

ENGLISH

*Time allowed: 3 hours*

*Maximum Marks : 80*

***General Instructions:***

- (i) *This paper is divided into three sections: A, B and C. All the sections are **compulsory**.*
- (ii) *Separate instructions are given with each section and question, wherever necessary. Read these instructions very carefully and follow them faithfully.*
- (iii) *Do not exceed the prescribed word limit while answering the questions.*

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SECTION A — (Reading)

Read the passage given below carefully and answer the questions that follow :

	<b>SECTION A READING SKILLS</b>	
1	<p><b>Read the passage given below and answer the questions that follow:</b></p> <p>1. The Higgs boson has been called, or miscalled, the God particle, enabling it to pass into the realm of popular scientific lore, like the discovery of the smallpox vaccine, the structure of DNA, or the theory of relativity. It would be difficult for most people to understand its significance, just as it would be to comprehend the notion of relativity, but such problems are overcome by locating science in personalities as well as cultural and national traditions. The first thing that you and I know about the Higgs boson is that it's named after Peter Higgs, a physicist at Edinburgh University who made the discovery — although the original insight, in one of those recurrent back stories of science, was Philip Anderson's.</p> <p>2. Still, we have Higgs, and Edinburgh, and western civilisation to fall back on. The rest — “the Higgs boson is a hypothetical elementary particle predicted by the Standard Model of particle physics. It belongs to a class of particles known as bosons ...” — we needn't worry too much about. But maybe we should worry just enough to ask, “What is a boson?” since the word tends to come up as soon as Higgs does. Is it, an ignoramus such myself would ask, akin to an atom or a molecule? It is, in fact, along with the fermion (named after Enrico Fermi), one of the two fundamental classes of subatomic particles.</p> <p><b>3. From Bose</b></p> <p>The word must surely have some European genealogy? In fact, “boson” is derived from Satyendra Nath Bose, an Indian physicist from Kolkata who, in 1924, realised that the statistical method used to analyse most 19th-century work on the thermal behaviour of gases was inadequate. He first sent off a paper on quantum statistics to a British journal, which turned it down. He then sent it to Albert Einstein, who immediately grasped its immense importance, and published it in a German journal. Bose's innovation came to be known as the Bose-Einstein statistics and became a basis of quantum mechanics. Einstein saw that it had profound implications for physics; that it had opened the way for this subatomic</p>	12

particle, which he named, after his Indian collaborator, “boson.” Still, science and the West are largely synonymous and coeval: they are words that have the same far-reaching meaning. Just as Van Gogh and Toulouse-Lautrec’s paintings digest the Japanese prints they were responding to so we don’t need to be aware of Japanese prints when viewing the post-impressionists, western science is pristine, and bears no mark of what’s outside itself.

#### **4. Other Indian contributions**

The last Indian scientific discovery that is universally acknowledged is the zero. Indians are very strong at maths, and the only modern Indian who’s remotely part of the western mythology of science is Srinivasa Ramanujan, equally well known for his Hindu idiosyncrasies and his agonised stay in Cambridge as he is for his mathematical genius.

5. Indians can be excellent geeks, as demonstrated by the tongue-tied astrophysicist Raj Koothrappalli in the U.S. sitcom Big Bang Theory; but the Nobel prize can only be aspired to by Sheldon Cooper, the super-geek and genius in the series, for whom Raj’s country of origin is a diverting enigma, and miles away from the popular myth of science on which Big Bang Theory is dependent. Bose didn’t get the Nobel Prize; nor did his contemporary and namesake, J.C. Bose, whose contribution to the fashioning of the wireless predates Marconi’s. The only Indian scientist to get a Nobel Prize is the physicist C.V. Raman, for his work on light at Kolkata University. Other Indians have had to become Americans to get the award.

6. Conditions have always been inimical to science in India, from colonial times to the present day; and despite that, its contributions have occasionally been huge. Yet non-western science (an ugly label engendered by the exclusive nature of western popular imagination) is yet to find its Rosalind Franklin, its symbol of paradoxical success. Unlike Franklin, however, scientists were never in a race that they lost; they simply came from another planet.

**Based on your reading of the passage, answer twelve out of fifteen questions that follow:**

- (a). What is the first thing which the narrator knows about Higgs Boson?
- (b). What is Bose-Einstein statistics?
- (c). How does Sheldon view Raj’s country of origin?
- (d). What do Van Gogh’s paintings do to Japanese prints?
- (e). Has India always got the credit for its merit?
- (f). What do Higgs Boson have in common with Smallpox vaccine?
  - i. Both are used in medical radiography.
  - ii. Both are part of scientific myth and legends now.
  - iii. Both were met with scepticism on their discovery.
  - iv. Both fetched their teams a Nobel prize.

<p>(g). Which statement is not true about Boson?</p> <ol style="list-style-type: none"><li>i. They were not discovered by Enrico Fermi.</li><li>ii. They constitute one class of subatomic particle.</li><li>iii. It is named after an Indian Physicist.</li><li>iv. It was discovered by Satyendra Nath Bose.</li></ol> <p>(h). Choose the word which is an apt synonym of the word Ignoramus (used in para 2)</p> <ol style="list-style-type: none"><li>i. Idiot</li><li>ii. Intelligent</li><li>iii. Idealist</li><li>iv. Ingenious</li></ol> <p>(i). How are esoteric scientific concepts made understandable for people?</p> <ol style="list-style-type: none"><li>i. By printing short introductory courses.</li><li>ii. By comparing it with other scientific discoveries.</li><li>iii. By locating science in personalities, social and cultural traditions.</li><li>iv. By revising the country's educational structure.</li></ol> <p>(j). Based on the reading of the passage, which statements are correct about Higgs Boson.</p> <ol style="list-style-type: none"><li>1. They are called God's particle.</li><li>2. Philip Anderson's study provided the original insight.</li><li>3. This concept is easily understood by common people.</li><li>4. A physicist from Edinburgh University made the discovery.</li><li>5. It was discovered by Albert Einstein.</li></ol> <ol style="list-style-type: none"><li>i. 1,2 &amp; 3</li><li>ii. 2,3 &amp; 5</li><li>iii. 1, 4 &amp; 5</li><li>iv. 1,2 &amp; 4</li></ol> <p>(k). Which field of Physics was SN Bose working on?</p> <ol style="list-style-type: none"><li>i. Quantum Mechanics</li><li>ii. Electromagnetism</li><li>iii. Geophysics</li><li>iv. Acoustic</li></ol> <p>(l). Which scientist/ mathematician out of the following won the Nobel prize?</p> <ol style="list-style-type: none"><li>i. J C Bose</li><li>ii. C V Raman</li><li>iii. Srinivasa Ramanujan</li><li>iv. S N Bose</li></ol>	
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	<p>(m). What is Srinivasa Ramanujan known for in the popular culture?</p> <p>(1) Mathematical genius.  (2) For formulation of game theory.  (3) Hindu Idiosyncrasies.  (4) Troubled stay in Cambridge.  (5) For devising another explanation for chaos theory.</p> <p>i. 1, 2 &amp; 3  ii. 1, 3 &amp; 5  iii. 1, 3 &amp; 4  iv. 1, 4 &amp; 5</p> <p>(n) . The conclusion of third paragraph highlights that</p> <p>i. Western art grants recognition to all its inspirations.  ii. Van Gogh painted Japanese prints.  iii. Western art subsumes all the influences under it.  iv. Van Gogh and Toulouse-Lautrec are post-impressionist painters.</p> <p>(o). Why did JC Bose deserve a Nobel?</p> <p>(i) He was an Indian physicist.  (ii) He was the only one researching on wireless.  (iii) His research &amp; findings on wireless started before Marconi.  (iv) He acquired an American citizenship.</p>	
2.	<p><b>Based on the careful reading of the passage given below, answer any four out of five questions that follow:</b></p> <p>1. When you see me sitting quietly,  Like a sack left on the shelf,  Don't think I need your chattering.  I'm listening to myself.  Hold! Stop! Don't pity me!  Hold! Stop your sympathy!  Understanding if you got it,  Otherwise, I'll do without it!</p> <p>2. When my bones are stiff and aching,  And my feet won't climb the stair,  I will only ask one favor:  Don't bring me no rocking chair.  When you see me walking, stumbling,  Don't study and get it wrong.  'Cause tired don't mean lazy  And every goodbye ain't gone.</p>	1x 4=4

	<p>3. I'm the same person I was back then, A little less hair, a little less chin, A lot less lungs and much less wind. But ain't I lucky I can still breathe in.</p> <p>Maya Angelou</p> <p>(a) What does the poet think she looks like, when sitting quietly? (b) Does the poet invite pity? Quote a line to support your argument. (c) What has changed in the poet over the course of years? (d) Pick out a word from the second stanza which means 'faltering'. (e) Why does the poet consider herself lucky?</p>	
3.	<p><b>Based on the careful reading of the passage given below, answer any four out of five questions that follow:</b></p> <p>Climate change and global warming are the biggest threats of the present time and how the world manages to control pollution will define our future. Rising industrialization, urbanization, deforestation etc., are endangering the natural ecosystem. Since 1880, the earth's temperature has been rising at a rate of 0.14° F (0.08° C) per decade and the rate of increase has doubled since 1981 at 0.32° F (0.18° C) per decade. The 10 warmest years on record have occurred since 2015, with 2020 recorded as the second-warmest year as per the National Oceanic and Atmospheric Administration (NOAA).</p> <p>With growing economies, global carbon measurements have been rapidly rising for the last 15 years. As per recent data, in January 2022, carbon dioxide (CO<sub>2</sub>) measurement stood at 418 parts per million, up around 11% from 378 parts per million recorded since 2007.</p> <p>(a) What is the key to defining our future? (i) The means employed to control pollution. (ii) The means employed to control resources. (iii) The means employed to control state policies. (iv) The means employed to educate masses.</p> <p>(b) Which of the following elements are not responsible for endangering natural ecosystem? (i) Deforestation (ii) Inflation (iii) Industrialization (iv) Urbanization</p> <p>(c) According to the passage, economy, and carbon emissions have been_____to each other for last 15 years.</p>	1x4=4

	<p>(i) Inversely proportionate  (ii) Directly proportionate  (iii) Not related  (iv) Disproportionate</p> <p>(d) Name the institution responsible for observing and recording earth's temperature over the years.</p> <p>(i) National Organic and Atmospheric Administration  (ii) National Oceanic and Atmospheric Administration  (iii) North Organic and Atmospheric Administration  (iv) National Offshore and Atmospheric Administration</p> <p>(e) Carbon dioxide measurement stood at _____ parts per million in 2007.</p> <p>(i) 387  (ii) 378  (iii) 481  (iv) 418</p>	
<b>SECTION B</b> <b>CREATIVE WRITING SKILLS</b>		
4.	<p><b>Rewrite the sentences according to the instructions given after each. Attempt eight out of ten questions.</b></p> <p>(a) Anne paid a heavy price for her recklessness.  (Begin: It .....)</p> <p>(b) He does not intend to leave the company.  (Use: Intention.....)</p> <p>(c) "Do you want some more ice-cream or a slice of cake?" asked my aunt.  (Begin: My aunt asked.....)</p> <p>(d) Both the players are not adequately prepared for the tournament.  (Begin: Neither.....)</p> <p>(e) That need not happen.  (Rewrite: using does)</p> <p>(f) This horse is better trained than yours.</p>	<b>1X8=8</b>

	<p>(Begin: Your... ..)</p> <p>(g) The teacher asked, “How many of you think the answer is correct?” (Rewrite the sentence using indirect speech)</p> <p>(h) She opened the kitchen door, and a cockroach ran out. (End with ‘cockroach’)</p> <p>(i) “I am sorry for insulting you,” said Lakshmi to Madhu (Begin : Lakshmi apologized..... )</p> <p>(j)Suresh suddenly thought of a splendid idea. (End:..... to Suresh)</p>	
5.	<p><b>Attempt any three of the following four questions in 120-150 words each.</b> [Competency Based Involving Analysis/Interpretation/Application]</p> <p>(a)“The five Ss of sports training are: stamina, speed, strength, skill, and spirit; but the greatest of these is spirit.” —Ken Doherty. More lessons are learnt on the sports field than in the classroom. Write a magazine article for your school magazine expressing your views in 120-150 words.</p> <p>(b) "It's a dialogue, not a monologue, and some people don't understand that. Social media is more like a telephone than a television." - Amy Jo Martin Keeping the above quote in mind, discuss the pos and cons of social media pervading all parts of our life in form of an article for an e-journal in 120-150 words</p> <p>(c) Failure is an inescapable part of life and critically important part of any successful life. Describe a transformative failure you faced and how it changed you.</p> <p>(d) The prerequisites of being a hero has undergone a huge change over the years. Describe in about 120-150 words what qualities do GEN Z admire and look for when they envision their hero.</p>	15
6.	<p><b>Attempt any one of the following questions in 120-150 words.</b> [Competency Based Involving Analysis/Interpretation/Application]</p> <p>(a) Mental illnesses affect 19% of the adult population, 46% of teenagers and 13% of children each year. However, only half of those affected</p>	5





	<p>And mid these dancing rocks at once and ever  It flung up momentarily the sacred river.  Five miles meandering with a mazy motion  Through wood and dale the sacred river ran,  Then reached the caverns measureless to man,  And sank in tumult to a lifeless ocean;  And 'mid this tumult Kubla heard from far  Ancestral voices prophesying war!</p> <p>a. How is the chasm described in these lines?  b. What did Kubla Khan hear from afar?  c. Which sacred river is being referred to in the lines above?  d. What are bursts of water compared to?  e. What does the phrase By woman wailing for demon-lover mean?  f. An apt antonym for the word 'savage' is _____  (i) civilized (ii) vagabond  (iii) severe (iv) ferocious</p>	
<p>7.  (ii)</p>	<p><b>(a) Choose any one extract and the answer the questions that follow:</b>  During the morning nobody worried about the car encrusted in the wall, for people assumed it was one of those that had been parked on the pavement. But when the crane lifted it out of its setting, the body of a woman was found secured behind the steering wheel by a seat belt. The blow had been so brutal that not a single one of her bones was left whole. Her face was destroyed, her boots had been ripped apart and her clothes were in shreds. She wore a gold ring shaped like a serpent, with emerald eyes.”</p> <p>a. Who wore a gold ring?  b. How did she make her living?  c. What state was 'She' discovered in?  d. Why did the author mention the snake ring?  e. Why did no one bother about the damaged car?  f. Which word can be a good synonym for brutal  (i) Brash (ii) ebullient  (iii) cruel (iv) crass</p> <p style="text-align: center;"><b>OR</b></p> <p>(b) He was tall, slim, blond, blue eyed. His hair was thinning, had turned somewhat grey, but he managed to disguise these signs of age. He stooped a little, but in company was quick to straighten up. Years ago in Germany he had worn a monocle...”</p> <p>a. Who does 'he' refer to?  b. What signs of age were evident on him?</p>	<p><b>1x6=6</b></p>



13.	<b>Answer any one of the following two questions in 120-150 words.</b>  [Competency Based Involving Analysis/Interpretation/Inference]  (a) The Master advised the frightened villagers not to use the words 'beast' or 'brute'. Discuss his rationale behind it. (b) The Master's early life is a total contrast to his present philosophical leanings. Comment. (c) Margayya, the hero of 'The Financial Expert' is probably Narayan's greatest single comic creation. Justify. (d) In what way is Margayya ruined through his own son? Trace the path of their relationship and discuss.	<b>1x5=5</b>
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