

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

* All questions are compulsory.

* Read the instructions on the **ANSWER SHEET** and fill in your **NAME**, **CLASS and OTHER INFORMATION**.

To mark your choice of answer by darkening the circles in the Answer Sheet, use an **HB Pencil** only.

* You **MUST** record your answers on the **ANSWER SHEET**.

* There are 40 **MULTIPLE CHOICE QUESTIONS**. Use the information provided to choose the **BEST** answer among the four possible options.

On your **ANSWER SHEET** fill in the oval that matches your answer.

* Marks are **NOT** deducted for incorrect answers.

* Return the **Answer Sheet** to the invigilator at the end of the examination.

* Write your Roll No. on the Question Paper too and take it home for future reference.

* You are **NOT** allowed to use a calculator.

You may use a ruler and spare paper for rough work.

Section - A

(This section contains 8 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which only ONE is correct.)

1. Aamir introduces Abdul, "He is the husband of the grand-daughter of the father of my father". How is Abdul related to Aamir? (A) Brother (B) Son (C) Brother-in-law (D) Nephew 2. If 2678 is coded is 3789, then what will be the code for 1473? (A) 2465 (B) 2584 (C) 3741 (D) 7865 3. If the numbers divisible by 5 between 5 and 85 are arranged in descending order, which would come at the 11th place from the bottom? (A) 60 (B) 35 (C) 45 (D) None of these 4. Arrange the following words in a meaning full sequence. (i) Room, (ii) House, (iii) Town, (iv) Country, (v) Street (A) (i), (ii), (iii), (iv), (v) (B) (iv), (iii), (v), (ii), (i) (C) (iv), (iii), (i), (ii), (v) (D) (ii), (i), (v), (iii), (iv)Calculate the maximum number of squares in the given figure. 5. (B) 10 (A) 15 (C) 14 (D) 12

- 6. Animals : Zoology :: Zodiac Signs : ?
 - (A) Botany (B) Geometry
 - (C) Physiology (D) Astrology
- 7. If white is red, red is blue, blue is black, and black is orange, then what is the color of milk?
 - (A) Red (B) White

(C) Blue

(D) Orange

- 8. Choose the word that cannot be formed from the letters of the word DICTIONARY.
 - (A) Action (B) Diary
 - (C) City (D) Youth

Section - B

(This section contains 25 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which only ONE is correct.)

- 9. Who described comets as 'dirty snowballs'?
 - (A) Fred Hoyle (B) Fred Whipple
 - (C) James Jeans (D) Perceval Lowell

10. Nuclear fusion reactions can be described as _____.

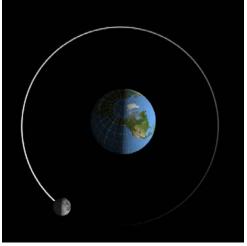
- (A) A heavy nucleus breaks down into two lighter nuclei.
- (B) Two heavy nuclei combine to form a lighter nucleus.
- (C) Two lighter nuclei combine to form two heavy nuclei.
- (D) Two lighter nuclei combine to form a heavy nucleus.
- 11. Which planet has a system of peculiar rings that appears discontinuous?
 - (A) Saturn (B) Neptune
 - (C) Jupiter (D) Uranus
- 12. Which of the following is used as an additive in the food that astronomers carry with themselves in order to avoid the floating of food crumbs in the air?
 - (A) Oxidized oil (B) Gelatin
 - (C) Ketchup (D) Honey
- 13. _____ was the first space shuttle to be launched into Earth's orbit.



(A) Columbia

(B) Atlantis

	(C)	Endeavour	(D)	Discovery
14.	What is the name of the supermassive black hole present in the core of the Milky Way galaxy?			
	(A)	Sagittarius A	(B)	OJ 287
	(C)	RX J1131	(D)	NGCC 1277
15.	If Betelgeuse star is positioned where the Sun is now, the orbits of which planet would it engulf?			
	(A)	Only Mercury	(B)	Mercury and Venus
	(C)	Mercury, Venus and Earth	(D)	From Mercury till Jupiter
16.	Fill in the blank.			
	One light year = 9.5 km.			
	(A)	Zillion	(B)	Trillion
	(C)	Billion	(D)	Million
17.	are the fastest spinning cosmic objects in the universe.			
	(A)	Pulsar	(B)	Black hole
	(C)	Stars	(D)	Satellite
18.	Name the thick layer of a fine, powdery dust covering the surface of the Moon.			
	(A)	Regolith	(B)	Cooled lava
	(C)	Micrometeorite	(D)	Molten mantle
19.	The moon goes from around Earth.			rth.



- (A) East to West
- (C) North to South

- (B) West to East
- (D) South to North

- 20. Choose the correct statement.
 - (A) Ozone depletion is caused by chlorofluorocarbons, whereas the greenhouse effect is caused by greenhouse gases such as CO₂ and water vapours.
 - (B) Ozone depletion is caused by CO₂ and water vapours, whereas the greenhouse effect is caused by greenhouse gases such as chlorofluorocarbons.
 - (C) Ozone depletion is caused by chlorofluorocarbons, whereas the greenhouse effect is caused by greenhouse gases such as SO₂ and CO.
 - (D) None of these
- 21. Which of the following factor is responsible for the different color of the stars?
 - (A) Location (B) Temperature
 - (C) Oxygen (D) Carbon dioxide
- 22. What is formed by the remnant of a massive star after a supernova explosion?
 - (A) White Dwarf Star (B) Neutron Star
 - (C) Red Dwarf star (D) None of these
- 23. Which theory explains that the Sun is the centre of the solar system?



- (A) Heliocentric theory
- (B) Geocentric theory
- (C) Centroid theory
- (D) Revolutionary theory of the Earth and the Sun
- 24. Name the satellite that has recorded the presence of an ozone hole.
 - (A) Nimbus-7 (B) Tiros
 - (C) INTELSET (D) LANDSAT
- 25. Which of the following devices can be used to measure the mass of the Earth?

(A) Telescope

(B) Seismograph

(C) Sextant

(D) Torsion Balance

26. ______ is the comet having the longest tail that has ever recorded.



- (A) Halley's comet (B) Encke's comet
- (C) The Great Comet of 1996 (D) Hale-Bopp comet
- 27. Which of the following is the spiral galaxy like the Milky Way?
 - (A) Andromeda (B) Sombrero
 - (C) Pinwheel (D) Whirlpool
- 28. ______ is not a considered as a part of the newer astronomical technology.
 - (A) Astrolabe (B) Sextants
 - (C) Satellite-aided GPS (D) Interferometric astrometry
- 29. _____ was the first person who observed the phases of the planet Venus.
 - (A) Galileo (B) Ptolemy
 - (C) Copernicus (D) Kepler
- 30. Which planet was named after the ancient Greek deity of heavens?
 - (A) Neptune (B) Jupiter
 - (C) Mercury (D) Uranus
- 31. How long is a day on Jupiter planet?
 - (A) 16 hours 45 minutes (B) 9 hours 55 minutes
 - (C) 10 hours 10 minutes (D) 17 hours 2 minutes
- 32. Which of the following was formulated by Issac Newton?
 - (A) Laws of motion and universal gravitation.
 - (B) General theory of relativity.

- (C) Laws of thermodynamics.
- (D) Kinetic theory of gases.
- 33. What is the name of the angle made by the orbiting path of the satellite with the equator?
 - (A) Inclination (B) Solstice
 - (C) Declination (D) Equinox

Section - C

(This section contains 7 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which TWO are correct.)

- 34. Which of the following represents the types of star clusters?
 - (A) Globular clusters (B) Spiral clusters
 - (C) Barred clusters (D) Open clusters
- 35. Which two elements can be found in the inner core of the Earth?
 - (A) Aluminium (B) Nickel
 - (C) Zinc (D) Iron
- 36. _____ and _____ are asterisms, not constellations.
 - (A) Big Dipper (B) Summer Triangle
 - (C) Canis Major (D) Ursa Minor
- 37. Due to the nuclear reactions taking place in celestial bodies, they tend to emit light. Which of the following comes under the same category of celestial bodies?
 - (A) Sun (B) Stars
 - (C) Earth (D) Moon
- 38. _____ and _____ are the regions through which comets are known to originate in a swarm of icy bodies orbiting the Sun.
 - (A) Kuiper belt (B) TNO's
 - (C) Asteroid belt (D) Oort cloud
- 39. Which of the following nations were not involved in the 'Space Race' of the 20th century?
 - (A) United States (B) China
 - (C) Canada (D) Soviet Union

- 40. _____ and _____ were used by the ancient astronomers to chart the positions and motions of planets and celestial bodies.
 - (A) Sundial (B) Bisector
 - (C) Plinth (D) Chisel

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