

# DAVI AHILYA UNIVERSITY, INDORE [M.P.]

## Military Science

M.A. / M.Sc. [Final]

SEMESTER – III

PAPER – I [Part A]

Military History of India

Marks -85

Unit – 1.

1. Military History, Military Organization & the Art of Warfare of Vedic Period.
2. Military History, Military Organization & the Art of Warfare of Epic & Puranic Period.
3. Comparative Study of Indo-Greek Art of Warfare & Military Organization, with special reference to Alexander's invasion of India and the Battle of Hydaspes (326 B.C.)

Unit – 2.

1. Military Organization / System of Mauryas as described by Megasthenese and Kautilya's Philosophy of War.
2. Military Organization / System of Guptas and Chalukyas.
3. Military Organization of Harsh-Wardhan, the Battle of Somnath (1025 A.D.) & the fall of Hindu Military System.

Unit – 3.

1. Rajput Military Organization / System and the mode of fighting.
2. Military System of Sultanate Period (Turk Military System) and mode of fighting with reference to the armed clashes between Rajput & Turks, the First Battle of Tarain (1191 A.D.) and the Second Battle of Tarain (1192 A.D.).
3. Causes for the defeat of Rajput.

Unit – 4.

1. Campaigns of Alauddin Khilji: Conquest of Ranthambore and Chittor, South Indian Campaigns of Alauddin Khilji Led by Malik Kafoor.
2. Mongol Invasion during the reign of Military reforms of Alauddin Khilji and Gayasuddin Balban.
3. Causes for the defeat of Mongols.

Unit – 5.

1. Introduction of New elements in the art of fighting with special references to the first Battle of Panipat (21 April, 1526 A.D.) and the Battle of Kanwah / Khanwa (17 March, 1527 A.D.).
2. Sher Shah's Battles with Humayun, the Battle of Chause (26 June, 1539) and the Battle of Kannauze / Bilgram (17 May, 1540).
3. Military Organization of the Mughal Army under Akbar and the Second Battle of Panipat (5 November, 1556 A.D.) and the Battle of Haldighati (18 June, 1576 A.D.).

### Books Recommended:-

- |                         |   |  |
|-------------------------|---|--|
| 1. Dr. P.C. Chakravarty | : | The art of war in Ancient India.         |
| 2. Prof. A.R. Dikahitar | : | War in Ancient India.                    |
| 3. Dr. S.R. Singh       | : | Ancient India Warfare.                   |
| 4. B.K. Majumdar        | : | Military System of the Marathas.         |
| 5. B.K. Majumdar        | : | Indian Military System in Ancient India. |
| 6. Sir. J.N. Shankar    | : | Fall of the Mughal Empire Vol. I & II.   |
| 7. Sir. J.N. Shankar    | : | Military History of India.               |
| 8. J.F.C. Fuller        | : | Alexander the Great.                     |

Continue..... Military History of India (SEMESTER – III)

9. Gautam Sharma	:	Indian Army through the Ages.
10. R.C. Kulshrestha	:	An Introduction to Dhanurveda.
11. R.C. Kulshrestha	:	Kautilya's Philosophy of War.
12. P. Sen. Sharma	:	Kurukshetra War.
13. Sarva Daman Singh	:	Ancient Indian Warfare with special-reference to Vedic Period.
14. W. Irvine	:	The Army of Indian Mughal.
15. S.N. Sen.	:	Victory System of Marathas.
16. Gulcharan Singh	:	Battles of Panipat.
17. Alfred Devid	:	Indian Art of War.
18. I.H. Quereshi	:	Administration of Sultanate.
19. Col. Melleeson	:	Decisive Battles of India.
20. R.D. Palsokar	:	Shivaji the Great Guerrilla.
21. R.D. Palsokar	:	Study of Generalship.
22. Karr	:	Military History of India.
23. Subramniyam	:	Indian Military History.
24. K.M.L. Saxena	:	The Military System of India.
25. S.T. Das	:	Indian Military.

Note: - Any other Books and Journals may be prescribed to enrich the Standard of Performance in the items Listed above under Theory Paper.

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# DAVI AHILYA UNIVERSITY, INDORE [M.P.]

## Military Science

M.A. / M.Sc. [Final]

SEMESTER – III

PAPER – II [Part A]

Military Psychology

Marks -85

### Unit – 1.

1. Military Psychology: Meaning, Definition, Historical development, Role, Aim and Importance.
2. Relevance of Psychology in the Defense Problems.
3. The use of Psychology in the War and Seven Military uses of Psychology.

### Unit – 2.

1. Personnel Selection and Classification for Defense Services, use of Intelligence Tests, Group Testing procedure and clemently Personality Testing.
2. Application of the principles of Psychology in the Military Training.
3. General Ability Tests, Special Ability Test, Individual deference, Classification and Assignment.

### Unit – 3.

1. The Eye as a Military Instrument, Visual Adaptation and Night Vision, Colour and Camouflage, Colour and colour Blindness, Camouflage and Counter Camouflage.
2. The Ear as a Military Instrument, Nature of Hearing, psychology of Hearing, Deafness and Communication, Effect of Noise, localization of objects by Hearing, Sound Camouflage, practical rules for Hearing.
3. The Nose as a Military Instrument: Smell in war, Sensitivity, Reorganization, war gases, Camouflage of odors.

### Unit – 4.

1. Personnel Adjustment, factors in Adjustment during Army life, the recruits Adjustment to combat.
2. The psychological mechanisms of personal adjustment, Defence mechanisms and Escape mechanisms of personal adjustment.
3. The problem of Adjustment and the problem of Re-adjustment of Ex-Soldiers.

### Unit – 5.

1. Group: Structure, types and their functions.
2. Formation of Social Norms and Group Problem Solving.
3. Motivation, Learning, Group and Individual Education, Frustration and psychological mechanism of frustration.

### Books Recommended:-

1. Boring, Edwin G. : Psychology for the Armed Services.
2. Lienbarger : Psychological Warfare.
3. Mac, Cormack : Human Factor Engineering.

Continue..... Military Psychology (SEMESTER – III)

- |                         |   |  |
|-------------------------|---|--|
| 4. Bartlett, F.G.       | : | Psychology and the Soldier.                |
| 5. Mann, J.             | : | Frontiers of Psychology.                   |
| 6. Henning's            | : | Air War and Emotional Stress.              |
| 7. Lifton, R.J.         | : | Thought Reforms and Psychology of Torture. |
| 8. Schein, E.H.         | : | Coercive Persuasion.                       |
| 9. Brown, J.F.          | : | Techniques of Persuasion.                  |
| 10. Second & Backman    | : | Social Psychology.                         |
| 11. Grinker, R.R.       | : | Man under Stress.                          |
| 12. Norman Copeland     | : | Psychology and Soldier.                    |
| 13. Hasnain, Maj. Qamar | : | Psychology for the fighting man.           |
| 14. Gupta, Parshuram    | : | Sainya Manovigyan (Hindi).                 |

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*AG*  
*Others*  
*by* *dm*

*PK*

**DAVI AHILYA UNIVERSITY, INDORE [M.P.]**

**Military Science**

M.A. / M.Sc. [Final]

**SEMESTER – III**

PAPER – III [Part A]

**Area Study**

**(Indian Ocean)**

Marks -85

**Unit – 1.**

1. Maritime History of the Indian Ocean: The Early Period, the Hindu Period and the Arabs.
2. The Advent of Europeans: The Portuguese, the Dutch, the French and the British.
3. The Rise and Decline/Downfall of Maratha Navy.

**Unit – 2.**

1. Geo-Political Importance of the Indian Ocean with reference to India.
2. Elements of Maritime Strategy.
3. Maritime Strategy for India.

**Unit – 3.**

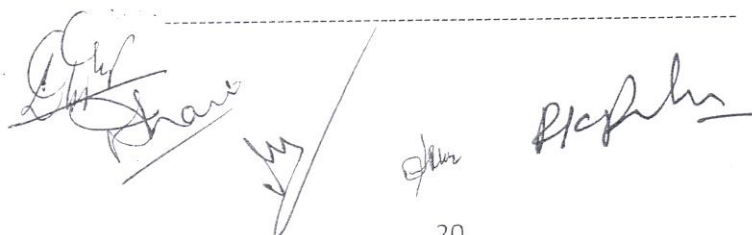
1. Foreign Bases in the Indian Ocean.
2. Diego-Garcia and its Strategic Importance in the Indian Ocean.
3. Potential threat to the South Asian countries.

**Unit – 4.**

1. Interests of major powers in the Indian Ocean with special reference to United States of America & Russia.
2. Power Struggle in the Indian Ocean Region and R.D.F. (Rapid Deployment Force).
3. Importance of Indian Ocean and Indian Navel Policy.

**Unit – 5.**

1. Peace Zone Proposal and the Indian Ocean.
2. Role of Iran, Indonesia, Pakistan and Australia in the Indian Ocean.
3. Role of South Asian Association for Regional Co-Operation (SAARC) and Association of South-East Asian Nations (ASEAN).

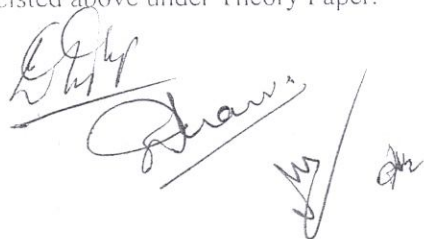
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Continue....Area Study/Indian Ocean (SEMESTER – III)

Books Recommended:-

- |                                  |   |
|----------------------------------|---|
| 1. Poullose, Dr. T.T.            | : Indian Ocean Power Rivalry.   |
| 2. Pannikar, K.M.                | : Geographical factors in Indian Ocean.   |
| 3. Pannikar, K.M.                | : India and Indian Ocean.   |
| 4. Vaidya, K.B.                  | : Naval defence of Indian Ocean.  |
| 5. Martin, L.W.                  | : Sea in Modern Strategy.   |
| 6. Admiral Kohli                 | : Sea Power in the Indian Ocean.  |
| 7. Palsokar, R.D.                | : Power Rivalry in the Indian Ocean.  |
| 8. Singh, R.K.                   | : Indian Ocean.   |
| 9. I.D.S.A. Journal              | : New Review on Indian Ocean Defence Journal – Vikrant and Chanakya                   |
| 10. Elwi, Verrier                | : Philosophy of NEFA.   |
| 11. Rahul, Ram                   | : Himalayan Borderland.   |
| 12. Karan, P.P.                  | : Himalayan Kingdom.  |
| 13. Srinivas, M.N.               | : Social Change in Modern India.  |
| 14. Nandi, S.N.                  | : Agro-Economic Indications – A Comparative Study of North Easter States of India     |
| 15. Meeti, N.B.                  | : Autonomy, Ethnic Politics and Conflicts in North-east India.                        |
| 16. Horam, M.                    | : Naga Insurgency: the last thirty years.   |
| 17. Hazarika, Sanjoy             | : Strangers of the Mist: Tales of War and Peace from India's North-East.              |
| 18. Nibedon, Nirmal              | : The Night of Guerillas.   |
| 19. Ben, Hayes                   | : The other Burma – Conflict, Counter Insurgency and Human Rights in Northeast India. |
| 20. East-West Central Washington | : Working Papers No– 10 July 2007.  |
| 21. Namruta Goswami (IDSA)       | : India's North-East-2020: for Alternative futures.                                   |
| 22. Harisharan & Harsk K. Sinha  | : Hind-Mahasagar: Chunautiyan aur Vikalp.   |

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**Military Science**

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**SEMESTER – III**

PAPER – IV [Part A]

**Science & Technology in War**

Marks -85

**Unit – 1.**

1. Science and War in the History [500 B.C. to up to date].
2. Science and Society: Introduction of Science, Technology and Society in war and different content.
3. Impact of science and technology on human life with special reference to modern warfare.

**Unit – 2.**

1. Defence and Civil Technology, research and development, standardization of weapons system, economic factor of standardization, obsolescence factor and lots of effectiveness, essentials for standardization.
2. Effects of Science in diminution of sufferings, War and Environment.
3. War Science and Technology in India, Development of armament technology in India since [1962 to till date].

**Unit – 3.**

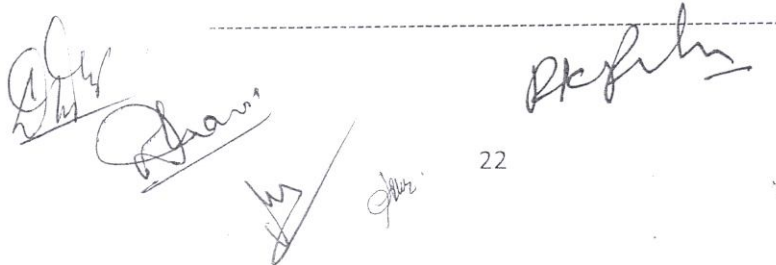
1. Historical development and role of Nuclear (Atom) Bomb, Hydrogen Bomb, Cobalt or Dirty Bomb, Reduced Residual Radiation Bomb (RRR Bomb), Electro Magnetic Pulse Nuclear Bomb (EMP Nuclear Bomb), X-Ray Laser, Gamma Ray Laser.
2. Effect of Atomic / Nuclear Explosion.
3. Spread of Nuclear Weapons.

**Unit – 4.**

1. Nuclear Fusion, Chain Reactions, Nuclear Reactor and the use of Nuclear Reactor.
2. Nuclear Fission, Difference between Nuclear Fusion and Nuclear Fission.
3. Nuclear Technology in India.

**Unit – 5.**

1. Indian Atomic / Nuclear Test and Present Technology.
2. Indian Atomic / Nuclear Research Centers.
3. Atomic / Nuclear minerals with special reference to India.



## Continue.....Science & Technology in War (SEMESTER – III)

### Books Recommended:-

1. J.F.C. Fuller	:	Armament and History.
2. Sir Russell Bertrand	:	Science and Survey.
3. Partway Donald	:	Military Science Today.
4. Dow	:	Fundamentals of Advanced Missiles.
5. D.R. Bates	:	Space Research and Exploration.
6. Govt. of India Publication	:	Nuclear Explosion and their effects.
7. Robin Clerk	:	The War and Peace.
8. Christopher Lee	:	War in Space.
9. R.K. Jasbir Singh	:	Military Science and Armament Technology.
10. Military Year Book	:	Latest Edition.
11. Indu Prakash	:	Yuddh ka Vigyan/War Science. (Hindi).
12. Indu Prakash	:	Rasayanik aur Kitanu Yuddh. (Hindi).
13. Indu Prakash	:	Prakshepiki. (Hindi).
14. Manmohan Bala	:	Raksha Vigyan. (Hindi).
15. C.L. Garg	:	Nabhikiya Astra-Shastra. (Hindi).
16. C.L. Garg	:	Adhunik Astra-Shastra Aur Yuddh Vigyan. (Hindi).
17. Viren Gohil	:	Hathiyar: Barood se Atom Tak. (Hindi).
18. Mark Dartford	:	Modern Warfare.
19. Frosunda-Sweden	:	Sipri Year Book.
20. MC Graw Hill	:	Encyclopedia of Science and Technology.
21. C.L. Garg	:	Chamatkari Kiran LASER. (Hindi).
22. K. Parkins	:	Weapons and Warfare.
23. B.N. Pandey	:	Yuddh, Vigyan Avam Takniki. (Hindi).
24. Munesh Kumar	:	Suchna Takniki Avam Raksha Takniki. (Hindi).
25. G.K. Pandey	:	Yuddh me Vigyan Avam Takniki. (Hindi).
26. Frank Barnaby	:	Future War.
27. Maj. Gen. Raj Mehta	:	Encyclopedia of Missile Defense and Non-Proliferation–Vol. I & II.
28. Philip Alexander	:	Information Security.
29. M.N. Golvin	:	Conflict in Space.
30. Nels A. Parson Jo	:	Missiles and the Revolution in Warfare.

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**SEMESTER – III**

**Practical Work [Part A]**

Marks -50

**A. Psychological Experiments:**

1. Association: (a) Free association and controlled association.
2. Attention: (a) Span of attention. (b) Division attention.
3. Learning: (a) Transfer of learning – Positive and Negative. (b) Trial and error and insightful learning.
4. Memory: (a) Immediate memory spans (Auditory). (b) Immediate memory spans (Visual).
5. Land use Classification, Visual interpretation in Individual Bonds / Colour.

**B. Spotting: Recognition of Air Craft and Ship Models.**

**C. Group Discussion on Current Military Topics.**

**D. Lecturing on Current Topics.**

**Books Recommended:-**

- |  |   |   |
|--|---|---|
| 1. Collins                               | : | A fist laboratory guide in psychology.                    |
| 2. W.S. Hunter                           | : | Foundations of experimental psychology.                   |
| 3. H.S. Hines                            | : | Measuring intelligences (Harrap and Co. London, Calcutta) |
| 4. Phillip Basswood                      | : | Group Test intelligences published by Ballard.            |
| 5. Competition Success review (Monthly). |   |   |

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