

Inspiring Young Minds Through Knowledge Olympiads Name:

SOF Olympiad Roll No .:

Contact No.

CLASS



DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

QUESTION PAPER SET

Guidelines for the Candidate

- 2. Write your Name, School Code, Class, Roll No. and Mobile Number clearly on the OMR Sheet and do not forget to sign it. We will share your marks / result and other

Word and Structure Knowledge, Reading, Spoken and Written Expression & Achievers Section.

- 6. To mark your choice of answers by darkening the circles on the OMR Sheet, use HB Pencil or Blue / Black ball point pen only. E.g.

Q.16: Fill in the blanks.

Please teach my dog ____ a ball.

16.
B C D





WORD AND STRUCTURE KNOWLEDGE

FOR QUESTIONS 1 TO 24, CHOOSE THE CORRECT OPTION TO FILL IN THE BLANK.	7. He the song by heart so much so that he could sing the song in his own tune.
The annual sports fest is a of events that took place throughout the year at various places.	A. has been memorised B. have memorised C. are memorised D. had memorised
A. compensation B. cultivation C. culmination D. cancellation 2. He trusted his during difficult times to know better.	8. A lot of sea turtles ashore because of the sea tides. A. have been washed B. are washing C. is washed D. were washing
A. ego B. infection C. intuition D. constitution 3. The of various types of rocks	9. It irritated him to think that no onehim seriously. A. is taking B. is talking C. am taking D. were taken
were placed in the geology lab for the purpose of examination and analysis.	10. I able to help you when I come home from work.
A. samples B. share C. scopes D. sanctify	A. was be B. has be C. would been D. will be
 4. The nature of the problem warranted an examination and analysis for the purpose of A. glorification B. clarification C. customisation D. sedimentation 	11. His parents took him out to dinner him on his achievement. A. are congratulate B. has been congratulated C. to congratulate D. was congratulated
5. The little girl her favourite toys while her parents were shopping. A. take up B. sent off C. packed at D. picked out	12. Sara cried allway back home, because she had lost her favourite toy in park. A. a, the B. an, a C. the, an D. the, the
6. The patient during the operation. A. was sedated B. is sedating C. sedation D. has sedated	13. A city is a place where people live amidst the of traffic and vehicles. A. humph and trump B. odds and ease C. hustle and bustle D. fact and fiction
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his remarks about the strangers	D. from
he barely knew. A. punctual B. patience C. sarcastic D. sincere 15. The scientists studied and researched the problem thereof, andhaven't	21. The investigation officials were his every movement for any new leads and clues that might solve the case. A. catching of B. tracking down C. upside down D. continued on
got any solutions so far. A. yet B. therefore C. whether D. since 16. A mirage is an example ofillusion. A. olfactory	 22. A kitten its head from a person's bag and meowed to everyone's surprise and delight. A. popped out B. popped in C. popped off D. popped into
B. optical C. tactile D. nasal 17. The bench of judges handled	23. The situation to be contained before it escalated any further. A. dare B. could
the old man's case. A. leftly B. colourfully C. squared D. deftly 18. Tarun drew a DD from the bank	C. would D. had 24. You not worry about the cold for I have an extra jacket. A. dare B. would
the organising committee. A. in favour of B. in spite of C. by dint of D. in order to	C. need D. could FOR QUESTIONS 25 AND 26, CHOOSE THE CORRECT SYNONYM OF THE GIVEN WORD.
19. He survived his ordeals hard work and determination. A. in case of B. with an eye of C. according D. by dint of	25. Subservient A. Straight-forward B. Domineering C. Aggressive D. Submissive
20. Her pioneering work the field of psychology was considered to be remarkable. A. in B. upon	A. Queasy B. Chubby C. Thin D. Tall

FOR QUESTIONS 27 AND 28, CHOOSE THE CORRECT ANTONYM OF THE GIVEN WORD.

27. Cursory

- A. Thorough
- B. Perfunctory
- C. Superficial
- D. Offhand

28. Derisive

- A. Deprecatory
- B. Disparage
- C. Repress
- D. Respectful

FOR QUESTIONS 29 AND 30, CHOOSE THE OPTION WITH CORRECT SPELLING.

- 29. How do you spell the word that means 'to be stingy'?
 - A. Parsimonious
 - B. Parcimonious
 - C. Parsimious
 - D. Parsiminious
- 30. How do you spell the word that means 'to be clear'?
 - A. Perspisity
 - B. Perpicuity
 - C. Perspicuity
 - D. Perspicity

READING

FOR QUESTIONS 31 TO 35, READ THE PASSAGE AND ANSWER THE QUESTIONS THAT FOLLOW.

According to the proceedings of Goldschmidt conference, a new model from NASA scientists supports the theory that the interior ocean in Jupiter's moon, Europa would be able to sustain life. In addition, they have calculated that this water, believed to be an ocean under the surface ice shell, could have been formed by breakdown of water-containing minerals due to either tidal forces or radioactive decay. This work, which is not yet peer-reviewed, is presented for the first time at the virtual Goldschmidt conference, and may have implications for other moons in the Solar System.

Europa is one of the largest moons in the solar system. Since the flybys of the Voyager and Galileo spacecraft, scientists have held that the surface crust floats on a subsurface ocean. However, the origins and composition of this ocean have been unclear.

The researchers based at NASA's Jet Propulsion Laboratory in California, modelled geochemical reservoirs within the interior of Europa using data from the Galileo mission. Lead researcher Mohit Melwani Daswani said, "We were able to model the composition and physical properties of the core, silicate layer, and ocean. We find that different minerals lose water and volatiles at different depths and temperatures. We added up these volatiles that are estimated to have been lost from the interior, and found that they are probably present in the ocean."

The researchers found that ocean worlds such as Europa can be formed by metamorphism: in other words, heating and increased pressure caused by early radioactive decay or later subsurface tidal movement, would cause the breakdown of water-containing minerals, and the release of the trapped water.

They also found that this ocean would originally have been mildly acidic, with high concentrations of carbon dioxide, calcium, and sulfate. "Indeed it was thought that this ocean could still be rather sulfuric," said Mohit Melwani Daswani, "but our simulations, coupled with data from the Hubble Space Telescope, showing chloride

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on Europa's surface, suggests that the water most likely became chloride rich. In other words, its composition became more like oceans on Earth. We believe that this ocean could be quite habitable for life."

He continued, "Europa is one of our best chances of finding life in our solar system. NASA's Europa Clipper mission will launch in the next few years, and so our work aims to prepare for the mission, which will investigate Europa's habitability. Our models lead us to think that the oceans in other moons, such as Europa's neighbour Ganymede, and Saturn's moon Titan, may also have formed by similar processes. We still need to understand several points though, such as how fluids migrate through Europa's rocky interior."

The researchers have now teamed up with groups in Nantes and Prague to try to identify if seafloor volcanoes may have contributed to the evolution of the chloride-rich water on Europa. NASA has recently released new high-resolution photos of Europa, showing possible exploration sites to test these findings.

With a diameter of 3,100 km, Europa is slightly smaller than the Earth's Moon. As Europa orbits Jupiter around 780 million km from the Sun, the surface temperature never rises above minus 160 Celsius; the ocean temperature is still unknown. Galileo is credited with discovering Europa, along with 3 larger moons of Jupiter, on January 8th 1610.

- 31. What did researchers find about the formation of ocean on Europa?
 - It was formed by the volcano eruption on the planet.
 - B. It was formed by the breakdown of water containing minerals due to either tidal forces or radioactive decay.
 - C. It was formed by the breakdown of mountains on the planet.
 - It was formed by the breakdown of surface on the planet.

- Heating and increased pressure caused by early radioactive decay or subsurface tidal movement is called
 - A. ganymede
 - B. titan
 - C. metamorphism
 - D. prague
- 33. Choose the incorrect statement.
 - Europa is one of the largest moons in the Solar System.
 - Researchers have a theory that Europa's ocean would be able to sustain life.
 - C. Galileo discovered Europa along with 3 larger moons of Jupiter.
 - Europa is much larger in size than the Earth's moon.
- 34. Which of the following are not the characteristics of Europa?
 - 1. Europa's diameter is 3,100 km.
 - Europa orbits Jupiter around 780 million km from the sun.
 - Europa's surface temperature rises above -160°C.
 - Europa's ocean temperature is somewhere around −350°C.
 - A. 1 and 2 only
 - B. 2 and 3 only
 - C. 3 and 4 only
 - D. 1 and 4 only
- 35. Choose the synonym of the word 'composition'.
 - A. Interruption
 - B. Logical
 - C. Formation
 - D. Superficial

FOR QUESTIONS 36 TO 40, READ THE PASSAGE AND ANSWER THE QUESTIONS THAT FOLLOW.

By Hellmut E. Lehmann-Haupt

Johannes Gutenberg was a German craftsman and inventor who invented a method of printing from movable type. Elements of his invention are thought to have included a metal alloy that could melt readily and cool quickly to form durable.

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reusable type, an oil-based ink that could be made sufficiently thick to adhere well to metal type and transfer well to vellum or paper, and a new press, likely adapted from those used in producing wine, oil, or paper, for applying firm even pressure to printing surfaces. None of these features existed in the European technique used up to that time for stamping letters on various surfaces or in woodblock printing. Gutenberg's printing press was considered a history-changing invention, making books widely accessible and ushering in an "information revolution".

Gutenberg was long thought to have also invented the punch-matrix system of casting metal type. However, in the early 2000s a computer-aided analysis of Gutenberg's printed work showed that there was too much variation in characters of a given sort (e.g., the letter i) for his type to have been cast that way. Some scholars now think that the punch-matrix system emerged several years after Gutenberg's death.

Gutenberg was the son of a patrician of Mainz. What little information exists about him, other than that he had acquired skill in metalwork, comes from documents of financial transactions. Exiled from Mainz in the course of a bitter struggle between the guilds of that city and the patricians, Gutenberg moved to Strassburg (now Strasbourg, France) probably between 1428 and 1430. Records mention his presence there from 1434 to 1444. He engaged in such crafts as gem cutting, and he also taught a number of pupils.

Some of his partners, who became aware that Gutenberg was engaged in a work that he kept secret from them, insisted that, since they had advanced him considerable sums, they should become partners in these activities as well. Thus, in 1438 a five-year contract was drawn up between him and three other men: Hans Riffe, Andreas Dritzehn, and Andreas Heilmann.

It contained a clause whereby in case of the death of one of the partners, his heirs were not to enter the company but were to be compensated financially.

When Andreas Dritzehn died at Christmas 1438, his heirs, trying to circumvent the terms of the contract, began a lawsuit against Gutenberg in which they demanded to be made partners. They lost the suit, but the trial revealed that Gutenberg was working on a new invention. Witnesses testified that a carpenter named Conrad Saspach had advanced sums to Andreas Dritzehn for the building of a wooden press, and Hans Dünne, a goldsmith, declared that he had sold to Gutenberg, as early as 1436, 100 guilders' worth of printing materials. Gutenberg, apparently well along the way to completing his invention, was anxious to keep secret the nature of the enterprise.

After March 12, 1444, Gutenberg's activities are undocumented for a number of years, but it is doubtful that he returned immediately to Mainz, for the quarrel between patricians and guilds had been renewed in that city. In October 1448, however, Gutenberg was back in Mainz to borrow more money, which he received from a relative. By 1450 his printing experiments had apparently reached a considerable degree of refinement, for he was able to persuade Johann Fust, a wealthy financier, to lend him 800 guilders — a very substantial capital investment, for which the tools and equipment for printing were to act as securities. Two years later Fust made an investment of an additional 800 guilders for a partnership in the enterprise. Fust and Gutenberg eventually became estranged, Fust, apparently, wanting a safe and quick return on his investment, while Gutenberg aimed at perfection rather than promptness.

Fust won a suit against him, the record of which is preserved, in part, in what is called the Helmaspergersches Notariatsinstrument (the Helmasperger notarial instrument),

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dated November 6, 1455, now in the library of the University of Göttingen. Gutenberg was ordered to pay Fust the total sum of the two loans and compound interest (probably totalling 2,020 guilders). Traditional historiography suggested that this settlement ruined Gutenberg, but more recent scholarship suggests that it favoured him, allowing him to operate a printing shop through the 1450s and maybe into the 1460s.

- 36. According to the passage, which of the following was an element of Gutenberg's printing invention?
 - A. Pencil
 - B. Oil-based ink
 - C. Colourful pens
 - D. Different colours
- 37. Choose the incorrect statement.
 - A. Gutenberg's printing press is considered as a history changing invention.
 - B. Gutenberg moved to Strassburg probably between 1428 and 1430.
 - C. Gutenberg was ordered to pay around 2,120 guilders to Fust because he lost the suit against him.
 - D. Gutenberg was engaged in crafts such as gem cutting during 1434 to 1444.

38. Match the following based on the passage.

	Column I		Column II	
a.	1428-1430	i.	Gutenberg returned	
			to Mainz.	
b.	1448	ii.	Gutenberg moved to	
			Strassburg.	
c.	1438	iii.	Gutenbergwasengaged	
			in gem cutting.	
d.	1434-1444	iv.	Gutenberg signed a	
			five-year contract.	
A.	a-(ii), b-(i), c-(iv), d-(iii)			
B.	a-(i), b-(iii), c-(ii), d-(iv)			
C.	a-(iii), b-(ii), c-(i), d-(iv)			
D.	a-(iv), b-(iii), c-(i), d-(ii)			

- 39. Who among the following hadn't signed the five-year contract along with Johannes Gutenberg?
 - A. Hans Riffe
 - B. Andreas Dritzehn
 - C. Conrad Saspach
 - D. Andreas Heilmann
- 40. The word 'patricians' means
 - A. labourers
 - B. politicians
 - C. noblemen
 - D. musicians

SPOKEN AND WRITTEN EXPRESSION

FOR QUESTIONS 41 TO 45, CHOOSE THE CORRECT OPTION TO COMPLETE EACH CONVERSATION.

- 41. Shyam: I'll never know how you did that on your own.
 - A. some
 - B. all
 - C. every
 - D. either
- 42. Vinolin: He looked pale and the _____ of his voice was weak and shaky. I knew something was wrong.

- A. tenure
- B. tendon
- C. tenor
- D. tumour
- 43. Balu: The neighbour next door always has a _____ and arrogant look on his face that scares many people.
 - A. serene
 - B. gracious
 - C. mild
 - D. contemptuous

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44. Britney: There are some plants that glow at night and lose their when there is sunlight.	45. Lee: The farmer in the fields from dawn till dusk every single day. A. toiling				
A. luminance B. limit	B. be toiling				
C. liminal	C. has been toiling				
D. lunar	D. to toiled				
ACHIEVERS SECTION					
FOR QUESTIONS 46 AND 47, CHOOSE THE CORRECT OPTION TO FILL IN THE BLANK. 46. A of voices were heard from a very long distance. A. whistle B. humdrum C. colony D. cacophony 47. He in the competition if his mother hadn't encouraged him. A. would have participating B. won't had participate C. would hasn't participate D. wouldn't have participated	B. Auspicious C. Courteous D. Independent				
	9. CHOOSE THE CORRECT ANTONYM OF THE GIVEN WORD. Sacrilegious A. Pious B. Profane				
	C. Pernicious D. Preserve				
	50. CHOOSE THE CORRECT OPTION TO COMPLETE THE CONVERSATION. Suresh: He the matter once he realised that he wouldn't benefit from it.				
48. CHOOSE THE CORRECT SYNONYM OF THE GIVEN WORD. Perturbation A. Anxiety	A. washed away B. washed his hands off C. put his foot down D. put his finger in the pie				
THE INSTITUTE OF Company Secretaries of India strates of India strategy and India strategy of I					
SOF INTERNATIONAL GENERAL SOF INTERNATIONAL ENGLISH SOF NATIONAL SCIENCE SOF INTERNATIONAL ENGLISH SOF NATIONAL ENGLISH SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT					

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