

# CONCEPT APPLICATION LEVEL - III

## SECTION A

### • FILL IN THE BLANKS

- Q.1 ..... are celestial bodies of the universe continuously emit heat and light.  
Q.2 ..... is the distance travelled by light in one year and is equal to  $9.46 \times 10^{12}$  kilometres.  
Q.3 ..... is the star which appears to be stationary near the northern horizon.  
Q.4 ..... is a group of stars arranged in a definite pattern.  
Q.5 ..... are bright objects that revolve around the sun.  
Q.6 ..... constitutes sun, eight planets with their moons and all other objects that are bound to the sun due to gravity, e.g., asteroids, comets and meteors.  
Q.7 ..... are minor planets that revolve around the sun and are located between Mars and Jupiter.  
Q.8 ..... are very small sized bodies that revolve around the sun in highly elliptical orbits and are characterized with a small head and a long tail.  
Q.9 ..... are small stony or metallic bodies (meteors) travelling in interplanetary space that actually reach the earth's surface.  
Q.10 ..... are the celestial bodies revolving around a planet.

## SECTION B

### • TRUE OR FALSE :

- Q.1 Sun is a star.  
Q.2 Orion has 10 bright star.  
Q.3 Mercury has no satellite of its own.  
Q.4 Planets do twinkle.  
Q.5 Jupiter is a largest planet.

## SECTION C

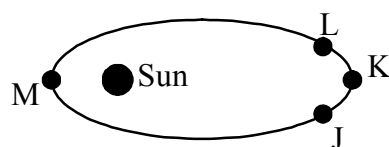
### • CHOOSE THE CORRECT OPTION IN THE FOLLOWING QUESTIONS :

- Q.1 Which of the following does not belong to the family of solar system?  
(A) Planet (B) Galaxy (C) Meteors (D) Comet
- Q.2 The Halley's Comet is seen after every  
(A) 76 months (B) 76 years (C) 56 months (D) 56 years
- Q.3 Ursa Major is a  
(A) star (B) constellation  
(C) seen only with telescope (D) satellite
- Q.4 Which planet has the largest number of satellites?  
(A) Jupiter (B) Saturn (C) Mercury (D) Mars
- Q.5 Which unit is used to measure astronomical distances?  
(A) Leap year (B) Light year (C) Centur (D) Sound year
- Q.6 The stars forming a recognizable shape is called  
(A) constellation (B) system (C) galaxy (D) aestroids
-

- Q.7 Which star is nearest to earth?  
(A) Pole star (B) Cassiopeia (C) Orion (D) Sun
- Q.8 What term is used for celestial bodies that revolve around the sun in highly elliptical orbit?  
(A) Comet (B) Meteors (C) Asteroids (D) Planets
- Q.9 Which small objects revolve between the orbits of Mars and Jupiter?  
(A) Satellites (B) Comets (C) Asteroids (D) Meteorites
- Q.10 Which planet is called morning star or evening star?  
(A) Venus (B) Mars (C) Jupiter (D) Mercury
- Q.11 Our galaxy is known as  
(A) earth galaxy (B) sun galaxy (C) Milky Way (D) constellation
- Q.12 Which of the following is not a planet?  
(A) Mercury (B) Saturn (C) Jupiter (D) Great bear
- Q.13 Orion is a  
(A) constellation (B) star (C) planet (D) satellite
- Q.14 Shooting stars are called  
(A) asteroids (B) galaxies (C) meteors (D) andromeda
- Q.15 The planet farthest from the sun is  
(A) Uranus (B) Neptune (C) Saturn (D) Mercury
- Q.16 Phases of the moon are observed because :  
(A) The moon does not reflect sunlight  
(B) The relative position of the sun, earth and the moon changes  
(C) The shadow of earth falls on the moon  
(D) Only some parts of the moon can emit light
- Q.17 Lunar eclipse occurs when the :  
(A) Sun comes between the earth and the moon  
(B) Moon comes between the earth and the sun  
(C) Earth comes between the sun and the moon  
(D) Earth and the moon collide with each other
- Q.18 Example of natural satellite is :  
(A) Venus (B) Comet (C) Moon (D) Sputnik-I
- Q.19 Which of the following planet has highest known satellite:  
(A) Mercury (B) Jupiter (C) Saturn (D) Venus
- Q.20 On the day of Amavasya, the phase of moon is called:  
(A) Full moon (B) New moon (C) Half moon (D) Crescent moon
-

- Q.21 Stars are mainly made up of :  
(A) oxygen and hydrogen (B) oxygen and nitrogen  
(C) hydrogen and helium (D) water and helium
- Q.22 Stars appear motionless because :  
(A) they move with the same speed as that of the earth  
(B) they do not move at all  
(C) they are very far away from the earth  
(D) their speed is extremely slow
- Q.23 Galaxies :  
(A) move towards each other (B) move away from each other  
(C) do not move at all (D) none of these
- Q.24 Any heavenly body having light of its own is called a :  
(A) nebulae (B) star (C) comet (D) meteorite
- Q.25 Galaxies are usually classified on the basis of their :  
(A) mass (B) size (C) shape (D) None of these
- Q.26 Indian name of Milky way galaxy is :  
(A) Akash Ganga (B) Dhruv Tara (C) Saptarishi (D) None of these
- Q.27 The vast collection of billion of stars is called a  
(A) universe (B) galaxy (C) constellation (D) None of these
- Q.28 The Milky Way galaxy has a/an :  
(A) elliptical shape (B) spiral shape (C) irregular shape (D) None of these
- Q.29 Sun is a  
(A) star (B) planet (C) galaxy (D) comet
- Q.30 The largest and **heaviest** member of the solar family is  
(A) Sun (B) Jupiter (C) Saturn (D) Uranus
- Q.31 Which of the following is a star?  
(A) Alpha **Centauri** (B) Deimos (C) Orion (D) Phobos
- Q.32 A luminous heavenly body with a long luminous streaking tail, is known as  
(A) an asteroid (B) a comet (C) a meteorite (D) a planet
- Q.33 The constellation, having five stars in it and resembling the shape of a queen, sitting on her throne, is the  
(A) Scorpio (B) Orion (C) Pleiades (D) Cassiopeia
- Q.34 Which of the following is called red planet?  
(A) Venus (B) Mercury (C) Mars (D) Jupiter
- Q.35 The planet nearest to the earth is  
(A) Venus (B) Mercury (C) Mars (D) Jupiter
-

- Q.36 Which is the planet nearest to the sun?  
 (A) Venus (B) Mercury (C) Mars (D) Jupiter
- Q.37 Number of satellites for Venus are  
 (A) 9 (B) 8 (C) 10 (D) None
- Q.38 What is the escape velocity required by a car of 3,500 kg weight to leave the earth?  
 (A)  $22.4 \text{ kms}^{-1}$  (B)  $11.2 \text{ kms}^{-1}$  (C)  $10.2 \text{ kms}^{-1}$  (D)  $30.2 \text{ kms}^{-1}$
- Q.39 What is a geostationary satellite?  
 (A) A satellite that does not revolve around the earth  
 (B) A satellite that does not revolve around its axis  
 (C) A satellite that remains stationary with respect to a place on the earth  
 (D) None of the above
- Q.40 The value of light year is  
 (A)  $9.46 \times 10^{12} \text{ km}$  (B)  $9.46 \times 10^{11} \text{ km}$  (C)  $3 \times 10^{12} \text{ km}$  (D)  $3 \times 10^{10} \text{ km}$
- Q.41 The path of a planet around the Sun is elliptical as shown in figure below. Its velocity is greatest at



- (A) K (B) J (C) M (D) L
- Q.42 Which one was the first satellite of India?  
 (A) Rohini-I (B) Bhaskar (C) Aryabhata (D) Rohini-II
- Q.43 The red shift suggest that the universe is  
 (A) Revolving (B) Oscillating (C) Contracting (D) Expanding
- Q.44 Which satellite does not belong to India?  
 (A) INSAT-2B (B) TUBESAT (C) INSAT-3A (D) Bhaskara
- Q.45 Atmosphere is present on earth due to  
 (A) Gravitational attraction (B) Air  
 (C) Cloud (D) Surface tension
- Q.46 Newton's law of gravitation is valid for  
 (A) all bodies (B) only heavenly bodies  
 (C) only for small bodies (D) only for charged bodies
- Q.47 The galaxy of which our solar system belong is  
 (A) Milky way (B) Solar galaxy (C) Elliptical galaxy (D) Radio galaxy
- Q.48 Which of the following is a star nearest to the sun?  
 (A) Milky way (B) Alpha centauri (C) Asteroid (D) Meteorite

- Q.49 Which one of the following planet has the longest day?  
 (A) Venus (B) Mars (C) Mercury (D) Earth
- Q.50 Smaller pieces of heavy stones and metals which on entering earth's atmosphere burns out are  
 (A) Comets (B) Meteorites (C) Asteroids (D) All
- Q.51 The colour of a star indicates its  
 (A) Temperature (B) Neutron stars (C) Black holes (D) Red shift
- Q.52 Which planet appears to be yellowish?  
 (A) Asteroids (B) Mars (C) Uranus (D) Saturn
- Q.53 The first outside orbit of the Earth planet is  
 (A) Jupiter (B) Mars (C) Jupiter (D) Saturn
- Q.54 What is the gap between the orbits of Mars and Jupiter called?  
 (A) Asteroids (B) Comets (C) Meteor (D) Meteorite
- Q.55 Stars appears to move from  
 (A) West to East (B) East to West (C) North to South (D) South to West
- Q.56 The filing of the Earth is responsible for  
 (A) Change of days (B) Change of the Sun rays  
 (C) Change of the season (D) None of these
- Q.57 The first of a month is the new moon day on 15th of the same month, which of the following figures would represent the phase of the moon?



**SECTION D**

● **MATCH THE COLUMN**

Q.1 Match the following items given in Column 'A' with that in Column 'B'

	Column-A		Column-B
A	Nearest of the sun	P	Jupiter
B	Largest planet	Q	Star
C	Comets	R	Artificial satellites
D	Alpha centauri	S	A constellation
E	INSAT 3E	T	Other than planets
F	Ursa major	U	Neptune
G	Planets	V	Mercury

**Q.2 Match the following items given in Column 'A' with that in Column 'B'**

<b>Column I</b>		<b>Column II</b>	
(A)	Constellation	(P)	Moon
(B)	Star	(Q)	Orion
(C)	Planet	(R)	Vega
(D)	Satellite	(S)	Jupiter

### SECTION - E

• **PREVIOUS YEARS QUESTIONS**

**Q.1** Pankaj took a photo at night by leaving the shutter of his camera open for about a few hours. The diagram on the right shows the picture he got. What causes the stars in Pankaj's photo to look like they are spinning around the night sky? [NSO-2010]



- |                           |                          |
|---------------------------|--------------------------|
| (A) The rotation of earth | (B) The rotation of moon |
| (C) The rotation of sun   | (D) None of these        |

**Q.2** Which of these represents the correct order of planets in the solar system in relation to the Sun? [NSO-2010]

- (A) Venus, Mars, Earth, Mercury, Jupiter, Saturn, Uranus, Neptune  
 (B) Earth, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune  
 (C) Mercury, Venus, Earth, Mars, Jupiter, Saturn, Neptune, Uranus  
 (D) Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

**Q.3** Which of the following statements is false in case of a comet? [NSO-2011]

- (A) They revolve around in highly elliptical orbits.  
 (B) Tail of a comet is always directed away from the sun.  
 (C) They are commonly known as shooting stars.  
 (D) Their period of revolution round the sun is very long.

**Q.4** Which of the following planets can be seen with naked eye? [NSO-2012]

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| (A) Mercury, Venus, Mars, Jupiter   | (B) Mars, Jupiter, Uranus, Neptune  |
| (C) Mercury, Venus, Uranus, Neptune | (D) Mercury, Mars, Jupiter, Neptune |

**Q.5** Lunar eclipse occurs when earth comes in between sun and the moon. Solar eclipse occurs when moon comes in between sun and earth. This suggests that [NSO-2013]

- (A) Both eclipses occur on a new moon day. (B) Solar eclipse occurs on a new moon day  
 (C) Lunar eclipse occurs on a new moon day. (D) Both eclipses occur on a full moon day.

**Q.6** Which planet is called the morning star as well as the evening star, depending on its position with respect to the sun? [NSO-2014]

- |             |           |          |            |
|-------------|-----------|----------|------------|
| (A) Mercury | (B) Venus | (C) Mars | (D) Saturn |
|-------------|-----------|----------|------------|