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**SECTION 'C'**  
(Long Answer Type Questions)

12 × 4 = 48

**Note :** Answer the following questions in 500 words.

1. How science and technology have impacted warfare in modern age ? Explain in detail.

Or

Write article on production cycle, quality control and cost effectiveness of military materials.

2. Write an article on the Nuclear weapons.

Or

Describe the spread and impact of Nuclear weapons on warfare.

3. Write an essay on Indian Missile family.

Or

Write an article on the Indian satellites.

4. Write an article on the Biological warfare.

Or

Write an essay on the characteristics of LASER and its applications in the military.

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**G-1/119/21**

**Roll No.....**

**I Semester Examination, April-2021**

**M.Sc.**

**DEFENCE STUDIES**

**Paper III**

(Science of War)

Time : 3 Hours ]

[Maximum Marks : 80

**Note :** All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/Multiple Choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

**SECTION 'A'**

(Multiple Choice Questions)

Choose the correct answer:

8 × 1 = 8

1. Match the following DPSU's with the places they are situated :

| List I   | List II        |
|--|----------------|
| (a) Garden Reach Shipbuilders and Engineers Ltd. | (I) Bengaluru  |
| (b) Mazagaon Docks Ltd.                          | (II) Hyderabad |
| (c) Mishra Dhatu Nigam Ltd.                      | (III) Kolkata  |
| (d) Bharat Electronics Ltd.                      | (IV) Mumbai    |

**Codes :**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
|     | (A) | (B) | (C) | (D) |
| (a) | III | IV  | I   | II  |
| (b) | IV  | III | I   | II  |

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- (c) III IV II I
- (d) IV III II I
2. Strategy of Indian armed forces to achieve cutting edge technology in galvanised by the concept of :
- (a) Regional Military Association
- (b) Regional Maritime Act
- (c) Revolution in Maritime affairs
- (d) Revolution in Military affairs
3. MIRV refers to :
- (a) Multidimensional Independent Re-entry Vehicle
- (b) Multidirectional Independently Reoriented Vehicle
- (c) Multiple Independently Targatabe Reentry Vehicle
- (d) Multipurpose Integrally Targeted Revolutionary Vehicle
4. ATAGS is related to :
- (a) Defence system
- (b) Automatic toll collection
- (c) An experimental medicine in cancer treatment
- (d) Genes
5. Write the full name of the ATAGS ?
6. DRDO has developed an unmanned remote operating tank called .....in July 2017.
- (a) MUNTRA (b) MUNDRA
- (c) MUTRA (d) MUDRA
7. Acid rain is considered as one of the following :
- (a) Chemical accidents

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- (b) Chemical chain reaction
- (c) Deforestation
- (d) Heavy chemical industrialisation and acidic formation in the atmosphere
8. Which one of the following is called a 'Mini thermo nuclear Bomb'?
- (a) Fission Bomb (b) Fusion Bomb
- (c) Neutron Bomb (d) H.E. Bomb

### SECTION 'B'

6 × 4 = 24

#### (Short Answer Type Questions)

**Note :** Answer the following questions in 250 words.

1. How science and technology changed the nature of war in gun-powder age. Write a comment.

Or

Highlight the importance of research and development in defence system.

2. Write a note on the guidance system of Missile.

Or

Write a note on launching vehicles.

3. Write a note on the Atomic Reactor.

Or

Write a note on thermonuclear Bomb.

4. Write a note on types of LASER.

Or

Write a note on the uses of RADAR.