

(OM1) Mark any 5 (five) of the following stars on the map by putting a circle (O) around the appropriate star and writing its code next to it. If you mark more than 5 stars, only the first 5 in serial order will be considered. 20

Code	Name	Bayer Name
S1	Caph	$\beta$ Cas
S2	Asellus Australis	$\delta$ Cnc
S3	Acrux	$\alpha$ Cru
S4	Alphard	$\alpha$ Hya

Code	Name	Bayer Name
S5	Sheliak	$\beta$ Lyr
S6	Albireo	$\beta$ Cyg
S7	Rasalhague	$\alpha$ Oph
S8	Kaus Australis	$\epsilon$ Sgr

(OM2) Mark location of any 3 (three) of the following galaxies on the map by putting a '+' sign at appropriate place in the map and writing its code next to it. If you mark more than 3 galaxies, only the first 3 in serial order will be considered. 15

Code	Name	M number
G1	Triangulum Galaxy	M 33
G2	Whirlpool Galaxy	M 51
G3	Southern Pinwheel Galaxy	M 83

Code	Name	M number
G4	Virgo A	M 87
G5	Sombrero Galaxy	M 104

(OM3) Draw ecliptic on the map and label it as 'E'. 5

(OM4) Show position of Autumnal Equinox (descending node of the ecliptic) on the map by a '+' sign and label it as 'A'. 5

(OM5) Draw local meridian for Bhubaneswar on Winter Solstice day (22<sup>nd</sup> December) at local midnight and label it as 'M'. 5