Name of the Student:_____
Max. Marks : 23 Marks **Time : 23 Minutes**

Mark Schemes

Q1.

(a) a star

1

(b) Milky Way

1

(c) natural satellite (that orbits a planet)

1

(d) Charon is smaller than the (largest) dwarf planet

1

Ganymede / Titan is larger than the (smallest) planet

*allow **1** mark for some are bigger than the smallest planet **or** some are smaller than dwarf planets*

1

(e) similarity: circular orbit

1

difference: (orbital) period
or
(orbital) height

allow (orbital) speed

1

(e) expensive
or
dangerous

allow difficult to get to
allow few opportunities
allow only trained astronauts can go

1

[8]

Q2.

(a) $g = \frac{750}{2.5}$

1

g = 300.0 (N/kg)

1

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(b) electrostatic

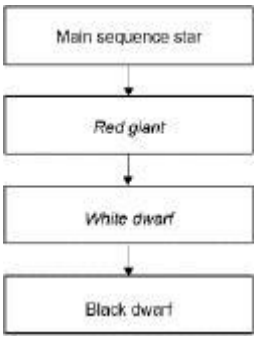
1

(c) red giant

this order only

1

white dwarf



1

(d) Z

reason only scores if Z chosen

1

only stars about the same/smaller size/mass as the Sun become Black dwarfs

allow converse

1

(e) supernova

1

[8]

Q3.

(a) Milky Way

1

(b) distance = 300 000 × 500

1

d = 150 000 000 (km)

1

*an answer of 150 000 000 scores **2** marks*

(c) 3

1

(d) accept any number greater than 1.0 and less than 12.0

1

(e) $\frac{9}{0.6}$

1

15

1

*an answer of 15 scores **2** marks*

[7]

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