anmol Publications Pvt .Ltd, 2006
- 8. Nayyar Shamsi, journalis: Ethics and Code, New Delhi, Anmol Publications Pvt .Ltd, 2005
- 9. Seema Sharma, Journalism: Communication Management, New Delhi, Anmol Publications Pvt .Ltd. 2005
- 10. Pushpendra P Singh and Samir Kumar Singh, Public Relations Management, New Delhi, Jnanada Prakashan (P&D), 2009
- 11. Tymson Candy and Peter Lazar, Public Relations manual, Sydney, Tymson Communications , 2006
- 12. Military year Book (Annual)
- 13. Annual Report, Ministry of Defence
- 14. B.G Varghese, Indian Journalism

## T. Y. B.Sc.Ds-306 (B) Armed Conflict and Human Rights

**Aim:** The course aims to study the conceptual foundation of Human Rights and Duties both in International and National Law and in different cultures in the world it also studies the concept of liberty, equality and social justices.

#### 1. Understanding the Concept of Rights

**(10)** 

- Meaning Nature and Significant of the Concept of Human Rights
- Classification of Human Rights-From Magna Carta to the International Bill of Rights.

#### 2. Introduction to types of violent conflict

**(10)** 

- Different approaches to Intervention
- International conflict, civil war
- Coercive humanitarianism
- Asymmetrical warfare/ insurgency / terrorism.

#### 3. Theories of Rights

(10)

- Liberty: Meaning and Dimensions of Liberty; Rights, Liberty and Duties
- Equality: Perspectives on Equality; Relationship between Equality and Liberty
- Justice: Meaning and Dimensions; Justice as a Pre-requisite for Rights.

#### 4. Humanitarianism and Conflict

(10)

- Coercive humanitarianism
- Military interventions, and peacekeeping.
- Theory.
- Mandates, and reality of the use of the use of force to create humanitarian outcomes.

**Total (40)** 

- 1. Buergenthal Thomas, International Human Rights in Nutshell,2<sup>nd</sup> ed, West Publishing co. 1995
- 2. Cranston, Maurice, What are Human Rights? (London, 1973)
- 3. Davidson, Scott, Human Rights (Buckingham, 1993)
- 4. Donnelly, Jack, The Concept of Human Rights(London, 1985)
- 5. Donnelly, Universal Human Rights in Theory and Practice, 3<sup>rd</sup> ed (Ithaca, 2003)

## T. Y. B.Sc. DS: 307 (A) Disaster Management

Aim: To study the effects of disaster in relation to national security.

1. Disaster: Introduction and meaning	(02)
2. Natural and Environmental Disaster	(03)
3. Manmade Disaster and Disaster due to Weapons of Mass Destructions	(03)
4. Contributive Factors to Vulnerability	(02)
5. India's Key Vulnerability	(04)
6. Case Study of Bhopal Gas tragedy 1984, Latur Earthquake 1993, 26/11 Mumbai Attack and Ambegoan (Malin)- Pune land slide in 2014	(12)
7. Disaster management: Public awareness on various disasters, Rescue & Relief Operations and Mitigation	(10)
8. Role of Social Scientist in Pre and Post Disaster Management	(04)

#### **Total (40)**

- 1. Comfort, L K, ed. 1988, Managing Disaster: Strategies and Policy Perspectives, Durham, NC: Duke University Press.
- 2. Shagufta, "Disaster Management" APH Publication Corporation, New Delhi, 2012
- 3. Murty DBN, "Disaster Management" Deep and Deep Publication New Delhi, 2007
- 4) Ram Murthy. "Disaster Management" Dominant Publication & Distributer, New Delhi.
- 5) Trivedi P. R. & Gurudeep Raj. "Encyclopedia of Environmental Science."
- 6) Narendra Pradhan "Disaster Management", Surendra Publication, New Delhi 110662.
- 7) Dr. S. R. Singh "Disaster Management", APH Publishing Corporation, New Delhi, 2009.
- 8) S. Prasad. "Natural Disaster Management", Manglam Publication & Distributor, New Delhi 53, Call 22945678, Mobile: 9868572512, (2008).
- 9) Braj Kishor Prasad Singh "Industrial Disaster Management", Navayug Publication & Distributor, New Delhi, (2008).
- 10) B. Narayan. "Disaster Management", A.P.H. New Delhi, 2009. Phone 23274080.
- 11) Rajesh Anand, N. C. Jana, Sudhir Singh. "Disaster Management & Sustainable Development", Pentagon Press, New Delhi: 110649

## T. Y. B.Sc. DS 307 (B) Global Security I

**Aim** – The basic aim of this paper is to educate the student on various strategic issues in relation to Global Security.

#### 1. Global Warming and Cooling

(10)

- Meaning, Nature, Scope, Causes
- Threat to Human being
- Preventive Measures

#### 2. Terrorism

(10)

- Meaning, Nature, Causes, Scope
- Terrorism as a Global problem

#### 3. Arab- Israel Conflict

(10)

- Historical background
- Genesis of The Arab-Israel Conflict
- Brief historical account of wars
- Present status of conflict.

#### 4. Escalation Points / Global Security Issues

(10)

- Relevant to Global Security
- Ethnicity :- As a source of conflict.
- Oil As a source of conflict
- Kashmir issue
  - India China border issue
  - North korea v/s South Korea
  - Afghanistan
- Iraq

**Total (40)** 

- 1. Balan K The Millennium Thoughts challenges to service. Author Press, Delhi 2001.
- 2. Karn Margaret P. Mingst, International organization The political & Process of Global Governance, Viva books pvt. Delhi 2005
- 3. Mishra Brijaylaxmi, United Nations and Security Challenges In New millennium, Kilaso books, New Delhi 2004.
- 4. Morgenthau Hans.J., Politics Among Nations. Scientific book Agency Calcutta 1963.
- 5. Sing Jasjit, United Nations Peace Keeping Operation, The challenges of change in Regan MS Ed. UN 50 and beyond, lancer Books Delhi, 1996.
- 6. Shastri M.N, Introduction to Environment, Himalaya Publishing house,
- 7. Mumbai 2005.
- 8. M.S.Rajan., "World Order and The United Nations Organization", Kanishka, New Delhi, 1998.
- 9. Sukhbir Singh, "<u>Structure and Functions of U.N.O. New Journal</u>: <u>International Organisation</u>".
- 10. S.K. Agrawal (Ed)., "Essay on the Law of Treaties", Bombay Orient Longmans 1973.
- 11. R.P. Anand., "New States and International Law", Vikas Publications, New Delhi, 1972.
- 12. Vinay Kumar Malhotra., "International Relations", Amol Publications, New Delhi, 2001.
- 13. Zelester David., "War, Peace and International Politics", Boston, Little Brown & Co. 1981.
- 14. Kesley Charles W. Jr. & Whittkopt Eugence R., "World Politics: Trends and Transformation", Hamphshire, Mac Millon, 1989.
- 15. Journals: "International Studies", Quarterly, New Delhi, India.

## T. Y. B.Sc. DS 308 (A) **Indian Military Strategy (1857-1947)**

Aim: To make aware the Students about Indian Military Strategy & Wars, Students will be literate about the role of the Indian armed forces and National as well as regional peace & Security.

1. Military History	(08)
- Strategically Meaning and Concept of Military History	
- Sources of Indian Military History.	
- Necessity of Its Study.	
2. Contemporary warfare	(08)
- Meaning and Concept	
- Changing nature of war from Limited to Total	
3. Indian Military Strategy	(08)
4 World war I- Role of Indian army in World War I	(08)
5. World war II - Role of Indian army in World War II	(08)

**Reference: Total (40)** 

- Sarkar J.N. Shivaji and his Times, (Drient Longman, New Delhi, 1960) 1.
- 2. Kulkarni A.R. The Maratha's (1600-1848), (Book and Books, New Delhi, 1996)
- 3. Apte B.K. War History of Maratha Navy (Bombay State Board of literature and Culture, 1973)
- 4. Pitre K.G. War History of the Maratha, (k.G. Pitre,pune,1998)
- 5. V.B. Kangly. "Kautilya's Arthashastra", Bombay University, Mumbai – 1972.
- 6. J.N. Sarkar. "Military History of India", Orient Longman, New Delhi – 1973.
- S. N. Sen. "The Military System of Maratha", Bagchi Com. New Delhi 1977. 7.
- Brig. K. G. Pitre. "War History of The Maratha", Pune University, Pune 1988. 8.
- 9. Pitre K. G. "Hindustancha Sankshipta Itihas", Navachaitanya Prakashan, Mumbai
- 10. Effenberger David "A Dictionary of Battles", New Delhi -1966.
- Sir. J. Sarkar. "Some Aspects of Military Thinking and Practice in Medieval 11. India", Calcutta – 1969.
- 12. Dr. Vipin Bihari Sindh. "Madhyayugin Bharat Ka Itihas", Manas Publication,

## T. Y. B.Sc. DS 308 (B) Maratha Military Strategy (1630 to 1680 A.D.)

Aim:- To make a details study about Maratha Military& Strategy.

1.	Rise of Maratha power	(08)
	- Social Religious and Economic Condition in Maharashtra before Shivaji	
2.	Shivaji and his Childhood	(08)
	- Role of Jijabai and Dadoji in making of Shivaji	
3.	Shivaji and Adilshai	(08)
	- Jawali incident & it's consequences	
	- Battle of Pratapgad- strategy and Tactice used by Shivaji	
4.	Shivaji and Moghals	(08)
	- Raid on Shahistekhan	
	- Campaign of Mirza Raja Jaising	
5.	Karnatka Campain	(08)
	- Objective & Consequnces	
	- Evaluation of Shivaji – As a Guerilla Leader	

## Total (40)

- 1. Sarkar J.N. Shivaji and his Times,(Drient Longman,New Delhi,1960)
- 2. Kulkarni A.R. The Maratha's (1600-1848), (Book and Books, New Delhi, 1996)
- 3. Apte B.K. War History of Maratha Navy (Bombay State Board of literature and Culture, 1973)
- 4. Pitre K.G. War History of the Maratha, (k.G. Pitre,pune,1998)

## T. Y. B.Sc. DS 309 (A) Regional Security System

**Aim:** To study about the role of regional organization in national and international security system.

1.	Regional Organizations for security	(08)
	a) NATO	
	b) SEATO	
	c) CENTO	
	d) WARSAW	
	It's Aims, objectives and Role	
2.	SAARC and OPEC	(08)
	a) Origin and Development	
	b) Objectives	
	c) Structure	
	d) Role	
3.	ASEAN and EUROPEAN UNION	(08)
	a) Origin and Development	
	b) Objectives	
	c) Structure	
	d) Role	
4.	NAFTA and SAFTA	(08)
	a) Origin and Development	
	b) Aims and Objectives	
5.	WTO (World Trade Organization)	(08)
	a) Aims	
	b) Objectives	
	c) Impact and Effects on World Trade	
		<b>Total (40)</b>

- 1) Palmer and Perkins- International Relations, 3rd Edn. Scientific Book Agency, Calcutta, 1970
- 2) Balan K, The Millenium Thoughts Challenges ti Security, Authors Press, Delhi, 2001.
- 3) Karn Margaret P. Koren A Mingst, International Organisation, the political of Global Governance, Viva Books New Delhi, 2004.
- 4) Mishra Brijlaxmi, United Nations and Security challenges in New Millenium, Kilaso Books, New Delhi, 2004.
- 5) Dr. Jadhav V.Y, Patil H.S.- Global Security, Prashant publication, Jalgaon, 2006.
- 6) Shastri M N, Introduction to Environment, Himalya Publishing House, Mumbai, 2005.
- 7) Rober H Allen, Enhancing United nations, Peace keeping in Chadok F. Alger Ed., The Future of the UN System: Potential for the Twenty First Century, United Nations University Press, Tokio,1998

## T. Y. B.Sc. DS 309 (B) Strategic Environment of Indian Ocean

**Aim :**- In view of close proximity of India with Indian ocean, Students must be aware about Current developments & how it has relevance to India's National Security. Students will be able to understand the super powers politics in Indian ocean.

(Lectures Required Approx)

1. Indian Ocean (10)

- Geographical political & Strategic importance
- Historical Survey
- Strategic importance of Andaman Nicobar & Diego Garcia Islands

#### 2. Strategic Environment

(10)

- Super powers rivalry in Indian ocean
- Strategic importance of Diego-Garcia for U.S.A. (Strategic consideration)
- Chinese Indian Ocean policy

#### 3. Indian Oceans :- Strategics of Respective Powers

(10)

- Naval Strategy of India
- Naval Strategy of China
- Naval Strategy of U.S.A.

#### 4. Indian Ocean :- Problems & Prospects

(10)

- Changing Nature of Super power politics
- Security problems of littoral countries
- Indian Ocean :- As a zone of Peace

**Total (40)** 

- 1. Rahul Roy Choudhary, "India's Maritime Security", Knowledge World New Delhi-2000
- 2. V.R. Raghavan and Lawrence Prabhakar, "<u>Maritime Security in the Indian Ocean Region:</u> Critical Issues in Debate", A.P.H. New Delhi, 2005.
- 3. K.R.Singh, "New Challenges to Maritime Security: Legality and Legitimacy of Responses", Manas Publications, New Delhi, 2005.
- 4. "Freedom to Use the Seas: India's Maritime Strategy", Integrated HQ,
- 5. Vijay Khare, "India in Global Politics", K. Sagar, Pune 2008.
- 6. Thakkar Usha and Kulkarni Mahesh, "India in World affairs: Towards the 21st
- 7. <u>Century</u>", Himalaya Mumbai,1999. Dr. M.L.SALI "<u>Military Geography</u>" Manas Publication.
- 8. Ghosh P.A., Ethic conflict in Sri-Lanka & Role of IPKF, (APH Publisher, New Delhi)

#### T.Y. B.Sc. DS- 401 (Core papers) Internal Security of India Semester IV

**Aim: -** To literate the students about the basic concept of India Internal Security along with relevant dimensions of it.

#### 1. Internal Security.

(12)

- Meaning & Elements of The State.
- Role of The State in Human Security.

#### . Different Dimension of Internal Security.

(13)

- Socio-Cultural-ethnic.
- Political.
- Economic.
- External Abetment.

#### 3. Case Studies in India.

(15)

- Kashmir Problem.
- Naxalite Problem.
- Agitations over Economic/Developmental Issues (including SEZ).
- Agitations over Religious and Caste and class issues.
- Security Challenges to North East Region of India.

**Total (40)** 

- 1) Shrikant Paranjpe, "India's Internal Security: Issues and Perspectives", Kalinga, New Delhi, 2009.
- 2) Inderfurth, Kari F. and Johnson, Lock K. (Ed), "Fateful Decisions: Inside the National Security Council", Oxford University Press, New York, 2004.
- 3) Samadar Surjeet, "Defence, Development & National Security: Linkages in the Indian Context", Gyan Publishing House, New Delhi, 2005.
- 4) Bhonsle Rahul K., "India Security Scope 2006: The New Great Home", Kalpaz Publication, Delhi, 2006.
- 5) Carpenter William M & Wienecle David G. (Ed), "Asian Security Handbook:Terrorism and the New Security Environment", Pentagon Press, New Delhi, 2007.
- 6) Singh Anand K., "Ethnicity and Security of India", Anubhav Publishing House, Allahabad, 2008.
- 7) Vijay Khare, "India in Global Politics", K. Sagar, Pune 2008.
- 8) Thakkar Usha and Kulkarni Mahesh, "India in World Affairs: Towards the 21st Century", Himalaya, Mumbai, 1999.
- 9) Vijay Khare, "Dr. B. R. Ambedkar & India's National Security" Kilasoo Books New Delhi-2005

#### T.Y. B.Sc. (Core papers) DS-402, Trends in India's Defence Expenditure

**Aims: -** To provide elementary knowledge pertains to Defence Budgeting, Planning and programming in India, inter-alia highlighting the trends in Defence expenditure.

1.	Salient features of Indian Economy	(05)
2.	Organization and Functions of the Ministry of Defence	(05)
3.	Organization and Functions of Defence Research and Development (DRDO)	(05)
4.	Role of DPSU and Private Sector in India's Defence	(05)
5.	Importance and Historical perspectives of Defence Budget	(05)
6.	Structure of India's Defence Budget	(05)
7.	Link between Parliament and Defence Budget	(05)
8.	Analysis of Indias Defence Spending from 1947 to till date	(05)

**Total (40)** 

- 1. Laxmi Y, Trends in Defence Expenditure, New Delhi, ADS 1988
- 2. Ron Mathew, Defence Production in India, New Delhi, ABC-1989
- 3. Alok Ghosh, Indian Economy; Its Nature & Problem, New Book Hall-Kolkata-1994
- 4. S. K. Mishra & V.K. Puri , Indian Economy, Himalaya Publishing House-1998,New Delhi.
- 5. K.Subramanyam. Perspectives in Defence Planning, Abhinav Publshing Company, New Delhi-1972
- 6. Raju G. C.Thomas, The Defence of India –A budgetary perspective of strategy and politics, The Macmillan Company of India, New Delhi
- 7. A. N. Agarwal Economic Mobilization of National Defence, Asia Publishing House, London 1968 V. N. Shrinivas, Budgeting for Indian Defence, New Delhi, K W Publishers, 2008
- 8. Amiya Kumar Ghosh, Defence Budgeting & Planning in India: The Way Forward, New Delhi, 2006
- 9. Alain C. Einthoven & K. Wayne Smith, How much is Enough ?,Shaping the Defence Budget 1961-1969s ,New Delhi, RAND Corporation
- 10. Jaswant Sing, Defending India, Chennai, MacMillan India Ltd, 1999
- 11. V. N. Shrinivas, Budgeting for Indian Defence, New Delhi, K W Publishers, 2008
- 12. H.C. Bhatia, Public Finance (Ed), Vikas Publishing House, New Delhi -2006
- 13. S. P. Ganguly, Fundamentals of Government Budgetary in India,3rd Ed ,New Delhi, Concept Publishing Co.-2007
- 14. K. Subramanyam, Perspective in Defence Planning, New Delhi, Abhinav Publishing, 1972
- 15. Jaswant Sing, Defending India, Chennai, MacMillan India Ltd, 1999
- 16. H. B. Mishra, Defence Programmes of India, Delhi, Author press, 2000

#### T.Y. B.Sc. (Core papers) DS: 403 PROJECT REPORT

It is an Internal Paper of 50 marks at par with other paper/s. The very objective of this Project Report is to train and orient the students for research study. It will be the first small step in the long journey of his/ her academic research journey. Guidelines of this paper are as follows:

- 1. Student has to write a project report under the guidance of teacher. Students will be made aware on the related topic of the subject. Students will be guided on related hypothesis, research design, data collection and analysis and further report writing with due care in drafting, foot notes and bibliography. Project should be signed by respective guide and HOD.
- 2. Project will be evaluated internally in the department. Out of 40 marks, Project report will be evaluated on theme, relevance to subject, subject contents application of research methodology and students interest in the project. Out of 10 marks, viva will be conducted and marks will be given accordingly. Both the marks out of 40 and 10 will be clubbed together and will be send to Examination Section of Savitribai Phule Pune University, Pune for further action

#### T.Y. B.Sc. (Core papers) DS: 404 Information Warfare and Cyber Security

	ו	Γotal (40)
8.	Prospects of Information Warfare for land, naval and air military operations	(05)
7.	Cyber Security	(05)
6.	Battlefield Information Systems	(05)
5.	Role of Computers in Information Systems	(05)
4.	Strategic Significance of Information Warfare	(05)
3.	Development of Information Warfare as a Force Multiplier	(05)
2.	Information Technology and Information Warfare	(05)
1.	Information Technology- Introduction and Concept	(05)

- 1. Anand A, Information Technology- The Future Warfare Weapons, Ocean Books, New Delhi, 2003
- 2. Virendra Kapoor and MI Jaisinghani, Battle field Information System, Personally published at Artillery Press-Regiment of Arty Association, Nasik Road Camp, Nasik-India
- 3. M A Rice & AJ Sammer, "Communication and information Systems for Battlefield Command and Control" Volume 5 ,UK Brassy's 1989
- 4. Johannes Citizen, "Information Flow in Air Defence," NATO's Fifteen Nations Special Issue 1, 1982
- 5.ParryL, "Airborne Early Warning Systems" Defence, Dec. 1982
- 6. Arnold, "Early Warning in Twenty First Century," Electronic Defence, Oct. 1984
- 7. Deva Y, "Conceptual Approach to C3I" Defence Management, Oct. 1988
- 8. Khan JA, "Probing War and Warfare", APH Publishing Corporation, New Delhi, 2005

#### T.Y. B.Sc. (Core papers) DS-405 Defence Production and Logistics in India

Aim: - To appraise the students about Defence production and Logistics element in India.

1. Rational of Defence production in India	(05)
2. Role of Defence Production in National Development	(05)
3. Structure of Defence Production	(05)
A. Role and Functions of Department of Defence Production and DRDO	
B. Ordnance Factories-Its Highlights	
C. Management of DPSU, Foreign Collaboration and private sector	
4. Principles of Logistics	(05)
5. Just in Time concept	(05)
6. Supply Chain Management	(05)
7. Mobilization of Logistics Elements for War	(03)
8. Management of Integrated Defence Logistics	(03)
9. Make in India' & Defence Procurement.	(04)

**Total (40)** 

- 1. Ron Mathews, Defence Production in India, ABC, New Delhi, 1989
- 2. Raju G C Thomas, The Defence of India: A Budgetary Perspective of Strategy and politics, MacMillan Publication, New Delhi, 1978
- 3. Sam-C-Sarekesian, The Military Industrial Complex-A Reassessment, Sage publication, 1972
- 4. Maj. Gen Pratap Narain (Retd), Indian Arms Bazar, Shilpa Publication, New Delhi, 1998
- 5. Annual reports of The Ministry of Defence, Government of India
- 6. Brig. Pramod Sasius, Military Logistics-Third Dimensions, manas publication, New Delhi, 2000
- 7. John Downey, Management in the armed Forces, EBD Educational Pvt Ltd, Dehradun India, 1987
- 8. Andre Beaufre, Strategy for Tomorrow, Mac Donald Press, London, 1974
- 9. Defence Management, An Annual Journal of College of Defence Managemnet, Secundarbad
- 10. Mishra H B, Defence Management in India, Author Press, New Delhi, 2000
- A L Venkateshwaran, Defence Organization in India, Publication Division, Government of India, New Delhi, 1967 John Downey, Management in the armed Forces, EBD Educational Pvt Ltd, Dehradun India, 1987

# T.Y. B.Sc. DS-406(A) Defence Journalism and National Security (optional)

**Aims:** - To make aware of the students about the role of media in the management of National and International Security. Also, provide knowledge how to be a responsible Defence Journalist.

1.	Introduction- Evolution of the study	(05)
2.	Essential knowledge for Defence Journalists	(05)
3.	Defence and Media-Duties and Responsibilities	(05)
4.	Role of Defence journalism in National security studies	(05)
5.	Role of Defence journalism in International security studies	(05)
6.	Role of Defence Journalism in conflict management and peace studies	(05)
7.	Current trends in Defence Journalism	(05)
8.	Problems and Prospects of Defence Journalism	(05)

**Total (40)** 

#### Reference:

Sangeeta saxena, Defence Journalism in India, New Delhi, Manas Publications, 1997

- 1. M. V. Desai and Seventi Ninan (ed) Beyond Those headlines, New Delhi, Allied Publication Ltd
- 2. P. P. Singh and Dr. A. K. Nayak, Future of mass communication, New Delhi, Manas Publications ,2008
  - A. K. Nayak and S.K Sing, Professional Journalism, New Delhi, Manas Publications ,2008
- 3. P. P. Singh and S. Kumar Singh, World Encyclopedia of Mass Communication, New Delhi, Manas Publications ,2008
- 4. Jan R Hakemulder and Fay AC de Jonge, media Ethics and Laws, New Delhi, Anmol Publications Pvt .Ltd, 2006
- 5. Nayyar Shamsi, journalis: Ethics and Code, New Delhi, Anmol Publications Pvt .Ltd, 2005
- 6. Seema Sharma, Journalism: Communication Management ,New Delhi, Anmol Publications Pvt .Ltd, 2005
- 7. Pushpendra P Singh and Samir Kumar Singh, Public Relations Management, New Delhi, Jnanada Prakashan (P&D), 2009
- 8. Tymson Candy and Peter Lazar, Public Relations manual, Sydney, Tymson Communications , 2006
- 9. Military year Book (Annual)
- 10. Annual Report, Ministry of Defence
- 11. B.G Varghese, Indian Journalism

#### T.Y. B.Sc. 406 B Sem.- IV Gender Base Conflict and Human Rights

**Aim:** To enable the students to understand the Phenomena of Gender discrimination nature, causes, & Solutions. The paper will also look into the status of women in India and the crimes and violence faced by them.

#### 1. Introduction

- Gender Discrimination as a Universal Phenomenon, Universal declaration of Human Rights, Gender Equality & Gender Justice, Struggle for Gender, and basic concepts of gender based violence, approaches coming from cost and measurement of violence. (10)
- 2. Definitions of war and conflict. Direct violence and structural violence. Multiple oppression. "positive peace", global peace, culture of peace. Introducing gender analysis. What does gender approach mean? Addressing gender issues and conflict in specific geopolitical regions: Latin America, African countries the Middle-East, Asia, etc. (10)
- 3. Contestation between the feminist framing of gender violence and other important approaches to gender violence such as human rights, family policy and children's rights and health approaches. Intersectionality in framing gender violence (10)
- 4. Feminism and philosophy for peace. Alternative paradigms for democracy not without women! Sustainable peace-building and education. New feminist perspective and emotions Women's Knowledge: The Missing piece for peace. (10)

**Total (40)** 

- 1. Duncan M. Derrett J, Religion, Law and the State in India (London, 1986)
- 2. Duncan M. Derrett J, A Critique of Modern Hindu Law (Bombay:NM Tripathi,1970)
- 3. Government of India Ministry of Education, Towards Equality –Report of the committee on the status of and Social Welfare, Women in India (New Delhi, 1974)
- 4. Tahir Mahmood, A Study of the Hindu Marriage Act, 1955,(Allahabad: Law Book Co. 1980)
- 5. B.R. Nanda (ed), Indian Women: From Purdah to Modernity (New Delhi: Vikas, 1976)

#### T.Y. B.Sc. Ds: 407A Role of Armed Forces in Disaster Management

Aim: To understand the nature of disaster & role of Armed forces in the context of National Security.

1. Introduction and role of Armed Forces in Disaster Response	(05)
2. Required Traits, Training and Preparedness for Armed Forces	(05)
3. Role of NDRF with Armed Forces	(05)
4. Role of Central Government with Armed Forces	(05)
5. Role of State Government with Armed Forces	(05)
6. Role of Local Civil Administration with Armed Forces	(05)
7 Role of Non- Government Organizations (NGOs) with Armed Forces	(05)
8. Role of Armed Forces in training the civil population/organizations to Manage the Disaster.	(05)

**Total (40)** 

- 1. Army Training Command Disaster Management Seminar Papers, April 1999
- 2. Policy Approach and Role of Various Organisation for Disaster Management in India- Army Training Command 1996
- 3. Trishul Disaster Relief Vol III No. 2 1992
- 4. National Disaster Management Guidelines-Management of Earthquakes 2007. A publication of the National Disaster Management Authority, Govt. of India, New Delhi, April 2007
- National Disaster Management Guidelines-Management of Nuclear and Radiological Emergencies 2009. A publication of the National Disaster Management Authority, Govt. of India, New Delhi, April 20079
- 6. Sainik Samachar1-15 July 2013 Operation- Hope and Relief Vol .60 N013, New Delhi
- 7. 2) Brig. (Dr.) H. R. Kar. "Silent Warfare Managing Nuclear, Chemical,
- 8. Biological, (WMD) Disaster", Manas Publication, New Delhi.

#### T.Y. B. Sc. DS 407 (B) Global Security II

**Aim** – The basic aim of this paper is to educate the student on various strategic issues in relation to Global Security.

#### 1. Chinese policies

- Catchment & Containment policy
- Power Projection
- Chinese Maritime disputes with Vietnam, Japan & her neighbours
- China & Indian ocean

#### 2. Role of USA

- Regional conflicts (10)
- U.N.As a Responsible Member of International Community.

#### 3. Nunclear Threats

- Peaceful & Progressive purposes of Nuclear Energy (10)
- Nuclear Arsenal of Super Powers
- Attempts for Non-nuclear Proliferation.

#### 4. Role of UN

- For preserving & maintaining Global Peace & Security. (10)

**Total (40)** 

(10)

- 1. Balan K The Millennium Thoughts challenges to service. Author Press, Delhi 2001.
- 2. Karn Margaret P. Mingst, International organization The political & Process of Global Governance, Viva books pvt. Delhi 2005
- 3. Mishra Brijaylaxmi, United Nations and Security Challenges In New millennium, Kilaso books, New Delhi 2004.
- 4. Morgenthau Hans.J., Politics Among Nations. Scientific book Agency Calcutta 1963.
- 5. Sing Jasjit, United Nations Peace Keeping Operation, The challenges of change in Regan MS Ed. UN 50 and beyond, lancer Books Delhi, 1996.
- 6. Shastri M.N, Introduction to Environment, Himalaya Publishing house,
- 7. Mumbai 2005.
- 8. M.S.Rajan., "World Order and The United Nations Organization", Kanishka, New Delhi, 1998.
- 9. Sukhbir Singh, "<u>Structure and Functions of U.N.O. New Journal</u>: <u>International</u> Organisation".
- 10. S.K. Agrawal (Ed)., "Essay on the Law of Treaties", Bombay Orient Longmans 1973.
- 11. R.P. Anand., "New States and International Law", Vikas Publications, New Delhi, 1972.
- 12. Vinay Kumar Malhotra., "International Relations", Amol Publications, New Delhi, 2001.
- 13. Zelester David., "War, Peace and International Politics", Boston, Little Brown & Co. 1981.
- 14. Kesley Charles W. Jr. & Whittkopt Eugence R., "World Politics: Trends and Transformation", Hamphshire, Mac Millon, 1989.
- 15. Journals: "International Studies", Quarterly, New Delhi, India.

#### T.Y. B. Sc. Ds 408 (A) **Indian Military Strategy (1947-2014)**

**Aim :-** To make aware the Students Post-Independent Wars.

1.	Grand Strategy, Strategy & Tactics	(5)
	- Meaning- Definations & Concepts.	
2.	Indo-Pak War of 1947-48	(7)
	- Nature & courses of war	· ·
	- Ceasefire	
	- Implications	
3.	India-China war of 1962	(7)
	- Causes	
	- Nature & courses of war	
	- Ceasefire	
	- Implications	
4.	Indo-Pak war of 1965	(7)
	- Causes	
	- Nature of courses of war	
	- Ceasefire	
	- Implications	
5.	Indo-Pak war of 1971	(7)
	- Causes	
	- Nature of courses of war	
	- Ceasefire	
	- Implications	
6.	Kargil Episode of 1999	(7)
	- Causes	
	- Nature and Course of War	
	- Ceasefire	
	- Implications	
		<b>Total</b> (40)
efere	ences:-	

#### Re

- "Pakistan Occupied Kashmir The Untold Story" By Virendra Gupte & Alok Bangal, Manas 1. Publication, New Delhi.
- 2. "Prepare or Perish", Gen. Krishna Rao, Lancer Publishers, New Delhi, 1991.
- "India China Border Dispute", Dr.M.L.Sali, A.P.H., New Delhi, 1998. 3.
- Dodwell H.H. "The Cambridge History of India" Chand & Company New Delhi, 4.
- "Kashmir & Indo-Pak Relations" By Manans Publications, New Delhi. 5.
- "India-Pakistan War of 1965" By Jagan Mohan & Samir Chopra, Y.S.Books International F-31, Bali 6. Nagar, New Delhi – 15.
- Dalvi J.P. (Brig. Retd.) "Himalyan Blunder" Hind Pocket Books, New Delhi. 7.
- "Kargil Knot Unholy Pakistani Quest", By M.S. Jaswal, Manas Publication, New Delhi.
- "Kargil 1999", By Jagjit Singh, Y.S. Books International F-31, Bali Nagar, New Delhi.
- "Kargil War: Past, Present and Future", Col.B.Sarkar., Y.S. Books International F-31, Bali Nagar, New 10. Delhi-15.
- 11. "Future of India", Bimala Jalan, Y.S. Books International F-31, Bali Nagar, New Delhi-15.
- "Air Power and Challenges to IAF", Dr.J.A. Khan., A.P.H. New Delhi, 2009.
- 13. Hussain S.S. & Tariq M. "History of PAF", PAF Press, Masroor, Karachi,1981.
- 14. Kapila Viney. Air Vice Marshal, "IAF: A Balance Strategic & Tactical Application", Ocean Books Pvt. Ltd., New Delhi, 2002.

#### T.Y. B. Sc. DS408 (B) Maratha Military Strategy (1680 to1818 A.D.)

**Aim:-** To make a details study about Maratha Military& Strategy.

Sambaji –His Military Career and Achievement	(06)
2. Rajaram, Tarabai , Santaji, Dhanaji- Role in Maratha war of Independence	(06)
3. Bajirao First - His Roal in the battle of palkhed and Bhopal	(06)
4. Nanasheb Peshawa – Battle of panipat (1761A.D.)	(06)
5. Maratha Navy under Kanhoji Angre	(06)
6. First, Second & Third Anglo- Maratha war	(05)
7. Causes for Decline for Maratha power	(05)

**Total (40)** 

- 1. Sarkar J.N. Shivaji and his Times,(Drient Longman,New Delhi,1960)
- 2. Kulkarni A.R. The Maratha's (1600-1848), (Book and Books, New Delhi, 1996)
- 3. Apte B.K. War History of Maratha Navy (Bombay State Board of literature and Culture, 1973)
- 4. Pitre K.G. War History of the Maratha, (k.G. Pitre,pune,1998)

#### T.Y. B. Sc. DS409 (A) United Nations Organisation

Aim: To make a study about the role of United Nation in Global Peace and Security.

1.	United Nations Organisation	(08)
	- Aims	
	- Objectives	
	- Structure	
	- Functions	
2.	UN Role in the International Conflicts	(08)
	- Provision of UN Charter	
	- UN Peace keeping operations	
	- Diplomatic Procedure	
3.	Role of UN for maintaining peace	(08)
	- Disarmament	
	- Arms control	
4.	UN and Human Rights	(08)
	- Human Rights- Meaning & Definition	
	- Universal declaration of Human Rights progress in respect of Human	n Rights
5.	UN and Future Scenario	(08)
	- Future Threats in Globalization	
	- Hindrance in working of UN	
	- Suggestions to strengthen UN	
		Total (40)

- 1) Palmer and Perkins- International Relations, 3rd Edn. Scientific Book Agency, Calcutta, 1970
- 2) Balan K, The Millenium Thoughts Challenges ti Security, Authors Press, Delhi, 2001.
- 3) Karn Margaret P. Koren A Mingst, International Organisation, the political of Global Governance, Viva Books New Delhi, 2004.
- 4) Mishra Brijlaxmi, United Nations and Security challenges in New Millenium, Kilaso Books, New Delhi, 2004.
- 5) Dr. Jadhav V.Y, Patil H.S.- Global Security, Prashant publication, Jalgaon, 2006.
- 6) Shastri M N, Introduction to Environment, Himalya Publishing House, Mumbai, 2005.
- 7) Rober H Allen, Enhancing United nations, Peace keeping in Chadok F. Alger Ed., The Future of the UN System: Potential for the Twenty First Century, United Nations Universitry Press, Tokio,1998.

## T.Y. B. Sc. DS- 409 (B) India's Maritime Security

**Aim :-**To make "aware the students about the Strategic environments in Indian ocean & how it has relevance to India's Maritime Security. This paper focusing especially a concept of maritime Security & how it is significant for economic development of a country.

### 1. Maritime Boundaries

- Meaning & Concept
- Territorial water
- Exclusive Economic Zone
- Continental Shelf

#### 2. India's Maritime Threats

(8)

(8)

- Threats to Maritime trade
- LTTE
- Human Trafficking
- Drugs
- Terrorist Activities :- 26/11 Mumbai attack& Attempt of 31/12/2014

#### 3. Role of Maritime Elements

(8)

- Fixed Assets Ports & infrastructure Therein
- Naval Bases
- Oil Rigs Exploration platform
- Light Houses & Navigational Aids

#### 4. India's Navy

(8)

- Characteristics, Role & Limitations
- Naval weapons & Equipments :- Inventory & its analysis.

#### 5. Coast Guard (8)

- Brief Historical Account
- Role of Coast Guard for Maritime as well as National Security.
- Limitations of Coast Guard

**Total (40)** 

- 1. Rahul Roy Choudhary, "India's Maritime Security", Knowledge World, New Delhi-2000.
- 2. V.R. Raghavan and Lawrence Prabhakar, "<u>Maritime Security in the Indian Ocean Region</u>: Critical Issues in Debate", A.P.H. New Delhi, 2004.
- 3. K.R. Singh, "New Challenges to Maritime Security: Legality and Legitimacy of Reponses", Manas Publications, New Delhi, 2005.
- 4. "<u>Freedom To Use The Seas: India's Maritime Strategy</u>", Integrated HQ, Ministry of Defence (Navy), New Delhi,2007.
- 5. Steven Jones., "Maritime Security: A Practical Guide", London Nautical Institute.
- 6. Ravi Visva and D. Chakroborty (Ed)., "Maritime Dimensions of A New World Order", National Maritime Foundation, New Delhi.
- 7. Dr.M.L.Sali "Military Geography" manas publication, new delhi 2009.