

**Laxmi Narain Dubey College, Motihari**

(a constituent unit of B.R.A. Bihar University, Muz.)

NAAC Accredited 'B+'

**National Cadet Corps (NCC)**

**Topic: Prismatic Compass & Its Use and GPS**

**NCC – Map Reading**

**B/C Certificate Examination**

**Instructor**

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## [MR 7: PRISMATIC COMPASS AND ITS USE AND GPS]

### Introduction

40. The magnetic compass has been used extensively in ships, aircraft and the various branches of the army to find and maintain direction.

41. With the prismatic compass one can measure magnetic bearing on the ground.

42. There are two types of prismatic compass, the dry and liquid filled.

43. The names of various parts are shown below :-

- |               |                    |                  |
|---------------|--------------------|------------------|
| (a) Tongue    | (f) Lubber line    | (k) Card         |
| (b) Window    | (g) Direction mark | (l) Milled vanes |
| (c) Hair line | (h) Clamping screw | (m) Prism        |
| (d) Lid       | (i) Arrow head     | (n) Prism slide  |
| (e) Hinge     | (j) Setting value  | (o) Thumb ring   |
|               |                    | (p) Notch        |

44. Compass error. Sometimes due to the presence of impurities in the material of which a compass is made or other reasons, the magnetic needle may not point toward the magnetic North but a little to the East or West of it. This deviation of the magnetic needle in the compass from the magnetic north is termed as compass error.

45. Global Positioning System (GPS). It refers to a system of satellites and receivers that allows people and devices to pinpoint their precise location on the

earth. The normal GPS operational constellation consists of 24 satellites that orbit the earth in 12 hours.

46. The first GPS satellite was launched in 1974 and the 24<sup>th</sup> was launched in 1994. Q.

47. GPS is funded by and controlled by the United States, Department of Defense.

48. In the army, GPS is commonly used in battle fields and insurgency affected areas. All aircraft, ships and specialist vehicles are equipped with GPS.

49. How to take a bearing?

(i) Open the lid so that it is roughly at right angle to the body of the compass.

(ii) Turn the prism casing over so that it lies flat on the face of the compass.

(iii) Bring the prism up to the eye and you will see two things :-

(a) Above the prism, through the slot on the case, the hair line on the window.

(b) Through the prism itself, a set of figures.

(iv) The compass must be held so that the hair line is vertical and cuts the object on to which the bearing is being taken.

(v) The ~~bearing~~<sup>reading</sup> is determined by noting where the bottom of the hair line cuts the set of figures beneath it.