Flamsteed Astronomy Society - Christmas Quiz 2004
Answers

1 **What comes next in the sequence Mercury, Venus, Earth... ?**
   a) Mars   c) Jupiter
   b) The Moon   d) Saturn

a) Mars
Planets in sequence from the Sun. Followed by
the asteroids, Jupiter, Saturn, Uranus, Neptune, & Pluto

2 **What is the Galaxy C5A?**

   a) The Cat's Eye Nebula   c) A chocolate bar
   b) A US military aircraft   d) Barnard's Galaxy

b) A Military aircraft
   a) The Cat's Eye is Caldwell C6
   d) Barnard's Galaxy is Caldwell C57.
   'Caldwell' catalogue devised by
   Sir Patrick Caldwell Moore in 1996

3 **Which is the odd one out?**
   a) 149,600,000 km   c) 93,009,000 miles
   b) 30p   d) 499 seconds

b) 30p - the price of *The Sun*
All the others are the distance of the Sun from the Earth
 - the AU or Astronomical Unit. d) is 499 light seconds
 (1.496 x 10**8 km = 1.496 x 10**13 cm / 3 x 10**10
secs = 0.499 x 10**3 = 499 secs)

4 **Where is the tomb of Edmund Halley?**
   a) St John at Hampstead   c) St Margaret's Lee
   b) St Bart's Burstow   d) Westminster Abbey

c) St Margaret's Lee
   a) is John Harrison
   b) is John Flamsteed   d) is Sir Isaac Newton

5 **Who discovered Neptune?**

   a) Urbain Le Verrier   c) Johann Galle
   b) John Couch Adams   d) George Airy

c) Johann Galle at the Berlin Observatory in 1846
with d'Arrest based on LeVerrier's calculations.
Challis missed the chance when alerted by Airy from
the calculations of John Couch Adams.

6 **Picture Question. Look at Picture 1**
What is Object B?
   a) Sirius   c) Procyon
   b) Pollux   d) Saturn

d) Saturn
All the others are in the picture

7 **Where can you hear "I've seen things you people wouldn't believe. Attack ships burning off the shoulder of Orion ... " ?**
   a) The Wizard of Oz   c) The Matrix
   b) The Sound of Music   d) Blade Runner

d) Blade Runner - "Time to die" speech
spoken by replicant Roy Batty played by Rutger Hower

8 **How can you tell a Newtonian from a Maksutov?**
   a) By his accent   c) The Mak. is white
   b) The Newtonian eyepiece   d) The Newtonian is
      is usually up the top end   shorter

b) ... mostly

9 **Where was James Cook to observe the 1769 Transit of Venus?**
   a) Tahiti   c) Botany Bay
   b) Clapham   d) Hawaii

a) Tahiti at Point Venus
Cook discovered Botany Bay, was killed at Hawaii, and
has never been positively identified as the man on the
Clapham omnibus

10 **For what star was the first published accurate measurement of parallax?**
   a) Gamma Draconis   c) Alpha Centauri
   b) Vega   d) 61 Cygni

d) 61 Cygni by Friedrich Bessel, Koenigsberg, 1838
followed quickly by Thomas Henderson's value for
Alpha Centauri and Wilhelm Struve's value for Vega.
Gamma Draconis was the pioneer target for Hooke
and Bradley

11 What did the 'A' stand for in C. A. Parsons?

a) **Algernon**

   a) Algernon   c) Andrew
   b) Albert   d) Alice

**12 Which year comes next in the sequence
1639, 1761, 1769, 1874 ... ?**

b) **1882 - they're all Transits of Venus**
which occur in pairs 8 years apart, separated by over 100 years

   a) 1881   c) 1883
   b) 1882   d) 1884

13 Who was first to identify Saturn's rings correctly?

c) **Christiaan Huygens in *Systema Saturnium* 1659**
Galileo thought it was a triple planet. Cassini followed Huygens and identified the gap 'Cassini Division'. Maxwell proved the rings must be composed of small particles

   a) Galileo   c) Huygens
   b) Cassini   d) Maxwell

14 Which is the odd one out?

b) **The M4 Motorway - which runs roughly east-west**
All the others run roughly north-south

   a) M1   c) M5
   b) M4   d) M11

**15 Who comes next in the series Flamsteed,
Halley, Bradley ... ?**

d) **Airy: They established the 4 meridians at Greenwich**
Flamsteed in 1683/89, Halley in 1725, Bradley in 1750, and Airy in 1851. Airy's meridian was recognised as the Prime Meridian of the World in 1884.

   a) Maskelyne   c) Christie
   b) Pond   d) Airy

**16 Picture Question. Look at Picture 1
What is Object A?**

They all are. It is Betelgeuse 'The armpit (or hand?) of the central one': *Ibt al-Jauza* or *Yad al-Jauza;*
Alpha Orionis in Beyer, 58 Orionis in Flamsteed;
and 39801 in Henry Draper

   a) Alpha Orionis   c) HD 39801
   b) Betelgeuse   d) 58 Orionis

**17 What is the correct present spelling of the name
of the former home of the Royal Greenwich
Observatory?**

d) **None of the above - it's spelled Herstmonceux**

   a) Herstmanceux   c) Herstmonceaux
   b) Hurstmonceux   d) None of the above

18 What is the distance to Earth's nearest star?

b) **149.6 million kms. Earth's nearest star is the Sun**
   a) and c) are Proxima Centauri (nearest to the Sun)
   d) is Sirius (= 8.6 light years) - brightest

   a) 1.29 parsecs   c) 4.22 light years
   b) 149.6 million kms d) 2.64 parsecs

19 What is 'Syzygy' ?

b) Actually any alignment of the Sun, Earth, and other heavenly body in a straight line. In psychology, Carl Jung used the term syzygy to denote an archetypal pairing of contrasexual opposites, which symbolized the communication of the conscious and unconscious minds.

   a) Painful   c) Easy for **you** to say!
   b) The position of the   d) The position of the Moon
      Moon when full or new   when at half phase

**20 What is the temperature of the Cosmic
Microwave Background radiation?**

c) **-270.4˚C (= -273.15˚C + 2.7˚)**
The Cosmic Background Radiation has a temperature of 2.7˚K. Absolute zero (0˚K) is -273.15˚C.
212˚F is the Boiling point of water. 2.7˚C is just chilly.

   a) -273.15˚C   c) -270.4˚C
   b) 2.7˚C   d) 212˚F

21 Who is Jean-Luc Picard?
   a) Manager of Chapter II   c) Surveyor of France c. 1765
   b) Inventor of the   d) Captain of the Starship
      Bathyscape   *Enterprise*

d) Captain of the *Enterprise*
   b) was Auguste Picard   c) was Jean Picard
   a) beats me!

22 Who won the FA Cup in 1979?
   a) Arsenal   c) Accrington Stanley
   b) Everton   d) Manchester United

a) Arsenal 3:2 v Man U
This is just an excuse for Q 23

23 Who said "Frankly, my dear, I don't *give* a damn" ?
   a) Thatcher to Reagan   c) Astaire to Rogers
   b) Rhett Butler to   d) Eddie to Mike about Q22
      Scarlett O'Hara

b) ... really, but if you said d) you can have a mark too!

24 Who is the odd one out?
   a) William Herschel   c) Nathaniel Bliss
   b) Nevil Maskelyne   d) John Pond

a) William Herschel
He was 'King's Astronomer'. All the others were
Astronomers Royal

25 Which was the first planet discovered in recorded history?
   a) Saturn   c) Uranus
   b) Neptune   d) Vulcan

c) Uranus by William Herschel in 1781
Saturn was known in antiquity. Neptune was discovered
in 1846. Vulcan was thought to be a planet closer to the
Sun than Mercury, but doesn't exist.

26 In addition to Flamsteed and Tycho, which astronomer appears in the Painted Hall Greenwich?
   a) Galileo   c) Newton
   b) Halley   d) Copernicus

d) Copernicus - shown 'with his system in his hand'
No comment

27 What's it called when a planet is exactly the other side of the Earth from the Sun?
   a) Occultation   c) Opposition
   b) Conjunction   d) Precession

c) Opposition
   a) is when one object appears to pass in front of another
   b) is when two objects appear to be very close together
   d) is the effect caused by the slow rotation (every
      26,000 years) of the direction of the Earth's axis

28 What is 18 yrs 10 - 11 days (6585.3 - 6585.8 days)?
   a) A very good age to be   c) The Metonic Cycle
   b) The Saros   d) The synodic period of
               Earth & Mars

b) The Saros to predict eclipses (but not at same place)
19 x 346.62 days Sun passes through 2 nodes of Moon
223 x 29.5306 days avg time between new Moons
The Metonic Cycle of almost exactly 19 years (235 lunar
-months) to predict eclipses in the same place. Works 7x

29 Picture Question. Look at Picture 2 What is Object A?
   a) Deneb   c) Vega
   b) Polaris   d) Algol

b) Polaris - indicated by the 'Guards' of the Great Bear
or Big Dipper

30 What type of star is Betelgeuse?
   a) Red Dwarf   c) Red Giant
   b) Blue Giant   d) Jolly Green Giant

c) A Red Giant type M
Red Dwarves are small cool stars eg Wolf 339
A Blue Giant is a big hot star eg Rigel

31 Which is the odd one out?
a) Tethys   c) Titan
b) Io   d) Iapetus

b) Io is a satellite of Jupiter
All the others are satellites of Saturn

32 Which of these was written by Galileo Galilei?
a) De Revolutionibus   c) De Nova Stella
b) Sidereus Nuncius   d) In Loco Parentis

b) Sidereus Nuncius or 'message from the stars'
a) was Copernicus   c) was Tycho
d) means 'my Mother works for SE Trains'

33 Picture Question. Look at Picture 2
What is Object B?
a) Alpha Lyrae   c) Gamma Draconis
b) Beta Ursae Majoris   d) Delta Cephei

c) Gamma Draconis or Eltamin 'the head of the dragon'
Gamma Draconis transits very near the zenith at London and was the early target for parallax measurement attempts using zenith telescopes

34 What was Copernicus educated to be?
a) Astronomer   c) Priest
b) Doctor   d) Sagger maker's bottom knocker

b) A Doctor of Medicine
Copernicus studied medicine for 3 years at Padua 1501-3 However, he also studied law at Bologna and received his Doctorate in Law from Ferrara in 1503

35 What's the purpose of an equatorial mounting?
a) To have fun in the tropics   c) To have many bits to drop
b) To have fun anywhere   d) To help keep the thing pointed at the same place

d) Helps automatically track a star (with the help of a motor drive)

36 Astronomers say "Wow! Oh be a fine girl, kiss me right now Sweetie" to remember ... ?
a) Their mis-spent youth   c) Stellar spectral types
b) Colours of the spectrum   d) Tuning of a guitar's strings

c) Stellar spectral types - hottest to coolest
Sun is type G2
b) Richard Of York Gave Battle In Vain
d) Every Good Boy Deserves Favour

37 What type of mirror is used in the Great Equatorial 28-inch refractor at Greenwich?
a) Metal speculum   c) Aluminium on pyrex
b) Silver on glass   d) ..er. You've been listening to Mike again

d) It doesn't use a mirror. It uses a glass lens

38 When might you hope to see the Leonids?
a) July 23 - August 20   c) November 15 - 20
b) December 7 - 16   d) 6:00 pm on Channel 4

c) November 15 - 20
a) The Perseids   d) is the Simpsons
b) The Geminids

39 Who observed the first recorded Transit of Venus?
a) Edmund Halley   c) Nevil Maskelyne
b) Tycho Brahe   d) Jeremiah Horrocks

d) Jeremiah Horrocks in 1639
Halley saw Mercury in 1677 and realised that Venus was a better target for transits in 1761 and 1769
Maskelyne went to St Helena for 1761.
Tycho didn't.

40 In which constellation is the star Aldebaran?
a) Orion   c) Cortina
b) Taurus   d) Auriga

b) in Taurus, a load of Bull
just like c)
Mike was born under Taurus, the bull, and boy, was it surprised!