MENTAL ABILITY

1. Find the number of triangles in the given figure.

   (1)*16

   (2) 13

   (3) 9

   (4) 7
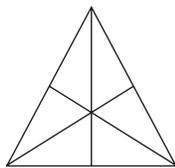
2. The value of $(-12) + 90 + 84 + (-15)$ is

   (1) 155

   (2) 152

   (3) 161

   (4)*157

3. The product of two numbers is 4000. If the H.C.F. of the number is 20, then L.C.M. will be

   (1)*200

   (2) 300

   (3) 305

   (4) 5

4. If ✡ + 100 = Δ and ✡ − 100 = O,

   What is the correct relation between ✡ and O?

   (1) 50 + O = Δ

   (2) 50 − O = Δ

   (3)*200 + O = Δ

   (4) 100 − O = Δ

5. Sita has 744 flags to pack into boxes. Each box will hold 24 flags. How many boxes will Sita need to hold all the flags?

   (1) 315

   (2) 35

   (3)*31

   (4) 21

6. $\frac{1}{5}$ is equivalent to

   (1) 25%

   (2)*20%

   (3) 50%

   (4) 75%

7. For the following figure, which of the following is true?
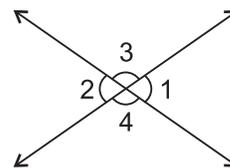
   (1) $\angle 1 + \angle 4 + \angle 2 = 180°$

   (2) $\angle 4 + \angle 2 + \angle 3 = 180°$

   (3)*$\angle 3 + \angle 1 = 180°$

   (4) $\angle 1 = \angle 4$.

8. The product of two numbers is 3000. If the H.C.F. of the number is 20, then L.C.M. will be

   (1) 30

   (2) 300

   (3) 305

   (4)*150

9. If n represents a number, which of these means the same as the expression $n - 6$?

   (1) Six more than a number

   (2) Six divided by a number

   (3)*Six less than a number

   (4) Six times a number

10. The perimeter of a square is 52 m. Find the area of the square.

    (1) 170 m^2 (2)* 169 m^2

    (3) 160 m^2 (4) 150 m^2

11. The different group of stars is known as

(1)*Constellations

(2) Celestial bodies

(3) Asteroids

(4) Comet

12. Which of the following factors explain why the Earth can support lives?

(i) It has air

(ii) It has water

(iii) It has a large surface

(iv) It has suitable temperature

(1) (i) and (iii)

(2) (ii) and (iv)

(3)*(i), (ii) and (iv)

(4) All of the above

13. Which of the following statements about the Moon are true?

(i) The Moon is the Earth's natural satellite

(ii) We can see a full Moon every night

(iii) There is no oxygen to support life on Moon

(iv) The Moon is twice the size of the Earth

(1)*(i) and (iii)

(2) (ii) and (iv)

(3) (i), (ii) and (iii)

(4) (ii), (iii) and (iv)

14. Side of Earth which faces Sun have

(1) summer season

(2)*day

(3) night

(4) winter season

15. The largest circular storm in our solar system is on the surface of which of the following planets?

(1)*
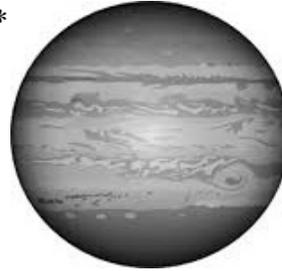
Jupiter

(2)

Venus

(3)

Uranus

(4)

Earth

16. The biggest asteroid known is

(1) Vesta

(2) Icarus

(3)*Ceres

(4) Eros

17. The Andromeda Galaxy is which of the following types of galaxies?

(1)
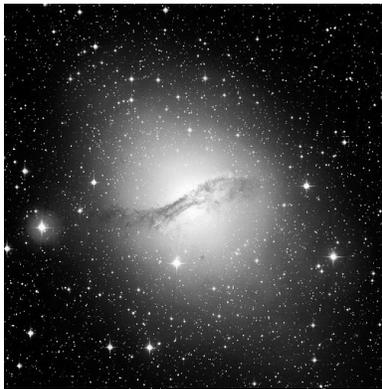

Elliptical

(2)*

Spiral

(3)

Barred-spiral

(4)
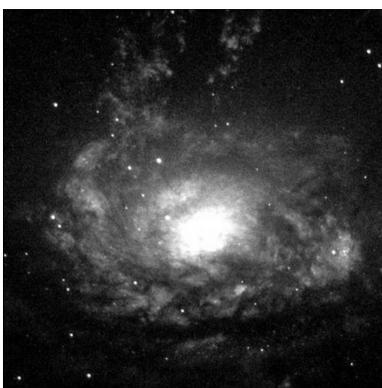
Irregular

18. The largest moon in our solar system has an atmosphere that is denser than the atmosphere of Mars. The name of this moon is

(1)*Titan   (2) Ganymede

(3) Triton   (4) Io

19. On which of the following planets would the sun rise in the west?

(1)
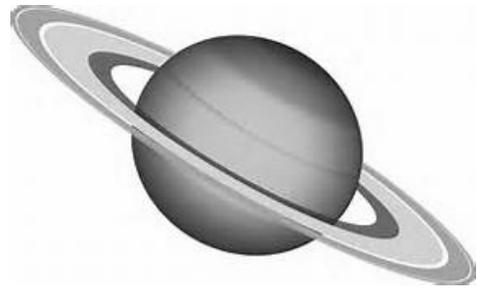
Saturn

(2)

Pluto

(3)

Mercury

(4)*

Venus

20. The period from one full moon to the next is

(1) 30.3 days

(2) 30 days

(3)*29.5 days

(4) 28 days

21. Beads of light visible around the rim of the moon at the beginning and end of a total solar eclipse are called

(1) Lunar Beads

(2) Solar Beads

(3)*Baily's Beads

(4) Rim Beads

22. Name the astronomer who discovered that Mars orbits the Sun in an elliptical orbit.

(1)*Kepler

(2) Newton

(3) Copernicus

(4) All of these

23. Neptune is closest in size to which planet?

(1)

Mars

(2)

Mercury

(3)*

Uranus

(4)

Neptune
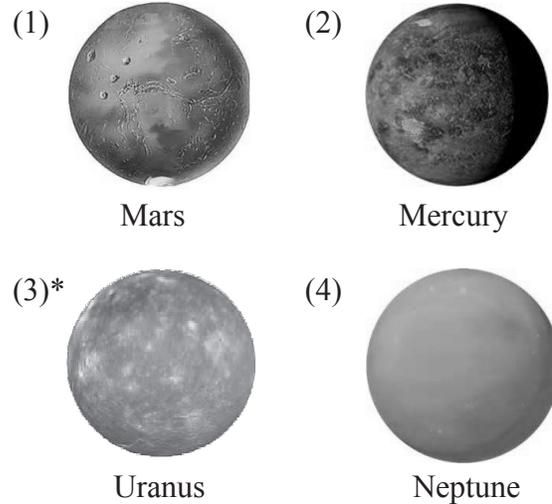
24. In the Milky Way there are approximately

(1) 2 million stars

(2) 100 million stars

(3) 400 million stars

(4)* 200 billion stars

25. How long is a comet's tail?

(1) Hundreds of miles long

(2) Thousands of miles long

(3)*Millions of miles long

(4) Billions of miles long

INTERACTIVE SECTION

26. What is the name of the star closest to our sun?

(1) Polaris

(2)*Proxima Centauri

(3) Rigel

(4) Mizor

**27.** Lunar eclipse occurs on

(1)

New moon

(2)*

Full moon

(3)

Half moon

(4)

Quarter moon
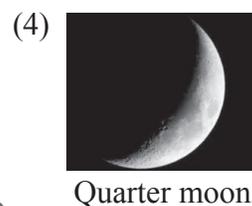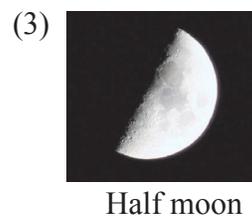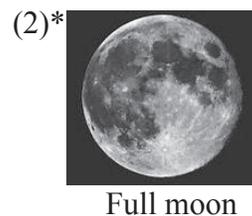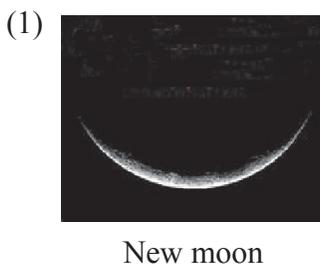
Use these constellations to answer the next two questions (Q. 28 and Q. 29).

A ☆

☆

☆   C

☆   ☆ ☆
☆   ☆ ☆
        ☆
        ☆
☆   ☆ D

☆
☆
B
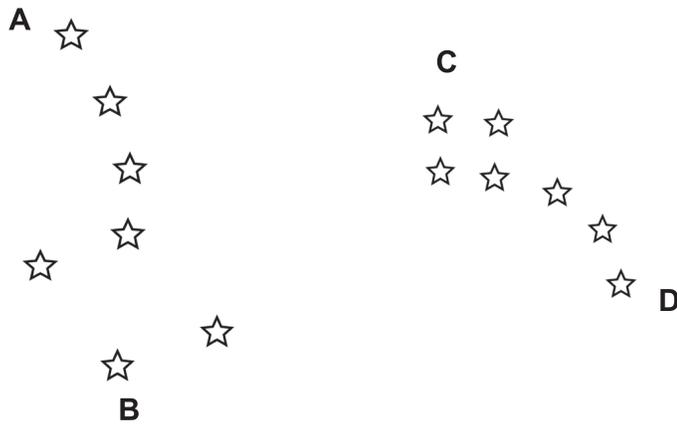
28. Which constellation is located between star "A" and "B"?

(1) Pegasus

(2) Cassiopeia

(3)*Big Dipper

(4) Orion

29. What star is "D"?

(1) Antares

(2) Betelgeuse

(3)*Polaris (North Star)

(4) Sirius (Dog Star)

30. The first lunar orbiter of China

(1)*Chang'e-1

(2) Chang'e-2

(3) Chang'e-3

(4) Chang'e-4

31. The first successful moon mission of India

(1)*Chandrayan 1

(2) Chandrayan 2

(3) Chandrayan 3

(4) Chandrayan 4

32. _____ was the first to realise that the earth was round.

(1)*Aristotle

(2) Galileo

(3) Ptolemy

(4) Heraclitus

33. NASA's Deep Impact space mission was employed to take detailed pictures of which comet nucleus?

(1) Halley's Comet

(2) Hale-Bopp

(3) Hyakutake

(4)*Tempel 1

34. We can see a black hole through a _____ telescope.

(1) Galilean

(2) Normal

(3) Radio

(4)*Gravity

35. Which of the following planets has a lesser rotation time than the Earth?

(1)*

Jupiter

(2)

Mars

(3)

Mercury

(4)

Venus

36. 'New Horizons' spacecraft was launched by NASA to study which of the following planet?

(1)

Mars

(2)*

Pluto

(3)

Jupiter

(4)

Mercury

37. Brightest star as seen from the Earth

(1) Rigel Kentaurus

(2)*Dog Star (Sirius)

(3) Betelgeux

(4) Eta Carinae

38. Satellite farthest from the parent planet

(1) Hyperion

(2) Titan

(3) Ganymede

(4)*Sinope

39. "Saptarishi" is the Indian name of which Constellation?

(1)*Ursa Major

(2) Ursa Minor

(3) Orion

(4) Draco

40. Which of the following is not a dwarf planet?

(1) Ceres

(2) Haumea

(3) Makemake

(4)*Europa

* denotes answer.

END OF THE EXAM