

Passage - 1

Environmental protection and management is deservedly attracting a lot of attention these days. This is a desirable development in the face of the alarming rate of natural resource degradation which greatly hampers their optimal utilization. When waste waters emanating from municipal sewage, industrial effluent, agriculture and land runoffs, find their way either to ground water reservoirs or other surface water sources, the quality of water deteriorates, rendering it unfit for use. The natural balance is distributed when concentrated discharges of waste water is not controlled. This is because the cleansing forces of nature cannot do their job in proportion to the production of filthy matter.

According to the National Environment Engineering and Research Institute (NEERI), a staggering 70 percent of water available in the country is polluted. According to the Planning Commission "From the Dal lake in the North to the Chaliyar river in the South From Damodar and Hoogly in the East to the Thane Creek in the West, the picture of water pollution is uniformly gloomy. Even our large perennial rivers, like the Ganga, are today are heavily polluted".

According to one study, all the 14 major rivers of India are highly polluted. Beside the Ganga, these rivers include the Yamuna, Narmada, Godaver i, Krishna and Cauvery. These rivers carry 85 percent of the surface runoff and their drainage basins cover 73 percent of the country. The pollution of the much revered Ganga is due in particular to municipal sewage that accounts for $\frac{3}{4}$ th of its pollution load. Despite India having legislation on water pollution [The Water (Prevention and Control of Pollution) Act, 1974] and various water pollution control boards, rivers have today become synonymous with drains and sewers.

Untreated community wastes discharged into water courses from human settlements account for four times as much waste water as industrial effluent. Out of India's 3,119 towns and cities, only 217 have partial (209) or full (8) sewerage treatment facilities and cover less than a third of the urban population. Statistics from a report of the Central Board for Prevention and Control of Water Pollution reveal that 1,700 of 2,700 water using industries in India are polluting the water around their factories. Only 160 industries have

waste water treatment plants. One estimate suggests that the volume of waste water of industrial origin will be comparable to that of domestic sewerage in India by 2000 AD. Discharges from agricultural fields, which carry fertilizing ingredients of nitrogen, phosphorous and pesticides are expected to be three times as much as domestic sewage. By that date, thermal pollution generated by discharges from thermal power plants will be the largest in volume.

Toxic effluents deplete the levels of oxygen in the rivers, endanger all aquatic life and render water absolutely unfit for human consumption, apart from affecting industrial production. Sometimes these effects have been disastrous. A recent study reveals that the water of the Ganga, Yamuna, Kali and Hindon rivers have considerable concentrations of heavy metals due to inflow of industrial wastes, which pose a serious health hazard to the millions living on their banks. Similarly, the Cauvery and Kapila rivers in Karnataka have been found to contain metal pollutants, which threaten the health of people in riverine towns. The Periyar, the largest river of Kerala, receives extremely toxic effluent that result in high incidence of skin problems and fish kills. The Godavari of Andhera Pradesh and the Damodar and Hoogly in West Bengal receive untreated industrial toxic wastes. A high level of pollution has been found in the Yamuna, while the Chambal of Rajasthan is considered the most polluted river in Rajasthan. Even in industrially backward Orissa, the Rushikula river is extremely polluted. The fate of the Krishna in Andhra Pradesh, the Tungabhadra in Karnataka, the Chaliyar in Kerala, the Gomti in U.P., the Narmada in M.P. and the Sone and the Subarnarekha rivers in Bihar is no different.

According to the W.H.O.- eighty percent of diseases prevalent in India are water-borne; many of them assume epidemic proportions. The prevalence of these diseases heighten under conditions of drought. It is also estimated that India loses as many as 73 million man-days every year due to water prone diseases, costing Rs. 600 crore by way of treatment expenditure and production losses. Management of water resources with respect to their quality also assumes greater importance especially when the country can no more afford to waste water.

The recent Clean-the Ganga Project with an action plan estimated to cost the exchequer Rs.250 crore (which has been accorded top priority) is a trend setter in achieving this goal. The action plan evoked such great interest that offers of assistance have been received from France, UK, US and the Netherlands as also the World Bank. This is indeed laudable. Poland too has now joined this list. The very fact that these countries have volunteered themselves to contribute their mite is a healthy reflection of global concern over growing environmental degradation and the readiness of the international community to participate in what is a truly formidable task. It may be recalled that the task of cleansing the Ganga along the Rishikesh – Hardwar stretch under the first phase of the Ganga Action Plan has been completed and the results are reported to be encouraging.

The reasons for the crisis of drinking water resources are drying up and the lowering of ground water through over pumping; this is compounded by the pollution of water sources. All these factors increase the magnitude of the problem. An assessment of the progress achieved by the end of March 1985, on completion of the first phase of the International Drinking Water Supply and Sanitation Decade (1981 – '91) reveals that drinking water has been available to 73 percent of the urban population and 56 percent of the rural population only. This means that nearly half the country's rural population has to get drinking water facilities. This needs to be urgently geared up especially when considered against the Government's professed objective of providing safe drinking water and sanitation to all by the end of the International Drinking Water Supply and Sanitation Decade i.e. March 1991. The foremost action in this would be to clean up our water resources.

As per surveys conducted by the NEERI, per capita drinking water losses in different cities in the country range between 11,000 to 31,000 litres annually. This indicates a waste level of 20 to 35 percent of the total flow of water in the distribution system primarily due to leaks in main and household service pipes. Preventive maintenance programme would substantially reduce losses, wastages and would certainly go a long way in solving the problem.

According to the Union Ministry of Works and Housing, of the 2.31 lakhs problem villages most

have been provided with at least one source of drinking water as of March, 1986. The balance (38,748) villages are expected to be covered during the seventh plan. A time bound national policy on drinking water is being formulated by Government, wherein the task is proposed to be completed by the end of the seventh plan. An outlay of Rs. 6,522.47 crores has been allotted for the water supply and sanitation sector in the seventh plan period against an outlay of Rs. 3,922.02 crores in the sixth plan. Of this, outlay for rural water supply sector is Rs. 3,454.47 crores. It is expected that this outlay would help to cover about 86.4 percent of the urban and 82.2 percent of the rural population with safe drinking water facilities by March 1991. Hygienic sanitation facilities would be provided to 44.7 percent and 1.8 percent of the urban and rural population respectively within the same period.

Q1. According to NEERI

- (a) the extent of water pollution in the Dal Lake is grim.
- (b) 70 percent of the total water available in the country is polluted.
- (c) only 217 out of 3119 towns and cities have sewage treatment facilities.
- (d) all the 14 major rivers of India are highly polluted.

Q2. The degradation of natural resources will necessarily lead to

- (a) poor economic utilization of resources.
- (b) contamination of water from municipal sewage.
- (c) water unfit for human consumption.
- (d) none of the above.

Q3. The crisis of drinking water is caused chiefly by

- (a) the green house effect.
- (b) water pollution caused by industrial development.
- (c) drying up of water sources and over pumping.
- (d) increasing urbanization.

Q4. The best remedy for shortage lies in

- (a) putting up more pumps in rural areas.
- (b) cleaning up polluted water.

- (c) reducing the waste level of 25-30 percent of the total flow of water.
- (d) constructing large sized dams.

Passage - 2

To teach is to create a space in which obedience to truth is practiced. Space may sound a vague, poetic metaphor until we realize that it describes experiences of everyday life. We know what it means to be in a green and open field; we know what it means to be on a crowded rush hour bus. These experiences of physical space have parallels in our relations with others. On our jobs we know what it is to be pressed and crowded, our working space diminished by the urgency of deadlines and competitiveness of colleagues. But then there are times when deadlines disappear and colleagues cooperate, when everyone has a space to move, invent and produce with energy and enthusiasm. With family and friends, we know how it feels to have unreasonable demands placed upon us, to be boxed in by the expectations of those nearest to us. But then there are times when we feel accepted for who we are (or forgiven for who we are not), times when a spouse or a child or a friend gives us the space, both to be and to become.

Similar experiences of crowding and space are found in education. To sit in a class where the teacher stuffs our minds with information, organizes it with finality, insists on having the answers while being utterly uninterested in our views, and focus us into a grim competition for grades – to sit in such a class is to experience a lack of space for learning. But to study with a teacher, who not only speaks but also listens, who not only answers but asks questions and welcomes our insights, who provides information and theories that do not close doors but open new ones, who encourages students to help each other learn – to study with such a teacher is to know the power of a learning space.

A learning space has three essential dimensions: openness, boundaries and an air of hospitality. To create open learning space is to remove the impediments to learning that we find around and within us; we often create them ourselves to evade the challenge of truth and transformation. One source of such impediments is our fear of appearing ignorant to others or to ourselves. The oneness of a space is created by the firmness of its boundaries. A learning space cannot extend

indefinitely; if it did, it would not be a structure for learning but an invitation for confusion and chaos. When space boundaries are violated, the quality of space suffers. The teacher who wants to create an open learning space must define and defend its boundaries with care. Because the pursuit of truth can be painful and discomfiting, the learning space must be hospitable. Hospitable means receiving each other, our struggles, our new-born ideas with openness and care. It means creating an ethos in which the community of truth can form and the pain of its transformation be borne. A learning space needs to be hospitable not to make learning painless, but to make painful things possible, things without which no learning can occur, things like exposing ignorance, testing tentative hypotheses, challenging false or partial information, and mutual criticism of thought.

The task of creating learning space with qualities of openness, boundaries and hospitality can be approached at several levels. The most basic level is the physical arrangement of the classroom. Consider the traditional classroom setting with row of chairs facing the lectern where learning space is confined to the narrow alley of attention between each student and teacher. In this space, there is no community of truth, hospitality of room for students to relate to the thoughts of each other. Contrast it with the chairs placed in a circular arrangement creating an open space within which learners can interconnect. At another level, the teacher can create conceptual space-space with words in two ways. One is through assigned reading; the other is through lecturing, assigned reading, not in the form of speed reading several hundred pages but contemplative reading which opens, not fills, our learning space. A teacher can also create a learning space by means of lectures. By providing critical information and a framework of interpretation, a lecturer can lay down boundaries within which learning occurs.

We also create learning space through the kind of speech we utter and the silence from which true speech emanates. Speech is a precious gift and a vital tool, but too often our speaking is an evasion of truth, a way of buttressing our self-serving reconstructions of reality. Silence must therefore be an integral part of learning space. In silence, more than in arguments, our mind made world falls away and we are open to the truth that seeks us. Words often divide us, but silence can unite.

Finally teachers must also create emotional space in the class-room, space that allows feelings to arise and be dealt with because submerged feelings can undermine learning. In an emotionally honest learning space, one created by a teacher who does not fear dealing with feelings, the community of truth can flourish between us and we can flourish in it.

Q5.The statement 'the openness of a space is created by the firmness of its boundaries' appears contradictory. Which of the following statements provides the best justification for the proposition?

- (a) We cannot have a space without boundaries.
- (b) Bounded space is highly structured.
- (c) When space boundaries are violated, the quality of space suffers.
- (d) A teacher can effectively defend a learning space without boundaries.

Q6.According to the author, learning is a painful process because

- (a) it exposes our ignorance.
- (b) our views and hypotheses are challenged.
- (c) it involves criticizing the views of other.
- (d) All of the above reasons.

Q7.Which of the following statements best describes the author's conception of learning space?

- (a) Where the teacher is friendly.
- (b) Where there is no grim competition for grades.
- (c) Where the students are encouraged to learn about space.
- (d) Where the teacher provides information and theories which open new doors and encourages students to help each other learn.

Q8.Another way of describing the author's notion of learning space can be summarized in the following manner

- (a) It is vital that learning be accompanied by unlearning.

- (b) Learning encompasses such elements as courage, dignity and endeavour.
- (c) An effective teacher recognizes the value of empathy.
- (d) Encourage good learners, discourage indifferent ones.

Passage - 3

Current feminist theory, in validating women's own stories of their experience, has encouraged scholars of women's history to view the use of women's oral narratives as the methodology, next to the use of women's written autobiography, that brings historians closest to the "reality" of women's lives. Such narratives, unlike most standard histories, represent experience from the perspective of women, affirm the importance of women's contributions, and furnish present-day women with historical continuity that is essential to their identity, individually and collectively. Scholars of women's history should, however, be as cautious about accepting oral narratives at face value as they already are about written memories. Oral narratives are no more likely than are written narratives to provide a disinterested commentary on events or people. Moreover, the stories people tell to explain themselves are shaped by narrative devices and storytelling conventions, as well as by other cultural and historical factors, in ways that the storytellers may be unaware of. The political rhetoric of a particular era, for example, may influence women's interpretations of the significance of their experience. Thus a woman who views the Second World War as pivotal in increasing the social acceptance of women's paid work outside the home may reach that conclusion partly and unwittingly because of wartime rhetoric encouraging a positive view of women's participation in such work.

Q9.The passage is primarily concerned with

- (a) contrasting the benefits of one methodology with the benefits of another
- (b) describing the historical origins and inherent drawbacks of a particular methodology
- (c) discussing the appeal of a particular methodology and some concerns about its use

(d) analyzing the influence of current feminist views on women's interpretations of their experience

Q10. According to the passage, scholars of women's history should refrain from doing which of the following?

(a) Focusing on the influence of political rhetoric on women's perceptions to the exclusion of other equally important factors

(b) Attempting to discover the cultural and historical factors that influence the stories women tell

(c) Assuming that the conventions of women's written autobiographies are similar to the conventions of women's oral narratives

(d) Accepting women's oral narratives less critically than they accept women's written histories

Q11. According to the passage, each of the following is a difference between women's oral narratives and most standard histories EXCEPT:

(a) Women's oral histories validate the significance of women's achievements.

(b) Women's oral histories depict experience from the point of view of women.

(c) Women's oral histories acknowledge the influence of well-known women.

(d) Women's oral histories present today's women with a sense of their historical relationship to women of the past.

Q12. If I sell some of my books then I'll pay the rent. I didn't pay the rent.

Which of the conclusion can be drawn from the above statement?

(a) Some of my books are sold.

(b) All of my books are sold.

(c) None of my books is sold.

(d) None of these is warranted.

Passage - 4

The communities of ants are sometimes very large, numbering even up to 500, individuals: and it is a lesson to us that no one has ever yet seen quarrel between any two ants belonging to the

same community. On the other hand, it must be admitted that they are in hostility not only with most other insects, including ants of different species, but even with those of the same species if belonging to different communities. I have over and over again introduced ants from one of my nests into another nest of the same species; and they were invariably attacked, seized by a leg or an antenna, and dragged out.

It is evident, therefore, that the ants of each community all recognize one another, which is very remarkable. But more than this, I several times divided a nest into two halves and found that even after separation of a year and nine months they recognize one another and were perfectly friendly, while they at once attacked ants from a different nest, although of the same species.

It has been suggested that the ant of each nest have some sign or password by which they recognize one another. To test this I made some of them insensible, first I tried chloroform; but this was fatal to them, and I did not consider the test satisfactory. I decided therefore to intoxicate them. This was less easy than I had expected. None of my ants would voluntarily degrade themselves by getting drunk. However, I got over the difficulty by putting them into whisky for a few moments. I took fifty specimens -twenty five percent from one nest and twenty five percent from another made them dead drunk, marked each with a spot of paint, and put them on a table close to where other ants from one the nests were feeding. The table was surrounded as usual with a moat of water to prevent them from straying. The ants, which were feeding, soon noticed those, which I had made drunk. They seemed quite astonished to find their comrades in such a disgraceful condition, and as much at a loss to know what to do with their drunkards as we were. After a while, however, they carried them all away; the strangers they took to the edge of the moat and dropped into the water, while they bore their friends home into the nest, where by degrees they slept off the effects of the spirits. Thus it is evident that they know their friends even when incapable of giving any sign or password.

Q13. An appropriate title for this passage might be

(a) Nature's Mysteries

(b) Human Qualities in the Insect world

(c) Drunken Ants

(d) Communication in Ant Communities

Q14. Attitudes of ants towards strangers of the same species may be categorized as

- (a) indifferent
- (b) curious
- (c) hostile
- (d) passive

Q15. The author's anecdotes of the inebriated ants would support all the following inductions except the statement that

- (a) ants take unwillingly to intoxicants
- (b) ants aid comrades in distress
- (c) ants have invariable recognition of their community members
- (d) ants recognize their comrades by a mysterious password.

Q16. According to the passage, chloroform was less successful than alcohol for inhibiting communication because of

- (a) its expense
- (b) its unpredictable side effects
- (c) its unavailability
- (d) its fatality

Passage - 5

Compared with other experimental sciences, astronomy has certain limitations. First, apart from meteorites, the Moon, and the nearer planets, the objects of study are inaccessible and cannot be manipulated, although nature sometimes provides special conditions, such as eclipses and other temporary effects. The astronomer must content himself with studying radiation emitted or reflected from celestial bodies.

Second, from the Earth's surface these are viewed through a thick atmosphere that completely absorbs most radiation except within certain "windows", wavelength regions in which the radiation can pass through the atmosphere relatively freely in the optical, near-infrared, and radio bands of the electromagnetic spectrum; and even in these windows the atmosphere has considerable effects. For light, these atmospheric effects are as follows: (1) some absorption that dims the radiation somewhat, even in a clear sky;

(2) refraction, which causes slight shift in the direction so that the object appears in a slightly different place; (3) scintillation (twinkling); i.e., fluctuations in brightness of effectively point – like sources such as stars, fluctuations that are, however, averaged out for objects with larger images, such as planets (the ionosphere, an ionized layer high in the atmosphere, and interplanetary medium have similar effects on radio sources); (4) image movement because of atmospheric turbulence ("bad seeing") spreads the image of a tiny point over an angle of nearly one arc second or more on the celestial sphere (one arc second equals 1/3, 600 degrees); and (5) background light from the night sky. The obscuring effects of the atmosphere and its clouds are reduced by placing observing stations on mountains, preferably in desert regions (e.g., southern California and Chile), and away from city lights. The effects are eliminated by observing from high-altitude aircraft, balloons, rockets, space probes, and artificial satellites. From stations all or most of the atmosphere, gamma rays and X-rays -that is, high-energy radiation at extremely short wave-lengths and far-ultraviolet rays and far-infrared radiation, all completely absorbed by the atmosphere at ground level observatories can be measured, At radio wave-lengths between about one centimeter and 20 meters, the atmosphere (even when cloudy) has little effect, and man -made radio signals are the chief interference.

Third, the Earth is a spinning, shifting, and wobbling platform. Spin on its axis causes alternation of day and night and an apparent rotation of the celestial sphere with stars moving from east to west. Ground – based telescopes use a mounting that makes it possible to neutralize the rotation of Earth relative to the stars; with an equatorial mounting driven at a proper speed, the direction of the telescope tube can be kept constant for hours while the Earth turns under the mounting. Large radio telescopes usually have vertical and horizontal axes (altazimuth mounting), with their pointing continuously controlled by a computer.

In addition to the daily spin, there are much more gradual effects, called precession and nutation. Gravitational action of the Sun and Moon on the Earth's equatorial bulge causes the Earth's axis to process like a top or gyroscope, gradually tracing out a circle on the celestial sphere in about 26,000 years, and also to nutate or wobble slightly in a

period of 18.6 years. The Earth's rotation and orbital motion provide the basic standard of directions of stars, so that uncertainties in the rate of these motions can lead to quite small but important uncertainties in measurements of stellar movements.

- Q17.** One of the type of radiations that cannot pass through the atmospheric 'windows' without distortion is
- (a) near infra-red spectrum.
 - (b) far-ultraviolet spectrum.
 - (c) optical band in the spectrum.
 - (d) radio band in the spectrum.
- Q18.** One of the atmospheric effects earth – based experiments that is not mentioned in the passage is
- (a) twinkling.
 - (b) refraction.
 - (c) image movement.
 - (b) clouds from volcano eruptions.
- Q19.** The purpose of telescope mounting is to neutralize
- (a) atmospheric interference.
 - (b) the effect of precession.
 - (c) the effect of nutation.
 - (d) the effect of diurnal spinning.
- Q20.** The orbital motion of the Earth
- (a) is partly caused by the moon.
 - (b) can have uncertain rates.
 - (c) has a periodicity of 18.6 years.
 - (d) is neutralized by telescope mounting.

Passage - 6

Dendrochronology, the study of tree-ring records to glean information about the past, is possible because each year a tree adds a new layer of wood between the existing wood and the bark. In temperate and subpolar climates, cells added at the growing season's start are large and thin-walled, but later the new cells that develop are smaller and thick-walled; the growing season is followed by a period of dormancy. When a tree trunk is viewed in cross section, a boundary line is normally visible between the small-celled wood added at the end of

the growing season in the previous year and the large-celled spring wood of the following year's growing season. The annual growth pattern appears as a series of larger and larger rings. In wet years rings are broad; during drought years they are narrow, since the trees grow less. Often, ring patterns of dead trees of different, but overlapping, ages can be correlated to provide an extended index of past climate conditions.

However, trees that grew in areas with a steady supply of groundwater show little variation in ring width from year to year; these "complacent" rings tell nothing about changes in climate. And trees in extremely dry regions may go a year or two without adding any rings, thereby introducing **uncertainties** into the count. Certain species sometimes add more than one ring in a single year, when growth halts temporarily and then starts again.

- Q21.** The passage suggests which of the following about the ring patterns of two trees that grew in the same area and that were of different, but overlapping, ages?
- (a) The rings corresponding to the overlapping years would often exhibit similar patterns.
 - (b) The rings corresponding to the years in which only one of the trees was alive would not reliably indicate the climate conditions of those years.
 - (c) The rings corresponding to the overlapping years would exhibit similar patterns only if the trees were of the same species.
 - (d) The rings corresponding to the overlapping years could not be complacent rings.
- Q22.** In the highlighted text, "uncertainties" refers to
- (a) inconsistencies introduced because of changes in methodology
 - (b) some tree species' tendency to deviate from the norm
 - (c) the lack of detectable variation in trees with complacent rings
 - (d) the lack of perfect correlation between the number of a tree's rings and its age
- Q23.** The passage is primarily concerned with
- (a) evaluating the effect of climate on the growth of trees of different species

- (b) questioning the validity of a method used to study tree-ring records
- (c) explaining how climatic conditions can be deduced from tree-ring patterns
- (d) tracing the development of a scientific method of analyzing tree-ring patterns

Q24. No promise-breakers are trustworthy. All wine drinkers are communicative. If you aren't a promise-breaker then you are honest. All pawnbrokers are wine-drinkers. Communicative people are trustworthy.

Which of the following conclusion can be drawn from the above statements?

- (a) All pawnbrokers are untrustworthy.
- (b) If you aren't honest then you aren't a pawnbroker.
- (c) If you aren't a promise-breaker then you are communicative.
- (d) None of these is warranted.

Passage - 7

In order to better understand conservatism in China, it is essential that one has a grasp of what the term "Chinese conservatism" means. Chinese conservatism is markedly different from the conservatism of the modern West. The political term "conservative" came about during the French Revolution and inspired men who were determined to preserve Christian and aristocratic elements in European society. Chinese conservatism began around the time of the Taiping Rebellion and had as its primary objectives the preservation of both Confucian society and non-feudal strains of pre-Opium War Chinese society. While western conservatism believes in sacredness of private property and distrust of cosmopolitanism, the Chinese conservatism is the defense of a rational cosmopolitan order. Thus, the only common area of agreement between European and Chinese conservatism is the intent to conserve.

During the Tung -chin Restoration, the great aim was the revival of Confucian values and institutions. But these aims had to be modified so that they might endure. Restoration statesmen had no desire to create a new society – they wanted to restore a society that they believed had been based on truth. The statesmen of the Restoration stretched the traditional ideology to its limits in an effort to make

the Confucian system under new conditions. They were true conservatives in a great tradition, living in an age when revolutionary change was unavoidable. The aim of the Restoration was to restore to their original vitality the best of the ancient institutions. During the Restoration, the two immediate problems were the suppression of rebellion and the stabilization of foreign relations. In addition, the people were striving for a restoration of the system of government by superior civil officials.

The men in the hierarchy of the Restoration rose to prominence through proven ability in both civil and military affairs. They emphasized human and social training – that is, indoctrination, morality, and the art of leadership through the cultivation of character. The great majority of the officials rose through the examination system.

During the chaos of this period, the examination system had lost much of its effectiveness. This is important and must be noted because the examination system was the traditional avenue for selecting officials . The senior official of Restoration realized that their policies would be ineffective unless the quality of the junior official was improved, so it was their duty to weed out the officials who had attained office in irregular ways and to promote the examination system as the only way to high position. But these men of the Restoration had enough foresight to determine that it was impossible to select officials automatically on the basis of objective tests alone. As a result, the system of recommendation was ushered in, whereby; a high official sponsored the career of a promising young man. This acted as an important supplement to the examination system.

Q25. A primary objective in the development of Restoration thought was

- (a) to modify traditional Chinese society to reflect new conditions.
- (b) to create a new society based on truth.
- (c) the knowledge that Chinese conservatism is superior to western conservatism.
- (d) the desire to familiarized China with military technology.

Q26. The major similarity between Chinese and western conservatism is

- (a) that Chinese conservatism attempted to preserve traditions.
- (b) that Chinese conservatism developed during the Taiping Revolution.
- (c) the cosmopolitan nature of western conservatism.
- (d) that Chinese conservatism is primarily land oriented.

Q27. During the Restoration, ancient institutions

- (a) were no longer accepted as a viable alternative to western technology.
- (b) were studied only as classical examples of a former glorious past.
- (c) were to be the cornerstones of a changing but traditional society.
- (d) were considered as a primary reason for the decline of traditional China.

Q28. The western conservatism ended to preserve all the following except

- (a) Christianity
- (b) private property
- (c) cosmopolitanism
- (d) aristocratic elements

Passage - 8

Many people believe that because wages are lower in developing countries than in developed countries, competition from developing countries in goods traded internationally will soon eliminate large numbers of jobs in developed countries. Currently, developed countries' advanced technology results in higher productivity, which accounts for their higher wages. Advanced technology is being transferred ever more speedily across borders, but even with the latest technology, productivity and wages in developing countries will remain lower than in developed countries for many years because developed countries have better infrastructure and better-educated workers. When productivity in a developing country does catch up, experience suggests that wages there will rise. Some individual firms in developing countries have raised their productivity but kept their wages (which are influenced by average productivity in the country's economy) low. However, in a developing country's

economy as a whole, productivity improvements in goods traded internationally are likely to cause an increase in wages. Furthermore, if wages are not allowed to rise, the value of the country's currency will appreciate, which (from the developed countries' point of view) is the equivalent of increased wages in the developing country. And although in the past a few countries have deliberately kept their currencies undervalued, that is now much harder to do in a world where capital moves more freely.

Q29. The primary purpose of the passage is to

- (a) identify the origin of a common misconception
- (b) discuss the implications of a generally accepted principle
- (c) present information relevant in evaluating a commonly held belief
- (d) defend a controversial assertion against a variety of counterarguments

Q30. The passage suggests that if the movement of capital in the world were restricted, which of the following would be likely?

- (a) Developed countries could compete more effectively for jobs with developing countries.
- (b) A country's average wages could increase without significantly increasing the sophistication of its technology or the value of its currency.
- (c) A country's productivity could increase without significantly increasing the value of its currency.
- (d) Workers could obtain higher wages by increasing their productivity.

Q31. The passage suggests that which of the following would best explain why, in a developing country, some firms that have raised their productivity continue to pay low wages?

- (a) Wages are influenced by the extent to which productivity increases are based on the latest technology.
- (b) Wages are not determined by productivity improvements in goods traded internationally.

- (c) The average productivity of the workers in the country has not risen.
- (d) The education level of the workers in the country determines wages.

Q32. The cotton farms of Country Q became so productive that the market could not absorb all that they produced. Consequently, cotton prices fell. The government tried to boost cotton prices by offering farmers who took 25% of their cotton acreage out of production direct support payments up to a specified maximum per farm. The government's program, if successful, will not be a net burden on the budget. Which of the following, if true, is the basis for the best explanation of how this is so?

- (a) Depressed cotton prices meant operating losses for cotton farms, and the government lost revenue from taxes on farm profits.
- (b) Cotton production in several counties other than Q declined slightly the year that the support-payment program went into effect in Q.
- (c) The first year that the support-payment program was in effect, cotton acreage in Q was 5% below its level in the base year for the program.
- (d) The specified maximum per farm meant that for very large cotton farms the support payments were less per acre for those acres that were withdrawn from production than they were for smaller farms.

Passage - 9

It is one week since Uttarakhand's worst disaster in living memory. Flash floods resulting from extremely intense rainfall swept away mountainsides, villages and towns, thousands of people, animals, agriculture fields, irrigation canals, domestic water sources, dams, roads, bridges, and buildings – anything that stood in the way. A week later, media attention remains riveted on the efforts to rescue tens of thousands of pilgrims and tourist visiting the shrines in the uppermost reaches of Uttarakhand's sacred rivers. But the deluge spread far beyond th Char Dhams – Yamunotri, Gangotri, Kedarnath and Badrinath – to cover the entire state. The

catchments of many smaller rivers also witnessed flash floods but the media has yet to report on the destruction there. Eyewitness accounts being gathered by official agencies and voluntary organizations have reported devastation from more than 200 villages so far and more affected villages are being reported every day.

Q33. Which of the following would the author agree the most with?

- (a) Char Dhams were most affected by Uttarakhand disaster.
- (b) Entire catchment of rivers flowing in Uttarakhand was affected.
- (c) Media attention was on Char Dham but the entire catchment area of rivers flowing in Uttarakhand was affected.
- (d) Voluntary organizations are better than media in reaching out to the affected people.

Q34. In many cases in physics, one has to deal simultaneously with collective and single-particle excitations of the system. The collective excitations are usually bosonic in nature while the single-particle excitations are often fermionic. One is therefore led to consider a system which includes bosons and fermions. Hence, _____

Which of the following options is most likely to follow the paragraph given above?

- (a) in this book, we discuss application of bosonic particles and their consequences on physics.
- (b) in this book, we discuss application of general algebraic theory of mixed Bose-Fermi systems to atomic nuclei.
- (c) in this book, we prove how collective excitations are bosonic and singular excitation are fermionic.
- (d) in this book, we prove that collective and singular excitation cannot exist together.

Analyze the following passage and provide appropriate answers for the questions that follow.

I heartily accept the motto, "That government is best which governs least"; and) should like to see it acted up to more rapidly and systematically.

Carried out, it finally amounts to this, which also I believe—"That government is best which governs not at all"; and when men are prepared for it, that will be the kind of governments which they will have. Government is at best but an expedient; but most government are usually, and all governments are sometimes, inexpedient. The objection which have been brought against a standing army, and they are many and weighty, and deserve to prevail, may also at last be brought against a standing government. The standing army is only an arm of the standing government. The government itself, which is only the mode which the people have chosen to execute their will, is equally liable to be abused and perverted before the people can act through it.

After all, the practical reason why, when the power is once in the hands of the people, a majority are permitted, and for a long period continue, to rule is not because they are most likely to be in the right, nor because this seems fairest to the minority, but because they are physically the strongest. But a government in which the majority rules in all cases cannot be based on justice, even as far as men understand it. Can there not be a government in which the majorities do not virtually decide right and wrong, but conscience? -- in which majorities decide only those questions to which the rule of expediency is applicable? Must the citizen ever for a moment or in the least degree, resign his conscience to the legislator? Why has every man a conscience then? I think that we should be men first, and subjects afterward. It is not desirable to cultivate a respect for the law, so much as for the right. The only obligation which I have a right to assume is to do at any time what I think right. It is truly enough said that a corporation has no conscience; but a corporation of conscientious men is a corporation with a conscience. Law never made men a whit more just; and, by means of their respect for it, even the well-disposed are daily made the agents on injustice.

Q35. According to the author of the paragraph, army is _____ ?

- (a) required
- (b) fallible
- (c) necessary evil
- (d) not required

Q36. In general, when would government of majority be good for minorities?

- (a) when it is fair
- (b) when it is right
- (c) when it abides by the law
- (d) when it is conscientious

Q37. Which of the following statements would the author agree the most with?

- (a) Men are bigger than the governments.
- (b) Business houses are best for the growth of a society.
- (c) Governments and armies are not required.
- (d) Concept of nations is redundant.

Analyze the following passage and answer the questions that follow

More selective than most chemical pesticides in that they ordinarily destroy only unwanted species, bio-control agents (such as insects, fungi, and viruses) eat, infect, or parasitize targeted plant or animal pests. However, bio-control agents can negatively affect non target species by, for example, competing with them for resources: a bio-control agent might reduce the benefits conferred by a desirable animal species by consuming a plant on which the animal prefers to lay its eggs. Another example of indirect negative consequences occurred in England when a virus introduced to control rabbits reduced the amount of open ground (because large rabbit populations reduce the ground cover), in turn reducing underground ant nests and triggering the extinction of a **blue butterfly** that had depended on the nests to shelter its offspring. The paucity of known extinctions or disruptions resulting from indirect interactions may reflect not the infrequency of such mishaps but rather the failure to look for or to detect them: most organisms likely to be adversely affected by indirect interactions are of little or no known commercial value and the events linking a bio-control agent with an adverse effect are often unclear. Moreover, determining the potential risks of bio-control agents before they are used is difficult, especially when a non native agent is introduced, because, unlike a chemical pesticide, a bio-control agent may adapt in unpredictable ways so that it can feed on or otherwise harm new hosts.

Q38. The passage is primarily concerned with

- (a) emphasizing that bio-control agents and chemical pesticides have more similarities than differences
- (b) suggesting that only certain bio-control agents should be used to control plant or animal pests
- (c) arguing that bio-control agents involve risks, some of which may not be readily discerned
- (d) suggesting that mishaps involving bio-control agents are relatively commonplace

Q39. According to the passage, which of the following is a concern that arises with bio-control agents but not with chemical pesticides?

- (a) Bio-control agents are likely to destroy desirable species as well as undesirable ones.
- (b) Bio-control agents are likely to have indirect as well as direct adverse effects on non target species.
- (c) Bio-control agents may change in unforeseen ways and thus be able to damage new hosts.
- (d) Bio-control agents may be ineffective in destroying targeted species.

Q40. The passage suggests which of the following about the blue butterfly mentioned in the highlighted text?

- (a) The blue butterfly's survival was indirectly dependent on sustaining a rabbit population of a particular size.
- (b) The blue butterfly's survival was indirectly dependent on sustaining large amounts of vegetation in its habitat.
- (c) The blue butterfly's survival was threatened when the ants began preying on its offspring.
- (d) The blue butterfly was adversely affected by a Bio-control agent that competed with it for resources.

DIRECTION (Q41 - Q44): The following questions are based on the information given below:

Data on 450 candidates, who took an examination in Social Science, Mathematics and Science is given below:

Passed in all the subjects = 167

Failed in all the subjects = 60

Failed in Social Sciences = 175

Failed in Mathematics = 199

Failed in Science = 191

Passed in Social Science only = 60

Passes in Mathematics only = 48

Passed in Science only = 52

Q41. How many failed in Social Science only?

- (a) 15
- (b) 21
- (c) 30
- (d) 42

Q42. How many failed in one subject only?

- (a) 152
- (b) 144
- (c) 61
- (d) 56

Q43. How many passed in Mathematics and at least one more subject?

- (a) 210
- (b) 203
- (c) 170
- (d) 94

Q44. How many failed in two subjects only?

- (a) 56
- (b) 61
- (c) 152
- (d) 162

Q45. One night, three naughty boys stole a basketful of apples from the garden, hide the loot and went to sleep. Before retiring they did some quick counting and found that the fruits were less than a hundred in number. During the night one boy counted the apples and found that he could divide the apples into three equal parts if he first took one for him self. He then took one apple, ate it up and took $\frac{1}{3}$ of the rest, hide them separately. The second and third boy also awoke after sometime, did the same and went back to sleep. In the morning, when all woke up, and counted apples, they found that the remaining apples again totalled 1 more than could be divided into three equal parts. How many apples did the boy sleet?

- (a) 67
- (b) 79

- (c) 85 (d) None of these

Q46. In a city, 40% of the adults are illiterate while 85% of the children are literate. If the ratio of the adults to that of the children is 2:3, then what percent of the population is literate?

- (a) 20% (b) 25%
(c) 50% (d) 75%

Q47. If you write down all the numbers from 1 to 100, then how many times do you write 3?

- (a) 11 (b) 18
(c) 20 (d) 21

Q48. A motorist knows four different routes from Bristol to Birmingham. From Birmingham to Sheffield he knows three different routes and from Sheffield to Carlisle he knows two different routes. How many routes does he know from Bristol to Carlisle?

- (a) 4 (b) 8
(c) 12 (d) 24

Q49. In a class, 20% of the members own only two cars each, 40% of the remaining own three cars each and the remaining own only one car each. Which of the following statements is definitely true from the given statements?

- (a) Only 20% of the total members own three cars each.
(b) 48% of the total members own only one car each.
(c) 60% of the total members own atleast two cars each.
(d) 80% of the total members own atleast one car.

Q50.

12	6	3
26	40	11
43	?	13

- (a) 35 (b) 36
(c) 34 (d) None of these

DIRECTION (Q51 - Q52): It was found that a large cube can be cut into certain number of identical small cuboids each of dimensions 1cm x 2cm x 5cm.

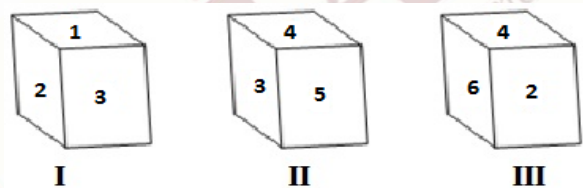
Q51. What is the measurement of side of the smallest such cube?

- (a) 5 cm (b) 20 cm
(c) 15 cm (d) 10 cm

Q52. How many such cuboids can be formed from a large cube?

- (a) 110 (b) 100
(c) 150 (d) 120

Q53. Which number is on the opposite face to the number 3?



- (a) 1 (b) 4
(c) 6 (d) 5

Q54. In a queue of children, Kashish is fifth from the left and Mona is sixth from the right. When they interchange their places between them, Kashish becomes thirteenth from the left. What will be Mona's position from the right?

- (a) 4th (b) 8th
(c) 14th (d) 15th

DIRECTION (Q55 - Q58): Read carefully the information given below and answer the questions.

- There is a group of 6 persons P, Q, R, S, T and U in a family.
- The family members are doctor, engineer, professor, lawyer, manager and jeweller.
- There are two married couples in the family.
- Q is the mother of T and U.
- R, the jeweller is married to the lawyer.
- The manager S is married to P.
- The doctor is the grandfather of U, who is a professor.

Q55. What is the profession of T?

- (a) Doctor (b) Jeweller

(c) Manager (d) None of these

Q56. How is P related to T?

(a) Brother (b) Uncle
(c) Father (d) Grandfather

Q57. How many male members are there in the family?

(a) One
(b) Three
(c) Four
(d) Cannot be determined

Q58. What is the profession of P?

(a) Doctor (b) Jeweller
(c) Lawyer (d) Manager

DIRECTION (Q59 - Q61): Read the following information carefully and answer the questions given below it.

- Six friends M, N, O, P, Q and R are sitting in a closed circle facing the centre.
- R is between Q and M.
- O is between M and N.
- Q is to the left of P.

Q59. Which of the above given statements is superfluous?

(a) 1 (b) 2
(c) 3 (d) None of these

Q60. Who is one the right of Q?

(a) M (b) N
(c) P (d) Q

Q61. Who is on the left of N?

(a) M (b) O
(c) P (d) Q

Q62. In a certain code language, 4286 is written as 3377. How is 3578 written in that code?

(a) 4488 (b) 2669
(c) 2668 (d) 4468

Q63. Find the missing number: 3, 12, 27, _____, 75, 108

(a) 35 (b) 48
(c) 38 (d) 42

DIRECTION (Q64 - Q66): Study the following table carefully to answer the questions:

Number of students appeared in civil services prelims exam from five different cities (A, B, C, D and E) in different years.

Year	A	B	C	D	E
2005	650	760	820	800	780
2006	700	740	860	780	740
2007	800	820	940	750	730
2008	750	880	920	840	790
2009	850	840	900	860	770

Q64. Find the average number of candidates appeared from city B for all the years.

(a) 815 (b) 808
(c) 801 (d) 813

Q65. Number of candidates appeared from city E in 2008 is approximately what percent of the total number of candidates appeared from all the cities together in that year?

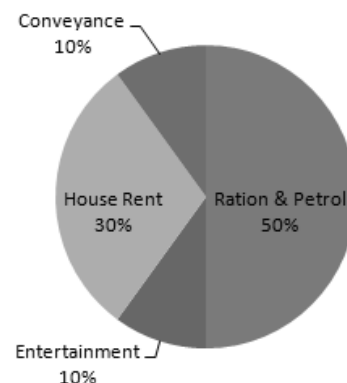
(a) 10 (b) 25
(c) 20 (d) 14

Q66. Find the ratio between the total numbers of candidates appeared in 2005 and 2006 together from city C and D respectively.

(a) 48:79 (b) 84:79
(c) 78: 79 (d) 79:48

DIRECTION (Q67 - Q69): See the following pie-chart to answer the questions.

Chart Title



Monthly expenditure of Anil from his monthly income Rs 25,000.

Q67. What is the total expenditure of Anil in ration, petrol and conveyance?

- (a) 15000 (b) 16000
(c) 18000 (d) None of these

Q68. Expenditure on ration and petrol is how much more than the expenditure on house rent?

- (a) Rs. 7550 (b) Rs. 7525
(c) Rs. 7500 (d) Rs. 13550

Q69. Find the total expenses of Anil on entertainment, house rent and conveyance.

- (a) Rs. 12500 (b) Rs. 15000
(c) Rs. 13500 (d) None of these

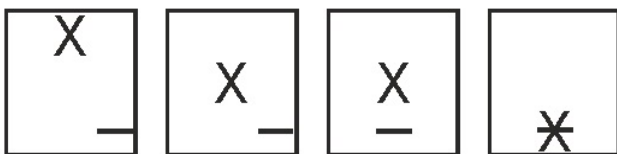
Q70. How many integers between 1 and 200. Which are divisible by both 2 and 3?

- (a) 31 (b) 32
(c) 33 (d) 34

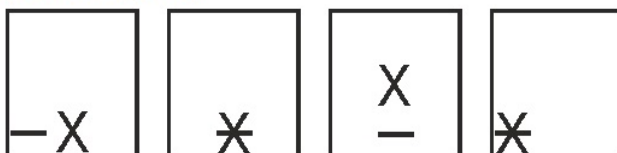
DIRECTION (Q71 - Q74): Each of the following problems, contains four problem figures marked A, B, C and D and four answer figures marked a, b, c and d. Select a figure from amongst the answer figure which will continue the same. Series as given in the problem figure.

Q71.

PROBLEM FIGURES



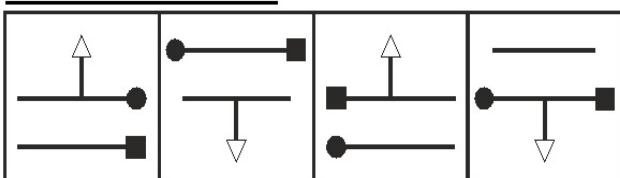
Answer Figures



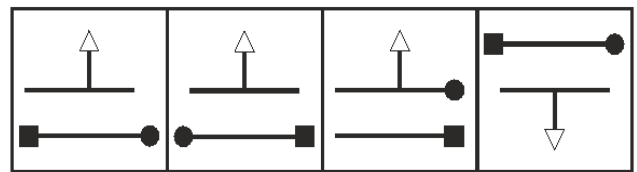
- (a) (b) (c) (d)

Q72.

PROBLEM FIGURES



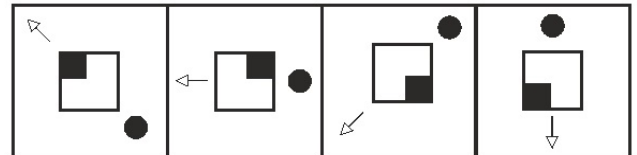
Answer Figures



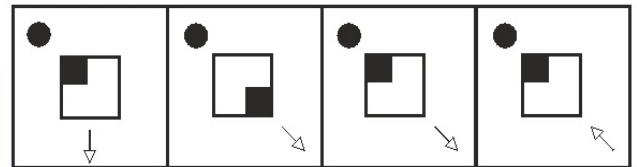
- (a) (b) (c) (d)

Q73.

PROBLEM FIGURES



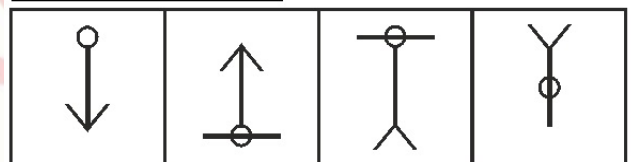
Answer Figures



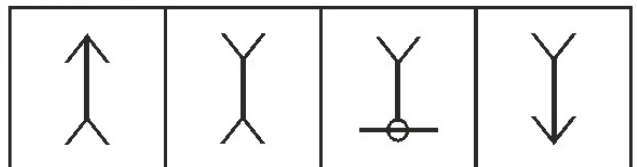
- (a) (b) (c) (d)

Q74.

PROBLEM FIGURES



Answer Figures



- (a) (b) (c) (d)

Q75. By what percent the volume of a cube increases, if the length of each edge was increased by 50%.

- (a) 237.5% (b) 273.5%
(c) 125% (d) 50%

Q76. In two alloys, the ratio of iron and copper is 4:3 and 6:1 respectively. If 14kg of the first alloy and 42kg of the second alloy is mixed together to form a new ally, then what will be the ration of copper to iron in the new ally?

- (a) 11:3 (b) 11:8
(c) 8:1 (d) None of these

Q77. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is

- (a) 25 (b) 18
(c) 16 (d) 15

Q78. Two persons are walking in the same direction at rates 3 km/hrs and 6 km/hrs. A train comes running from behind and passes them in 9 second and 10 second. The speed of the train is

- (a) 22 km/hrs (b) 40 km/hrs
(c) 33 km/hrs (d) 35 km/hrs

Q79. Three pipes A, B and C can fill a tank in 6 minutes, 8 minutes and 12 minutes respectively. The pipe C is closed 6 minutes before the tank is filled. In what time will the tank be full?

- (a) 4 minute (b) 6 minute
(c) 5 minute (d) Data in adequate

Q80. In a certain party, there was a bowl of rice for every two guests, a bowl of dal for every three of them and a bowl of sweets for every four of them. If in all there were 65 bowls of food, then how many guests were there in the party?

- (a) 65 (b) 24
(c) 60 (d) 48