Flamsteed Astronomy Society Xmas Quiz 2005

Circle the correct answer

(except in Qs 20 and 21: match-up and mark the numbers of all 4 pictures)

f@nmm

Questions:	**Answers:**

1 **On March 4, 2005 how old was the post of Astronomer Royal (Astronomical Observator)?**
   a) 310 years   c) 330 years
   b) 329 years   d) 335 years

1   c) It was 330 years old. The post was founded on March 4, 1675. John Flamsteed moved into the Observatory building in 1676.

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2 **How long does it take the Earth to spin once on its axis?**
   a) 1 day   c) 1 year
   b) 1 month   d) 23 hrs 56 mins

2   Both a) and d) are correct
   a) 1 day (24 hours) is the solar day when the Earth has completed one spin in relation to the Sun.
   d) 23 hrs 56 mins is the length of the sidereal day when Earth has completed one turn in relation to the stars.

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3 **Which is the odd one out?**
   a) Gluon   c) Klingon
   b) Meson   d) Boson

3   c) Klingon is the odd one out. Klingons are characters in *Star Trek* (and *Chicken Run*). The others are genuine sub-atomic particles.

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4 **What is 2003 UB313?**
   a) 313BU 2003 backwards   c) Gabrielle
   b) A large TNO   d) A claim form for unemployment benefit

4   b) 2003 UB313 is a large TNO - Trans-Neptunian Object. It is the putative 10th planet which the discoverers allegedly want to name *Xenia* after TV's warrior princess. *Gabrielle* is her side-kick and the name proposed for Xenia's moon

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5 **Who invented the caesium atomic clock?**
   a) Sir Clive Sinclair   c) Gene Amdahl
   b) Louis Essen   d) Wallace & Grommit

5   b) It was invented by Louis Essen at the NPL Teddington UK, in 1955. Clive Sinclair invented a pocket calculator and the C5 electric death-trap. Gene Amdahl invented the IBM 3-sickly.

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6 **The bright comet seen in 1910 was comet … ?**
   a) Skjellerup-Maristany   c) Tottington
   b) Donati   d) Halley

6   d) It was Halley which returns every 75/76 years. Skjellerup-etc was 1927. Donati was 1858. Tottington was in *Were-Rabbit*.

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7 **In Lambda-CDM hypotheses, how much of the mass & energy in the Universe is Cold Dark Matter**
   a) 5 percent   c) 70 percent
   b) 25 percent   d) are you kidding?

7   b) CDM is 25 percent.
   Normal baryonic matter is 5 percent & dark energy is 70 percent.

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8 **When were the moons of Mars discovered?**
   a) 1807   c) 1877
   b) 1827   d) 1907

8   c) In 1877 during a close approach of Mars, by Asaph Hall at the US Naval Observatory Washington with the 26-in refractor by Clarke.

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9 **What is the present mission to Saturn called?**
   a) Giotto   c) Clavius
   b) Cassini   d) Galileo

9   b) It's called *Cassini* after J D Cassini (I) who discovered the Cassini division.

Questions:	Answers:

10 Where is the SOHO satellite?
   a) On the way to Venus   c) 27, Dean Street W1
   b) Between the Earth and   d) Orbiting Saturn
      the Sun

10 b) It's orbiting between the Earth and the Sun at the Lagrangian Point L1 where it has an uninterrupted view of the Sun. SOHO is the Solar and Heliospheric Observatory.

11 From Dagenham, how long would a Ford Cortina, going flat out (say 50 mph), take to get to the Moon?
   a) about 6 days   c) about 6 months
   b) about 6 weeks   d) forever

11 d) Strictly d) because the Cortina will never achieve c) escape velocity, but c) gets a mark too. The 249,000 miles to the Moon would take about 6 months at 50 mph.

12 Who is the odd one out?
   a) Edwin Aldrin   c) Alan Shepherd
   b) Jim Lovell   d) Harrison Schmitt

12 b) Jim Lowell because the others walked on the Moon. Lovell flew two Apollo missions (8 and 13) but didn't get to land on the Moon. Aldrin (Apollo 11); Shepherd (Apollo 14); Schmitt (Apollo 17)

13 What is the temperature of a typical sunspot?
   a) 14 million degrees C   c) 5,800 degrees C
   b) 80,000 degrees C   d) 4,000 degrees C

13 d) 4000 degrees. The surface is generally 5800 deg. (sunspots are cooler - why they appear dark) The centre is 14 million and the corona is 80,000 u

14 Where do most long-period comets appear to originate?
   a) The Kuiper Belt   c) The asteroid belt
   b) The Oort Cloud   d) Tescos

14 b) The Oort cloud -- 50,000 to 100,000 AUs (about 1 light year) from the Sun - almost a quarter of the way to Alpha Centauri

15 How many Cassinis were Directors of the Paris Observatory?
   a) 1   c) 3
   b) 2   d) 4

15 d) There were four.

16 Where is Mount Erebus?
   a) Mars   c) The Moon
   b) Earth   d) Io

16 b) On Earth in the Antarctic.

17 When was Einstein's General Theory of Relativity published?
   a) 1895   c) 1915
   b) 1905   d) 1925

17 c) The General Theory was published in 1915. The Special Theory was published in 1905.

18 Who was George Airy's uncle?
   a) Anna Airy   c) Arthur Biddell
   b) Richarda Smith   d) Wilfrid Airy

18 c) It was Arthur Biddell. Anna Airy was his granddaughter, Richarda Smith his wife, and Wilfrid his son

Questions:	Answers:

19 Who discovered the Galilean satellites of Jupiter?
a) Urbain Le Verrier   c) Galileo Galilei
b) Jacques Cassini   d) Johannes Kepler

19 c) duh ..

20 Match the names to the pictures (one point each) In pictures 1a to 1d, which picture is the … ?

a) Triffid nebula   c) N. American nebula

b) Pelican nebula   d) Bubble nebula

20 a) The Triffid Nebula is 1C (M20)
b) The Pelican Nebula is 1B (IC5070)
c) The North American Nebula is 1A (NGC7000)
d) The Bubble Nebula is 1D (NGC7635)

21 Match the names to the pictures (one point each) In pictures 2a to 2d, which picture is … ?

a) Yerkes   c) Berlin-Treptow

b) Lick   d) Cote d'Azur

21 a) Yerkes is 2C. Next to Lake Geneva, Wisconsin
b) Lick is 2B - Mt Hamilton, CA
c) Berlin-Treptow (Archenold) is 2A
d) Cote d'Azur (Nice) is 2D

22 Where is the First Point of Aries?
a) Where Aries left it   c) In Pisces
b) On the tip of the Ram's   d) On the horizon on the
   nose   equator at midnight

22 c) It's now in Pisces thanks to precession.
It's the point on the sky from which we measure R.A.
right ascension (the astronomical equivalent of
longitude)

23 Where is the largest refractor in Europe?
a) At Berlin-Potsdam   c) At Yerkes Observatory
b) At Paris Meudon   d) At Polkova Observatory

23 b) At Paris-Meudon, a double refractor of 83+62 cm
by Gautier and the Henry Bros from 1891. (Greenwich
28-in is 72 cm.)

24 Astronomers say "Every Good Boy Deserves Favour" to remember … ?
a) Their mis-spent youth   c) Stellar spectral types
b) Colours of the spectrum d) Notes on the music
                               treble clef

24 d) Trick question.

25 Look at Picture 3. Is it … ?

a) M81   c) NGC253
b) M31   d) M83

25 b) It's M31, the Andromeda Galaxy. The most
distant object visible with the unaided eye.

26 Picture Question -- Odd one out In pictures 4a to 4d which is the odd one out?
a) 4a The Rosette   c) 4c The Whirlpool
b) 4b The Helix   d) 4d V838 Monocerotis

26 c) The Whirlpool Galaxy which is outside our Milky Way
galaxy. The others are all nebulae within the
Milky Way.

Maximum 32 points

Questions:	Answers:

27 Tie-breaker

What is the object in picture 5?

27   It's the Crab Nebula M1

28 Tie-breaker

Who is the person in picture 6?

28   It's Sir William Herschel, discoverer of Uranus 1781