


PASSAGE : 1

1. When a star explodes in a supernova, it leaves behind a stellar mass for its rebirth. Similarly, the death of a great man results in immortality. The perenniality of Indian culture is analogous to this phenomenon. Even though India was often left distraught by incessant invasions, her spiritually conscious people were mines of creative thought. Their love for truth gave birth to ideas and ideals that continually energised the country. In their creative expression, they emphasised peace and anity. The Big Veda says, “Words are sacred : sages cherish them, the brilliant rule by them.” Great men like Swami Vivekananda, Rabindranath Tagore, Mahatma Gandhi and Sarvepalli Radhakrishnan effected the integration of mind, body and soul through their wise words, which delivered the message of peace and love. India, in her struggle for freedom, was fortunate to have been under the auspices of such luminaries.
2. Mahatma Gandhi affectionately called Radhakrishnan Lord Krishna and said he himself was Arjun, his pupil. Indeed, Radhakrishnan’s achievements and teachings validate the wisdom and indispensability of the traditional Indian belief in the guru. The British, who believed that a humiliated India’s religion and important tales of sparrows to break the British fetters wanted India to believe in knowledge of Indian of the spiritually advanced character of Indian wisdom. His arguments inspired freedom fighters and scholars alike, turning them into ardent admirers of India, its people and culture.
3. Essentially an idealist, Radhakrishnan corroborates our belief in the efficacy of the good. In works like *Indian Philosophy*, *The Hindu View of Life* and *An Idealist View of Life*, he argues that goodness enables us to live the love in our hearts. It was his positive spirit that made the best universities in the world invite him to grace them with his lecture. Radhakrishnan also served India in the highest offices—as the first ambassador to Russia, as vice-president and president.

4. Born in Tiruttani in 1888 and married to Sivakamuamma for 51 years till her death, Radhakrishnan sought spiritual enlightenment and inspiration in her. In his autobiography, he remembers her as an everyday heroine who epitomised selflessness and stood for the victory of mind over matter. He honoured this character of Indian women and dedicated a book, titled *Religion and Society*, to them. Radhakrishnan wrote, “India, in every generation, has produced millions of women who have never found fame, but whose daily existence has helped civilise the race, and whose warmth of heart, self-sacrificing zeal, unassuming loyalty and strength in suffering when subjected to trials of extreme severity, are among the glories of this ancient race.”
5. A dutiful teacher, a deeply spiritual thinker, an able policy maker, Radhakrishnan was every bit the visionary India needed. Nobel laureate C.V. Raman beautifully summed up his glorious life. “The frail body of Radhakrishnan enshrined a great spirit—a great spirit which we have learnt to revere and admire, even to worship.”

I. Read the passage & answer the questions that follow :

- | | |
|---|---|
| (a) How does death of a great man result in immortality ? | 1 |
| (b) Did the incessant invasions leave India distraught? Why/why not ? | 2 |
| (c) What effect did the great men make on India’s struggle for freedom ? | 2 |
| (d) How could Radhakrishnan break British fetters on Indian Consciousness ? | 1 |
| (e) Which book did he dedicate to Indian women & why ? | 1 |
| (f) How does he pay his tribute to the unsung women of the country ? | 2 |

II. Find words from the passage which convey similar meaning as the following : **3**

- (a) Lasting for a long time (para 1)
- (b) Great moral or religious leader (Para 1 & 2)
- (c) The act of being strict /stern(para 4)

III. For Additional Practice :

- | | |
|---|------------------------------|
| (a) Suddenly becomes brighter (para 1) | (b) Forever (para 1) |
| (c) Similar in some way (para 1) | (d) Extremely upset (para 2) |
| (e) To be a perfect example of (para 4) | |

PASSAGE : 2

Intellect & intelligence : Know the difference

1. For long there has been no awareness or endeavour by us to develop the art of thinking. As a result the lives of people are based on groundless beliefs. And their beliefs rest on some absurd superstitions. Or mere assertions which bear no proof. And now they find it difficult to question their veracity.
2. Following this trend humanity has reached a perilous state. We need to realise the emergent need to develop and strengthen the intellect. The process of thinking should start from an early age. Develop the art of thinking. Follow it up with the study of the impeccable truths of life.
3. Delve deep into the truths. Accept those that appeal to logic and reason. Apply them in practical living. Adopt this procedure all through life. It will enable you to build your intellect. Albert Einstein said that intellectual growth should commence at birth and cease only at death.
4. We need strong intellect to exercise the right choice of action in life. We face endless trials and tribulations. The human species alone is provided with intellect to face and surmount mundane challenges.
5. All other species, devoid of intellect, are helpless victims of the rigours of the external world. A powerful intellect helps us overpower these onslaughts. But the role of the human intellect does not end there. The intellect has the unique capacity to even transcend the world and reach the ultimate state of spiritual enlightenment.
6. Unaware of the need to build the intellect, we tend to entertain ourselves with merely reading ourselves with merely reading others' periodicals and publications. We indulge in the mere length of study. Just pouring over pages of literature apathetic to its deeper implications. Rare indeed are those who go into the depth of study. Thus little is assimilated or absorbed by readers. People have been educated robots for generations. And have been traversing through life without knowing the meaning and purpose of it.
7. The world abounds in personalities with one-sided development. Intelligence and no intellect. Take the example of a scientist who is an alcoholic. His liver is damaged. He is extremely short-tempered and his blood pressure has shot up.

And he is stressed, unable to face even small worldly challenges. Analyse his personality carefully.

8. He is a brilliant scientist with profound knowledge of his subject. He has acquired abundant intelligence but never cared to develop his intellect. His intellect has always remained weak.
9. It lacks the strength to handle the multifarious demands of the mind. His mind craves for alcohol. His intellect is not powerful enough to control the nagging desire. So his mind raves in foul temper. His frail intellect is unable to control its ravings. And when his mind is humiliated, strained and stressed by the problems confronting it, his intelligence looks on helplessly.
10. On the contrary, there are luminaries possessing awesome intellects which hold their minds under perfect control. Some of them possess no academic qualification but academies are built around them. Only by developing the intellect can we save ourselves from self-destruction and evolve to spiritual perfection.

I. Answer the following questions :

- | | |
|---|---|
| (a) How are superstitions an obstacle in developing the art of thinking ? | 1 |
| (b) Why is it important to develop the art of thinking ? | 1 |
| (c) What happens to people without intellect ? | 2 |
| (d) What do we need to do for building intellect ? | 2 |
| (e) Briefly explain the difference between intellect & intelligence. | 2 |
| (f) How can building intellect help us know the meaning & purpose of life ? | 1 |

II. Find words from the passage which mean the same as the following : 3

- | | |
|---------------------------|----------------------------|
| (a) Truthfulness (para 1) | (b) Dangerous (para 2 & 3) |
| (c) Attacks (para 5 & 6) | |

III. For Additional Practice :

Look up dictionary for the meaning of the following words :

- | | |
|------------------|-------------|
| (a) Absurd | (b) Mundane |
| (c) Multifarious | (d) Nagging |
| (e) Luminaries | |

Passage : 3

1. Piya Ghose, 25, thought a friend was playing a prank on her when a text message on her mobile phone suggested she visit a website to find herself a partner. It was no prank.

Her friend, in fact, was one of the many mobile users who volunteer space in their mobile text messages for advertisements in exchange for several incentives such as lesser tariff for value-added services and enhanced features on their mobile phones.

2. With an ever-growing population of mobile phone users in India, advertisers see the handset as a potential medium for reaching consumers with their targeted messages. “Unlike television and print, mobile phones provide a much more focussed and assured access to consumers,” says Subho Ray, President of the Internet and Mobile Association of India, or IAMAI. “One always knows that one’s ad had been seen by the consumer, which is not the case with TV or print.”
3. To be sure, mobile phones are not a new phenomenon in India and advertisers have been experimenting with the medium, albeit cautiously. “We realize that the mobile is a powerful tool in targeting consumers but we are cautious in tapping the medium because it could amount to intrusion in consumers’ private space,” says Sajid Shamim, executive director, marketing, **Reebok India Co.**
4. “Historically, mobile marketing companies have had a reputation of being intrusive as they spam users with content they don’t care about and share database without permission,” says Beerud Sheth, co-founder and president of Webaroo’s GupShup. “But we offer users the option to choose the kind of messages they would want to get. That way, we are no different from a newspaper or television since these mediums, too, provide content along with ads.”
5. Affle’s SMS 2.0 technology, which once a consumer downloads free from its website, replaces the phone’s existing SMS system with a default browser that installs features such as colours, emoticons, icons, and signature in the user’s text messages. In return, users have to lend the bottom space in their message box for advertisements.

6. The company says these messages relate to interests users registration. “By

get space in their message box to sell to advertisers,” says Anuj Kumar, executive director for South Asia at Affle.

7. SMS GupShup, another mobile marketing company, offers users the option to create their own mobile communities. The company allows these user created communities to send SMSs or micro-blogs to the entire group for the price of one. In return, the consumers have to agree to accept advertisements.
8. “It’s a unique arrangement where advertisers get an opportunity to target specific group of consumers with specific interests and consumers, besides getting the kind of commercial information they want, save money on messaging,” says Sheth.
9. Similarly, SMS MyToday offers consumers a free messaging service that provides consumers daily updates in areas of their interest. In these updates, however, it smartly incorporates ads and consumers don’t complain about it because the service is free. “On an average, SMS updates will contain 160 characters, of which 70 characters belong to an ad,” says Abhijit Mukherjee, chief executive of Netcore Solutions.
10. Affle claims to have built a consumer base of 5,00,000 in the past six months, and has signed 16 leading advertisers such as **Nike Inc., Britannia Industries Ltd, ICICI Bank Ltd**, PepsiCo Holdings, and Board of Control for Cricket in India’s Indian Premier League.
11. Mobile advertising is cost-effective as well, besides providing advertisers a targeted access to consumers.
12. The mobile marketing companies charge advertisers anything between Rs. 5 lakh and Rs. 20 lakh a month for their campaigns.
13. Even as advertisers become more comfortable with the idea of reaching consumers through the platform, some experts sound out a word of caution.
14. “The mobile is a very personalized instrument and it is easy for consumers to have a negative impression of a brand if its message is not right or is not perceived in the right light,” said IMAI’s Ray. “Marketing companies will have to be careful as they move forward to exploit the handset for advertising.”

I. Answer the following questions :

- (a) Why did Piya Ghosh think that the text message was a prank ?

1

- (b) Do you agree that mobile phones have an edge over Television and print ? (Give 2 valid reasons from the passage to support your answer.) 2
- (c) What can be most annoying to the consumer on mobile ? 1
- (d) How are Customers benefited by the mobile marketing companies ? (Give 2 reasons) 2
- (e) What are the demerits of mobile advertising ? 2
- (f) Write one phrase which explains that mobile advertising is equally beneficial to both, the advertiser and the consumer. 1

II. Write words from the passage which means the same as :

- (a) fixed charges(para 1& 2) (b) though (para 3)
- (c) chop(para 4 & 5)

III. For Additional Practice :

Consult dictionary and find out the meanings :

- (a) Prank (b) Intrusion
- (c) Exploit

Passage : 4

1. For seven-year-old Gopal Tanaji Vanwe, home is not one place. With his parents, migrant farm labourers, Gopal moves from district to district. It's Beed one season, Jalgaon in another. Millions of nomadic families such as his are not covered by the National Sample Survey. Given that none of these families live in one place for more than a few months, the Government's largesse evades them, whether it is primary education for their children or shelter for themselves.
2. But thanks to one man's efforts at providing these children with a choice, Gopal and many of his friends now happily recite rhymes and tables under a tree in a remote village in Bhenda (Maharashtra). Founded by Pravin Mahajan, Janarth, a not-for-profit organisation operating in Maharashtra, has come up with an innovative alternative education solution for children of seasonal migrants.
3. Almost 6.5 lakh families with 2 lakh children migrate to sugarcane cooperatives in Maharashtra alone. Given that the sugarcane harvesting season starts in April, which coincides with the academic year, most children of migrant parents are left out of the education system even if there is a school in the village they come from. So in 2000, Janarth took it upon itself to address their needs. After much cajoling, the first sakhar shala or sugar school was born at the Mula sugarcane factory in Naggar district, which now provides primary education to children of migrant farm labourers. Janarth's 126 sakhar shalas across 39 sugar factories in Maharashtra now cover 15,000 children. To ensure that older children don't have to drop out of school in their critical years. Janarth also built hostels in the villages from where families migrate so that children can stay back even if their parents move.
4. These educational institutions provide oral learning to children from pre-school to Class VII. The sugar factories allot land for schools and a labour officer appointed by the sugar factory supervises the running. The factory education board is represented by parents, the district education officer and senior factory officials. These schools are close to factories so that parents can look up on their kids whenever they want. Explains Mahajan : "We wanted to give children the freedom to choose a better life. Under the Sarva Siksha Abhiyan, there is a provision for alternative education formats. Sakhar shalas are partially funded (about Rs. 30 lakh per year) under that scheme."

5. Children at these schools get books, slates and even a mid-day snack as an incentive. Through the sakhar shalas scheme, sugarcane cooperatives receive financial incentives from the Government to set up on-site sugar schools, thereby creating a win-win situation for all stakeholders. Currently, Janarth spends up to Rs. 1,100 per child, which includes snacks, books and additional educational material.
6. Children like Gopal may not be able to read or write their names but can recite nursery rhymes like “*Johnny, Johnny.....*” and tables effortlessly, while older children can explain the complex chemical process of sublimation with ease. The schools deliver learning that is relevant to the context of village children, which is why the emphasis is not on reading and writing, but on oral learning and counting.
7. Like all ambitious projects, it has not been easy to get sakhar shalas off the ground. The biggest challenge that Janarth had to overcome was convincing the Government about the actual number of migrant children. “Nobody believed us when we quoted the number of migrant families and their affected children,” says Mahajan. For any sort of remedial action by the Government or local bodies, they have to believe that this invisible population has problems that need to be addressed in focusing attention on the invisible underclass.
8. Having expanded the capacity to 15,000 children. Janarth is now feeling stretched as no other agency has come forward to offer help. With many more Gopals wandering aimlessly out of school, it’s time this happened.

I. Answer the following questions :

- (a) What project is Pravin Mahajan working on ? (only in one sentence)
- (b) Why is government unable to do much for this segment of society ?

(c) Explain seasonal migrants.

- (d) Which critical years is the author referring to ? Why are they critical ?
- (e) What is alternative education ?
- (f) List the facilities offered by “these educational institutions”.
- (g) Who are the stakeholders here ? How is a win-win situation created ?

II. Find words similar in meaning :

- (a) generous or excessive giving (para 1)
- (b) two events happening at the same time (para 3)
- (c) use flattery to persuade / get information (para 3, 4)

III. Additional Exercise :

Find out the meaning with the use of a dictionary :

- (a) NOMADIC
- (b) INCENTIVE
- (c) STAKEHOLDERS
- (d) SUBLIMATION
- (e) UNDERCLASS

PASSAGE : 5

1. Long before the Commission for Protection of Child Rights (NCPCR) decided to investigate the long working hours of participants on reality shows on television, there was a show called *Boogie Woogie* on Sony (at 500 episodes and counting, over 12 years, perhaps the longest running in the genre) featuring tiny boys and girls. No one protested then. When Zee TV's *Sa Re Ga Ma Pa Li'l Champs* finale scored a TRP of 11.1 in its first season in 2006, no one protested then too. Now, when the platforms have multiplied and the rewards are all too evident for pushy parents and clamorous children, the NCPCR seems to have woken up to the issue of guidelines.



2. And about time too. Two big-ticket children's reality shows have already been wrapped up this year (*Li'l champs* and its clone *Star Voice of India Chhote Ustad*, which was crafted on Star Plus by the originator of the series on Zee TV, Gajendra Singh). Currently, two such shows are on air and another is all set to follow soon. Just as controversy erupted last year when CSS ran *Kid Nation*—a reality show where children try to create a functioning society in a town shot in New Mexico—the lid seems to have blown off television's best-kept secret. That the shows that get the small screen some of its highest ratings are no better than one long drudge where children, some as young as eight, are forced to behave like adults in front of the camera, lose their innocence and work in at least 12-hour shifts a day, but gain in big bucks. It's causing breakdowns, as when the 12-year-old Anamika Choudhary, who won *Sa Re Ga Ma Pa Li'l Champs* in 2007, broke down in the middle of her performance because she couldn't handle the news of co-



eliminated from the show. Indeed, children are being used, as a *Variety* columnist said earlier, as fodder for fun and profit.

3. It wasn't always so, says Ravi Behl, one of the three founders of *Boogie Woogie*. They started the show at a time when there was no platform for dancers and says even now, "we correct the parents when the kids are given adult songs and adult moves to perform." But being in the limelight has its compensations, he says, giving the example of Jai Nayar and Hrishikesh Jogdan, both teenagers, who were selected to be part of the Mithun Chakraborty-starrer *Fast Forward* after the actor visited the sets as a celebrity judge. Apart from that, of course, there is a hefty cash prize of up to Rs. 5 lakh and a car, or Rs. 10 lakh to lap up, depending on the season and the age of performers.
4. Glamour has become all-too-easily attainable and dreams are being transformed into reality at a lightening speed. Tanu participated in the first and second season of *Li'l Champs* and *Antakshari for Kids* respectively, says her mother Neelam, and already is the proud owner of a make-up kit because she doesn't like going out without her lipstick in place. "I think I have that something special in me that will make me an actress," she says, instantly chipping in that she's always wanted to be famous. But screen idols are not what she's hankering after. "*Main apni* favourite *hoon* (I'm my favourite)," is her spitfire reply, stumping adults all around. Aided by an entourage of choreographers, make-up artists, dress designers and production people, these little energy bundles can put their years of experience and professionalism to shame. They wake up religiously at 9 a.m. head for dance practice, for their next performance, and from 10 a.m. to at least 6 p.m. and sometimes 9 p.m., stay closeted in the practice hall, perfecting their 1, 2, 3, 4s. But pack-up for the choreographers doesn't mean pack-up for them. After returning to the flat, the children switch on the CD player again and get

5. And it is to escape elimination monster that 13-year-old Loria Dhosi, also from Udaipur, practiced despite fever, 12-year-old Depak Tirkey from a village in Jharkhand performed after popping a Crocin and Nagchoudhury wore a tightly-wound *pagdi* around her head for close to eight hours despite the fact



that her skin reacted to the material and broke out in a rash. “I hope this gets over soon. But since the shoot has started late, it looks like we’ll be here till 5 a.m.,” says Tirkey, who just like the majority on the show wants to be famous. Actor Raveena Tandon, one of the judges on the show, says that though children in general are aping adults, one cannot discount the platform television gives to contestants, especially from small towns. “They would have remained in their villages if it weren’t for television. Through these shows, they get to be celebrities,” she says, adding that it is sad that Santa Claus and the Tooth Fairy might soon be just a mirage.

Just like the ideal of an innocent childhood ?

I. Answer the following questions :

- | | |
|---|---|
| (a) Which line in para 1 suggests that NPCR delayed its investigations ? | 1 |
| (b) How are children being used as fodder for fun and profit ? | 2 |
| (c) “But being in the lime light has its compensations.” What are the compensations and who pays them ? | 2 |
| (d) Write very briefly how most reality shows are shot on gruelling dead lines ? | 2 |
| (e) What does the passage say in support of these reality shows ? | 2 |

II. Find words from the passage which mean the same as :

- Long hard boring job (para2)
- Group of people who travel with an important person (para 4)
- Hope /wish that you cannot make happen because it is not realistic (para 5)

Passage : 6

1. Education is modern India's greatest leveler and its redemption. It is the tide that lifts every boat. We are all prisoners of birth, but education has the power to snap the meanest bonds of economic and social enslavement. It is the route out of the caste ghetto, the path out of the slum, the road to the high table. A degree in engineering or medicine gives the child of a mill hand as much opportunity as any son or daughter of privilege.
2. At home and at work, chances are that your domestic help, driver, dhobi, liftman, watchman and peon are doing whatever it takes to send their children to an 'English-medium' school, buy them a second-hand computer, pay for their tuition, get them trained in IT. They dream of empowering their child with the kind of ambition they never dared have. And when the child excels in a board exam, gets into big college or lands a good job, all those years of hardship and uncertainty melt away. In that defining moment there is a reinforcement of faith in the future—that it is possible to break the cycle of inequity by honourable means.
3. It is a well-worn cliché that ours is a country of glaring contradictions. Yes, we have one of the biggest education systems in the world—1.2 million schools, 6.3 million teachers and 290 million students, which is itself more than the population of every country in the world except China, India and the US. And yes, literacy has grown from 28% in 1961 to 68% today. But the other end of the scale is crumbling. We still have over 287 million illiterate people (from the age of five)—the largest in any country, and larger than the population of Indians (five and above) at the time of Independence.
4. If India is today considered an emerging super power and if the stereotype has shifted from snake-charmer to IT whiz, some of the credit must go to our education system, to our IITs and IIMs, and to grassroots initiatives like the midday meal scheme and the Navodaya Vidyalayas. This system has produced one of the world's largest pools of science and tech graduates and created a robust middle class. And with well-educated Indians in influential positions in the developed world, notably the US, India has a voice that commands respect and attention on the global stage.
5. And yet, the many successes cannot hide the system's sprawling underbelly.

Millions of underprivileged youth have no access whatsoever to any form of schooling of the 460 million between 6 and 24 years, 170 million are not in the education system.

The drop-out rate is depressing : a staggering 90% don't make it to college.

There are thousands of schools and colleges, both state-run and private, that provide no real education, and we don't need empirical proof to bear this out. There is enough and more anecdotal evidence.

There's a massive deficit of teachers. And of the 4.7 million-odd who teach between classes I and VIII, almost half have not studied beyond senior secondary.

Infrastructure is dismal : almost a third of primary and middle schools don't have pucca buildings, 87% have no computers.

6. Ironically, our greatest source of strength is threatening to become our biggest weakness. Our education system is choking. Strategically, we are in danger of losing our global competitive advantage. Entrepreneurs have found that education is a great new business, and there's nothing wrong with that so long as there is a genuine intent to provide quality education. But private education comes at a price, and the question is, can it reach children in slums and villages ? If it can, can they afford it ? The answer quite simply is no. As aspirations rise and disparities widen, and as the need for equity assumes even greater urgency, there is only one solution : to redeem the classroom.


I. Answer the following questions :

- (a) Why do you think illiterate parents put in years of hardship ?
- (b) How is education modern India's greatest leveller ?
- (c) Name any two glaring contradictions of our country in education ?
- (d) Who/ what are responsible for shift in image from snake charmer to IT whiz ?
- (e) How is our greatest strength becoming our biggest weakness ?

II. Find words similar in meaning :

- (a) make free/ make amends for (para 1)
- (b) relying on observation & experimentation (para 5)
- (c) desire (para 6)

Passage : 7

1. A COMMON claim made by critics of the Indo-US civilian nuclear agreement is that, ultimately, it can't really be about powering light bulbs. The fun fact always cited : the Indian government's own projection that nuclear power won't contribute more than 3 percent of the country's energy requirements in the near future.
2. This figure is more than wonky. On the down-side, it assumes no private capital, no imported nuclear fuel. And on the upside, it expects the Department of Atomic Energy's (DAE) thorium-cycle gamble to pay off. All three are suspect variables. Let's turn to the past for a better indication. History shows a country can ramp up nuclear production once it gets the right policies and politics in place.
3. The most famous example is France. France is the pin-up girl of nuclear power, generating 70 percent of its electricity from glow-in-the-dark fuel. Less known is how fast this was accomplished. The figures are stunning. In a 10 year period from 1989 to 1999, France was able to get 42,000 MW of nuclear-based power up and running. In one year, 1985, the country operationalised over 7,000 MW of nuclear power capability. In comparison, India's total nuclear power capacity today is less than 3,800 MW.

China is threatening France's record. Tote up the construction sites and completion targets. They show that between 2010 and 2015 Beijing will bring 22,300 MW of nuclear energy on stream. It has drafted plans to add yet another 19,400 MW between 2014 and 2018. The Left in New Delhi claims nuclear power is too expensive. Chinese communists share their dialectic, but clearly not their mathematics.
4. Vinay Rai, energy fellow at Stanford University, has shown that nuclear energy is competitive with coal and natural gas. The problem, he says, is that India's lack of nuclear fuel access "has had the effect of making nuclear power appear more expensive". In an environment similar to which exists in the West, nuclear

power costs between 6.7-4.2 cents per kilowatt-hour and is comparable to the 10.1-3.9 cents price range for coal and natural gas in India.

5. Indian nuclear power has been constrained by more than just fuel. Capital has been lacking : nuclear energy is cheap over time but initial costs are high. Then there's technology. Thanks to sanctions, Indian engineers have had to develop expensive home-bred replacements. The nuclear deal will lift all these barriers.
6. Undo these shackles and what France accomplished in the 1980s could be repeated here. It would actually be easier to do this these days. Reactors in those days were small, largely in the 900 MW range. Today, one could nearly double India's nuclear power capability with just two 1,500 MW reactors. France had to finance the reactors from its own pocket. Today, exporting and building reactors is a well-oiled business. France and Russia have off-the-shelf package deals for customers combining fuel, reactor and finance.
7. Finally, modern reactors are more safe, less waste-producing and come up faster than they did even 15 years ago. "New reactors take an average six years to build, have one year of trials, and link up to the grid on the eighth year," says Anupam Srivastava, a technology expert at the University of Georgia. The real constraint on nuclear expansion, say some experts, is a global shortage of trained engineers.
8. So what is an optimistic but realistic scenario for Indian nuclear power after the deal is done ? Under the existing government-only system, the constraint is capital. The Nuclear Power Corporation of India Limited (NPCIL) has cash reserves of \$2-3 billion. Given that infrastructure projects normally require the government to provide 20-25 percent of the cost, this could be leveraged to as much as \$15 billion. This would pay for 10,000 MWs of reactors.
9. Revolution can only come from privatisation. A suitably amended atomic Energy Act would allow the NPCIL to license reactor building and operating to the private sector. Unsurprisingly, the Tatas, Reliance and other Indian firms have already been talking with foreign firms about acquiring technology. Given time, India Inc will probably master the technology and get into the line itself. Look at the China. Its second generation reactors are already 50 percent local. The next lot, says the World Nuclear Association, will be 75 percent indigenous. See a trend ?

10. There are a lot of ifs regarding a nuclear renaissance in India. The privatisation amendment could become stuck. The DAE is, in the end, a government bureaucracy. And the Indo-US nuclear deal has plenty of hoops to jump through. But if all the tumblers fall into place, a 20 percent nuclear component to India's electricity production by 2030 is a distinct possibility. "There is no limit on the amount of nuclear power India can generate, providing it invests the right amount of resources," says Manohar Thyagaraj of the US-India Business Alliance.
11. The people who say there are no nukes in India's energy future echo the ones who said the 1991 economic reforms would be a disaster, that infotech was a lot of bunkum, and generally suffer from indo-pessimism. It all depends, to paraphrase a famous leftist, whether India can seize the coming year.

I. Answer the following questions :

- (a) What are the three suspected variables with regard to nuclear energy ?
- (b) Which two countries are rapidly progressing in nuclear energy and how ?
- (c) How can nuclear deal benefit our country ?
- (d) In present times production of Nuclear Energies is much more facilitated. How ?
- (e) What are the constraints of the expansion of Nuclear power?
- (f) What do you think is the opinion of the writer regarding Indo-US nuclear deal ?

II. Find words from the passage which mean the same as :

- (a) to be restricted or limited(para 5)
- (b) revival (para 10)
- (c) nonsense (para 11)

III. Look up the dictionary for the meaning of the following words :

- (a) optimistic
- (b) amendment
- (c) paraphrase

Passage : 8

Read the passage and answer the questions that follow :

1. The seasons bring variety to my morning walk around Mumbai's Five Gardens. The quality of light changes, new flowers splash across the branches, and different bird-song filters out of the dense foliage.
2. However, my eyes are usually lowered as I walk. This has little to do with my non-existent humility and everything to do with the Brihanmumbai Municipal Corporation's inability to lay and maintain a single level pavement. That, and the inability of dogs, stray and pet, to keep their poo off it.
3. Thus it was that as I walked with downcast eyes, I came upon a swathe of purple prose, No, call it poetry. The pavement and the road beyond it had been dyed like a royal robe, though not evenly. Here, it was of deep rich hue, there, the fuchsia segued into a paler mauve. I marvelled over this unfamiliar beauty. The end-of-summer breezes cover the pavements with the golden blooms of the copper pod tree, and the first showers do the same with the resplendent gulmohur, spreading out a red carpet which might be the envy of Cannes. But that recent morning, the night's rainfall had changed the accustomed palette. It had brought down hundreds of jamuns.
4. And that's how I discovered how many jamun trees there are in Five Gardens. I had never noticed them before. Now, as I gingerly skirted the slippery purple, I looked up to behold the magnificent tree that had nestled this benevolence. A philosophical amble does not normally accompany me as I stride through this sylvan enclave, but this time, I found myself pondering over the lessons that had dropped from those mystic branches.
5. The jamun was too crushed to eat. And only when it had fallen had I become aware of its existence. Wasn't this the same as only realising the value or even presence of someone or something after he, she or it has gone out of our reach ? It need not be death. It could simply be going away, or a friendship that has withered from neglect. Or even a long-departed aunt's hand-embroidered sari which has frayed beyond repair by the time her bachelor son decides to take it out of the cupboard and gift it to one of the women in the family.
6. A second truth stared at me out of that crushed carpet of jamuns. It is only when we perforce have to look down that we deign to look upwards. If the pavement

my eyes to see that there was a resplendent tree up there. Didn't this reflect the fact that we think of higher things and beings only when we are down and out ?

7. When the sun shines and we have our health, happiness and praise from peers and strangers, when we have designer labels in our wardrobe and party invitations to show them off, we don't bother to give a passing thought to whichever version of divinity we call our own. It is only when we lose any of these that we realise that we should have been less self-obsessed, that we owe what we have to something far bigger.
8. There was a third lesson. As I looked from the fallen fruit to the tree that once held these purple riches, I saw the branches reaching for the sky without the slightest trace of handwriting over having been beggared overnight. Bounty comes, bounty goes. The tree had simply shed its burden, and continued with the business of living and growing without a backward glance.
9. I now pass the jamun trees with respect, and even when a prolonged dry spell has bleached the cautionary purple on the pavement, I look up and nod in acknowledgement of what these trees so silently told me that morning.

Answer the following questions :

- (a) How do seasons bring variety to the narrator's morning walk ?
- (b) Why does the narrator walk with downcast eyes ?
- (c) What does accustomed palette refer to & how has it changed ?
- (d) What are the two most common weaknesses of human nature which the narrator realizes on seeing the crushed jamuns lying on the pavement ?
- (e) How does the tree continue with the business of living & growing ?
- (f) Find words similar in meaning :
 - (i) Wondered (para 3)
 - (ii) Generosity (para 4)
 - (iii) brightly coloured (para 6)

Passage 9

The Challenge of Change

1. The just released Prime Minister's National Action Plan on Climate Change acknowledges the potentially adverse impact of changing climate on India's development and envisages a multi-pronged approach to tackling climate-related emissions without compromising on growth or committing to carbon caps. This is consistent with the Prime Minister's per capita emissions will remain below those of developed countries. The Action Plan outlines eight National Missions—solar energy, energy efficiency, sustainable habitat, water, Himalayan ecosystem, sustainable agriculture, etc. It also includes a National Mission for a Green India and another on strategic knowledge for climate change.
2. Critical as these are to combating climate change, the document significantly omits transportation as an independent mission for carbon mitigation, although the sector does figure elsewhere in the action plan, its salience somewhat diminished. Transportation alone accounts for half of the country's oil demand and was directly responsible for at least 11 percent of our greenhouse gas emissions in 1994, according to our National Communication submitted to the United Nations Framework Convention on Climate Change in 2004. This number did not include fugitive emissions from handling of oil and gas systems. Within transport sector, road transport accounted for 90 percent of all emissions. In 1994, petroleum products contributed to 31 percent of all CO₂ emissions.
3. Since 1994, there has been an explosion in automobiles after we opened the floodgates to international auto majors in the early 90s. Each year we unleash two million more cars on our beleaguered roads. Now we have a whopping 14 million four-wheelers in India, not to mention several times as many two wheelers. Correspondingly, our crude consumption has gone up from 1.4 million barrels daily in 1994 to 2.4 million barrels daily now. Although data is not available, commensurate increase in direct emissions from automobile tailpipes is ineluctable.
4. Tailpipe emissions tell only part of the story. Pari passu with the growth in automobiles our refining capacity has also gone up from 62 million tonnes in 1994 to 146 million tons in 2008 and slated to go up further to 240 million tonnes by 2012. Refining entails burning oil and is classified under 'Energy and transformation industries' in our National Communication. Although coal-

fuelled power generation tops the list in this category, emissions from refining must have risen correspondingly and will rise further as new refineries come online. Besides, as the world is exhausting sweet light crudes and is turning to heavier crudes, the refinery emission quotient increases commensurately. *Chicago Tribune* reported in February this year that emissions from Midwest refineries in the U.S. will increase by 15 to 40 percent more on account of refining heavier crudes from Canada. Add to this, emissions from industries that service the automobile sector such as steel, petrochemicals, glass, etc, each of which is carbon-intensive in its own right. Thus we have a chain of activities related to transportation which add up to a significant carbon footprint.

5. Yet, in January 2007, the government released an Automotive Mission Plan (AMP) prepared by Department of Heavy Industries and is also setting up an expert committee to monitor its implementation. The AMP envisages a quantum leap in growth of automotive sector in a decade—from the 2006 level of 3.2 percent share in India's GDP to 10 percent share by 2016. According to the report, in 2006, the industry had a total turnover of \$41 billion including \$10 billion of the auto component industry, \$3 billion of Indian tyre industry. Now the mission plan hopes to ramp this up to \$145 billion and double the industry's employment potential to 24 million ! No doubt some of these automobiles will be exported and many of them will have stringent emission norms. Yet, their sheer numbers will weigh us down. The hype about hybrid cars needs to be seen in the context of not only our electricity deficits, but also the fact that much of the electricity is produced by burning dirty coal. According to the Ministry of Power, 84 percent of India's generation (as opposed to installed capacity) in 2008 will come from thermal power plants !
6. Untrammelled growth in automobiles is not just an Indian phenomenon. It pervades rest of Asia too, especially China whose oil import dependence has grown from zero to nearly 50 percent in just 15 years. What our auto policies will do to our liquid fuel demand, our import dependence, our energy security and finally to the global climate through its emissions, is not hard to imagine. China has already surpassed Japan to become the second largest energy consumer as well as the second largest emitter of greenhouse gases. India is not far behind, in the fourth place although we can claim dubious comfort in our per capita emissions being only a fraction of those emitted by our counterparts in the developed world.

7. Coal-based power generation still leads the list of polluting activities, but as natural gas, nuclear and big dams increasingly displace coal, its share is likely to plateau and even decline over time. At the rate at which automobiles are growing, it will not be too long before emissions from hydrocarbons catch up with coal, if not surpass it as the single biggest fouler of our environment. India's automotive sector will be constrained by neither resources nor climate concerns, but only by the country's inadequate infrastructure. For China, unacceptable levels of urban pollution could play a similar role. As of now, both these countries seem to be merrily speeding on, unmindful of their galloping emissions.
8. Currently, the world consumes about 83 millions barrels of oil daily. International Energy Agency (IEA) estimates that by 2030, this will go up to 116 mbd of which Asia alone will demand an additional 20 million barrels of oil daily, thanks to its misplaced emphasis on private transport as the engine of economic growth. If we persist in our current growth paradigm, our carbon emissions will go up by 500 percent in the next 25 years. Does it not, therefore, make sense to make transportation a thrust area when dealing with carbon emissions ? What better timing than now, to decarbonise our transportation sector, when skyrocketing crude prices and ballooning subsidies give us the sorely needed excuse for drastic intervention ?
9. The Climate Action Plan does address transport-related emissions, but not adroitly enough. It talks of hydrogen, biodiesel and recycling of auto waste. Hydrogen is a distant dream. Turning to biofuels is not just tinkering at the margin. Biofuels are also turning out to be part of the problem rather than solution. Our pilot projects have shown that jatropha cannot be successfully cultivated in marginal or waste lands. It needs irrigation and fertilizer, much the same as food crops. Ethanol carries with it the moral hazard of diverting energy from humans to vehicles. It is also water and fertilizer intensive. It is also water and fertilizer intensive. A life-cycle assessment energy balance and environmental impact will place biofuels firmly out of reckoning. The plan also talks of developing inland waterways and coastal shipping, establishing mechanisms to promote investments in high capacity public transport systems and more importantly, of appropriate transport pricing. The last two are the key to checking runaway growth in automobiles.

10. Hopefully, we will vigorously examine the last option—of taxing existing and new automobiles steeply enough to raise the resources for initial capital to build our mass transit system, not just in cities, but also in the numerous smaller towns. Subsidies saved from shift to public transportation alone will make this enterprise worthwhile. Can the huge workforce currently employed in the automobile sector be gainfully redeployed to build public transportation networks in a white-collar version of NREGS ? Simultaneously, can we persuade our aspiring middle classes to change their notions of ‘desirable’ lifestyles at the core of which is the now ubiquitous automobile ?
11. While it is not anyone’s case that those who never enjoyed the fruits of the auto boom hitherto should be denied access to the family car, we must also acknowledge that climate is an implacable adversary. With global carbon galloping up to the 550 ppm tipping point, you can neither negotiate nor argue with Gaia, not now, when she is on her sick bed. Nor can we hope to heal her by reading history to her. We need a paradigm shift in the way we perceive development. Such shifts in the economy are possible only during periods of extreme pain or threat. And we have both now—in soaring fuel prices and deteriorating environment and climate.

(The writer is Member, National Security Advisory Board.)

Answer the following questions :

- (a) How does the changing climate worry India & what is the multi-pronged approach to tackle the problem of changing climate ?
- (b) What is the chain of activates related to transportation which adds up to a significant carbon footprint ?
- (c) Why does incessant growth of automotive sector worry not only India but other Asian countries as well ?
- (d) Which are the common factors on the basis of which the writer compares India & China ?
- (e) How can you say that it is high time to decarbonise the transportation sector ?
- (f) What are the two most important ways to check reckless growth in automobiles ?
- (g) Find words from the passage which the same as the following :
 - (i) fighting (para 2)

- (ii) a great & important change in the way something is done or thought about
(para 11)

FOR ADDITIONAL PRACTICE :

Look up the dictionary for the meanings of the following words :

- (a) mitigation (b) surpass
(c) persuade

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Passage 10

Scientists Set Forth Proposals to Tame Climate

In 20 years, global temperatures will rise by 0.2-0.4 degree centigrade, they say

1. Scientists from 12 academies round the world have met in Tokyo to issue a statement on the inevitable long-term rise in temperature.

Their forecast is that in the next 20 years, global temperatures will rise by 0.2-0.4 degree centigrade. The consequences of global warming will be felt worldwide. Polar icecaps will continue to melt and the world's oceans will erode coastlines still further.

2. The academics assessed the scientific aspects of global climate change. This will be a G-8 plus 5 summit involving China, India, South Africa, Brazil and Mexico.

Representatives of these five nations participated in drafting the statement on climate change.

3. The decision to expand the summit format was logical as China now ranks second after the United States in industrial emissions, and the other four countries are also notorious for their high pollution levels.

The scientists called on world leaders to minimise the threat of climate change, stressed the need for urgent action to clarify the causes of this process and set forth proposals to "tame" the climate.

4. Yury Izrael, director of the Institute of Global Climate and Ecology at the Russian Academy of Sciences, who co-authored the statement, told RIA Novosti that the document mostly aimed at enhancing climate-stabilisation measures, outlined ways of adapting to the situation and stipulated a transfer to a low-carbon society.

5. He said less carbon carbon-intensive energy sources and the energy-preservation principle had to be introduced.

Japan, which will hold the G-8 summit, has invented a production process making it possible to cut toxic emissions by 70 percent by 2050. However, Mr. Izrael said this would not solve the climate change problem even if all industrial giants followed suit.

“To stabilise the climate, we must reduce toxic emissions down to the Earth’s natural absorbing capacity. The planet can now absorb less than 50% of toxic emissions,” he said.

6. “This means that we cannot achieve any short-term results in this sphere.”

Mr. Izrael said direct efforts to fight greenhouse emissions held little promise.

Scientists have not yet assessed the impact of greenhouse gases on the global climate. At any rate, state-of-the-art industrial technologies are not the only way to fight global warming. This costly programme will take several hundred years and many millions of dollars to implement.

The G-8 plus 5 academic meeting also focussed on other factors influencing global climate change.

7. “We must have different ‘weapons’ for fighting climate change and stabilising the climate, and have to use the most effective ones,” Mr. Izrael said.

For instance, geo-engineering technologies can alter the Earth’s albedo, or reflecting power. According to scientists, young and old trees have different albedo levels. Young trees actively sequester carbon needed for their growth and development, while older trees either absorb little or no carbon at all. Consequently, new forests must be planted regularly to preserve a stable climate. Moreover, we must care for old forests, protecting them from wildfires and implementing well-thought-out tree felling programmes.

8. The Tokyo statement said it was necessary to intensify biological processes in the world’s oceans. For instance, plankton, the perennial inhabitant of the seven seas, requires huge amounts of carbon dioxide for further growth and should therefore be planted en masse with special biotechnologies.

It is also possible to build orbital solar-ray reflectors. This project may eventually prove less expensive than the costs of global warming. The statement called for developing and promoting Carbon Content Sequestering (CCS) technologies for accumulating, storing and extracting (sequestering) fossil-fuel carbon. This primarily concerns coal, which will remain a major source of energy for the next 50 years. All surplus carbon could be stored under the ground or dumped into the sea.

9. Mr. Izrael is an active supporter of the so-called optimal scenario aiming to change the meteorological solar constant by spraying fine dispersed aerosols of

sulphuric acid and other substances into the lower atmosphere at 12-16 km altitudes. This will decrease sunshine reaching the Earth's surface and reduce the temperature in the troposphere by the required number of degrees, serving as an instrument of climate change.

In 1974, Mikhail Budyko, member of the Soviet Academy of Science and author of the global-warming theory, proposed the aerosol-spraying method for increasing natural atmospheric layers. It is a well-known fact that after volcanic eruptions, surface temperature is reduced over vast areas because natural aerosols block sunshine and bring temperature down.

Sulphuric acid aerosols could be sprayed from specially-equipped planes. According to Mr. Izrael, this is an optimal and inexpensive scenario in case of fast global warming. It would be possible to change the situation in 12 months or several years at most.

Right now, a group of climatologists headed by Mr. Izrael is preparing to conduct an experiment to assess the impact of sulphuric acid aerosols on temperature fluctuations in some Russian areas.

However, the method has some drawbacks. For example, the stratosphere must be sprayed regularly because sulphuric acid aerosols will eventually drift to the ground.

But their amount is a thousand times smaller than current greenhouse gas emissions. According to Mr. Izrael, international agreements and joint projects are needed to introduce the aerosol-spraying method.

"We have to accomplish this objective because climate remains a major problem and a hard-to-solve social phobia."

—RIA Novosti

I. Answer the following questions :

- (a) The G-8 summits has been logically expanded. How ?
- (b) What are the ways to transfer the society into a low-carbon society ? (Mention two).
- (c) What is meant by Geo-Engineering Technologies ?
- (d) Why has dispersal of aerosols of Sulphuric acid been most favoured by Scientists ?
- (e) How does plankton help tame climate ?

II. Find words from the passage which mean the same as :

- (a) To state clearly and firmly that something must be done or how it must be done.(para 4).
- (b) Living for two years or more. (para-8)
- (c) Strong unreasonable fear of something. (para-9)

III. FOR ADDITIONAL PRACTICE :

Look up the Dictionary for the meaning of the following words :

- (a) optimal
- (b) eventually
- (c) accomplish