

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.	1:1::4: ?						
	(A)	19	(B)	32			
	(C)	64	(D)	18			
2.	Selec	Select odd one out.					
	(A)	Friday	(B)	March			
	(C)	August	(D)	December			
3.	Choo	choose the pair which shows the similar relationship shown by the given pair.					
	246 :	246 : 123					
	(A)	266 : 223	(B)	224 : 476			
	(C)	418 : 224	(D)	234 : 432			
4.	If 5 Δ 6 = 30, 40 o 10 = 4 and 7 # 5 = 12, then find the value of 16 Δ 100 o 20 # 80.						
	(A)	148	(B)	155			
	(C)	160	(D)	170			
5.	Prakash wants to go to the college. He starts from his home which is in the East and comes to a crossing. The road to the left ends in a theatre, straight ahead is the hospital. In which direction is the college?						
	(A)	West	(B)	South			
	(C)	North	(D)	East			
6.	Find t	he odd one out.					
	(A)	BAC	(B)	GFH			
	(C)	LKM	(D)	OPQ			
7.	Fill in	the blanks.					
	Socks	s : Feet :: Muffler :					
	(A)	Neck	(B)	Legs			
	(C)	Hands	(D)	Elbow			
8.	At a ticket counter, 35 people are standing in a row. Nishant is 16th from ticket counter. What is his position from the end?						

(A)	19th	(B)	20th
· · ·		(=)	

(C) 21st (D) 22nd

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. _ mission was cancelled when an explosion destroyed its main module's power system. (B) Apollo 10 (A) Apollo 9 (C) Apollo 13 (D) Apollo 16 10. What does the device Foucault pendulum measure? (A) Mass of the Earth (B) Rotation of the Earth (C) Density of the Earth (D) Radius of the Earth 11. SMART was a first low cost orbital probe of ESA. It was launched on . (A) Mars (B) Moon (C) Titan (D) Mercury 12. What was the name of the First USA-USSR joint flight? Soyuz 32 Soyuz 21 (A) (B) (C) Soyuz 19 (D) Soyuz 31
- 13. "There is a celestial body that fluctuates its brightness when seen from the earth and its examples include pulsating, eclipsing and cataclysmic."

Choose the correct option that stands true for the above statements.

- (A) Black holes (B) Pulsars
- (C) Quasars (D) Variable stars
- 14. Which of the following is true regarding the travelling path of Space Shuttle?



- (A) It travels in low-earth orbit.
- (B) It travels in geostationary orbit.
- (C) It travels in polar orbit.
- (D) It travels in eccentric orbit.

- 15. Moon appears orange in colour _____.
 - (A) Because of Earth's gravity.
 - (B) Because of scattering of light.
 - (C) Because of reflection of light.
 - (D) Because of nuclear reactions in Sun.

16. ______ is considered as the ultra-deep field of the universe whose snapshot includes galaxies of various ages, sizes, shapes, and colours.

- (A) Chandra Extreme Deep Field (B) Hubble New Horizons
- (C) Hubble Extreme Deep field (D) None of these

17. The evidence of gravity of moon on Earth is given by _____.

- (A) Meteors (B) Earthquakes
- (C) Aurora (D) Ocean tides
- 18. What is the name of the galaxy cluster found recently that created stars at a prodigious rate?



- (A) Phoenix (B)
 - (B) Dragoon
 - (D) New dawn
- 19. Below are the names of the moons of Saturn. Which of them has a large stain of organic matter?
 - (A) lapetus (B) Titan
 - (C) Mimas (D) Enceladus

20. _____ is known as the 'father of the Big Bang'.

Lagoon

(C)

- (A) Georges-Henri Lemaître (B) Alexander Friedmann
- (C) Willem de Sitter (D) George Gamow

21. _____ are the pieces of Earth's crust and uppermost mantle.

(A) Convergent Plates (B) Divergent Plates

	(C)	Tectonic Plates	(D)	All of these		
22.	Some planets have clouds, composed of poisonous gases like carbon dioxide and also contain sulphuric acid. Name the planet.					
	(A)	Earth	(B)	Mercury		
	(C)	Mars	(D)	Venus		
23.	What name is given to the meteors that appears brighter than any of the stars and planets?					
	(A)	Flares	(B)	Fireballs		
	(C)	Sparks	(D)	Meteor showers		
24.	Which of the following is correct for Neptune?					
	(A)	It has Great Blue spot	(B)	It has Great Green spot		
	(C)	It has Great Dark spot	(D)	It has Great Red Spot		
25.	"The fool who would overthrow the whole science of astronomy." This statement was used for Martin Luther by					
	(A)	Kepler	(B)	Roman Catholic Church		
	(C)	Galileo	(D)	Copernicus		
26.	Approximately, how many stars are there in Milky Way?					
	(A)	10 million	(B)	20 million		
	(C)	100 billion	(D)	200 billion		
27.	Which of the following low density layer is visible during the total solar eclipse?					
	(A)	Corona	(B)	Photosphere		
	(C)	Prominence	(D)	Faculae		
28.	It takes for the light to travel from Proxima Centauri to Earth.					
	(A)	4.23 years	(B)	3.9 years		
	(C)	2.5 years	(D)	1.7 years		
29.) is the first white dwarf detected in 1862.					
	(A)	L 97-12	(B)	Van Maanen 2		
	(C)	Procyon B	(D)	Sirius B		
30.	Whic	Vhich of the following serves the mission of promoting education in astronomy?				
	(A)	Indian Astronomical Union	(B)	International Astronomical Union		
	(C)	Both of these	(D)	None of these		

- 31. A tiny material of _____ can weigh about five billion tons.
 - (A) White dwarf (B) Neutron Star
 - (C) Red Giant (D) Red Supergiant

32. _____ is the measurement of the quantity of light reflected from the surface of a celestial body.

- (A) Albedo (B) Magnitude
- (C) Spark (D) Richter
- 33. Name the largest and closest known star factories that lies in the constellation.
 - (A) Crux (B) Sagittarius
 - (C) Orion (D) Horse head

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. Ronak was reading about the famous astronomer Edwin Hubble. Which of the following statements he must have read given by him?
 - (A) The shape of space is curved.
 - (B) Galaxies exist outside the Milky Way.
 - (C) General theory of relativity.
 - (D) The universe is expanding.
- 35. _____ and _____ galaxies belong to the Local Group.
 - (A) Dwingeloo 1 (B) Andromeda
 - (C) Milky Way (D) Maffei 2
- 36. Identify the qualities that an object should possess to have an extremely strong gravitational pull.
 - (A) Large mass (B) Small mass
 - (C) Small size (D) Large size
- 37. Which of the following are the well-known planetary nebulae?
 - (A) The Cat's Eye (B) NN Serpentis
 - (C) Betelgeuse (D) The Helix
- 38. Which of the following are the two largest moons of Uranus in terms of size?
 - (A) Callisto (B) Titan

- (C) Titania (D) Oberon
- 39. Who created and made adjustments in the first 365-day solar calendar?
 - (A) Babylonians (B) Greeks
 - (C) Egyptians (D) Romans
- 40. Which of the following are the moons of Saturn?
 - (A) Phobos (B) Tethys
 - (C) Phoebe (D) Rhea

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