

Section – I

Direction for questions 1 to 40: Each of the five passages given below is followed by questions. Choose the best answer for each question.

Passage – 1

Smith did not invent economics. Joseph Schumpeter observed that *The Wealth of the Nations* did not contain a single analytic idea, principle or method that was entirely new. Smith's achievement was to combine an encyclopaedic variety of insight, information and anecdote, and to distill from it a revolutionary doctrine. The resulting masterpiece is the most influential book on economics ever published. Remarkably, much of it speaks directly to questions that are still of pressing concern.

The pity is that Smith's great book, like most classics (of 900 pages), is more quoted than read. All sides in today's debates, about economic policy, have conspired to peddle a conveniently distorted version of its idea. If his spirit is still monitoring events, it will undoubtedly have celebrated the collapse of communism. But it must also long to meet the politicians who have taken charge of a fine reputation and not so fine profile. And put them right on one or two points.

Today Smith is widely seen as an intellectual champion of self-interest. This is a misconception. Smith saw no moral virtue in selfishness: on the contrary he saw its dangers. Still less was he a defender of capital over labour (he talked of the capitalist's 'mean rapacity'), of the rising bourgeoisie over the common folk. His suspicion of self-interest and his regard for the people as a whole come through clearly in one of his best-known remarks: "People of the same trade often meet together, even have merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."

Far from praising self-interest as a virtue, Smith merely observed it to be a driving economic force. In *The Wealth of Nations* he explained how this potentially-destructive impulse is harnessed to the social good. What is to prevent greedy producers raising their prices until their customers can afford to pay no more? The answer is competition. If producers raise their prices too high, they create an opportunity for one or more among them to profit by charging less and thus, selling more. In this way competition tames selfishness and regulates prices and quality. At the same time, it regulates quantities. If buyers want more bread and less cheese, their demand enables bakers to charge more and oblige cheese-mongers to charge less. Profits in bread-making would rise and profits in cheese-making would fall; effort and capital would move from one task to the other.

Through Smith's eyes, it is possible to marvel afresh at this fabulously powerful mechanism and to relish, as he did, the paradox of private gain yielding social good. Only more so, for the transactions that deliver a modern manufactured good to its customer are infinitely more complicated than those described by Smith. In his day, remember, the factory was still a novel idea: manufacturing meant pins and coats.

A modern car is made of raw materials that have been gathered from all over the world, combined into thousands of intermediate products, sub-assembled by scores of separate enterprises. The consumer needs know nothing of all this, any more than the worker who tapped the rubber for the tires knows or cares

what its final use will be. Every transaction is voluntary. Self-interest and competition silently process staggering quantities of information and direct the flow of goods. Services, capital and labour — just as in Smith's much simpler world. Far-sighted as he was, he would surely have been impressed. Mind you, modern man has also discovered something else. With great effort and ingenuity, and the systematic denial of personal liberty, governments can supplant self-interest and competition, and replace the invisible hand of market forces with collective endeavour and a visible input-output table. The result is a five-year waiting list for Trabants.

Because Smith was convinced that the market would, literally, deliver the goods, he wanted it, by and large to be left alone. He said that governments should confine themselves to three main tasks: defending the people from the 'violence and invasion of other independent societies', protecting every member of society from the 'injustice or oppression of every other member of it'; and providing 'certain public works and certain public institutions, which it can never be for the interest of any individual, or small number of individuals, to erect and maintain'.

Each of these jobs arises because the market in some ways fails. In the first two cases — collective defence and the administration of justice — the failure is the so-called free-rider problem. People disguise what they are willing to pay for a service that must be provided to everybody or not at all; they want to consume it and let others meet the cost. However the third job, the provision of 'certain public works and certain public institutions' goes much wider. Indeed, to modern minds, it threatens to be all encompassing. It recognizes not only the free-rider problem but also other species of market failure notably, the effects of private transactions on third parties, or 'externalities'. Smith has in mind roads, public education, and help for the destitutes. As it turned out, millions of teachers, nurses, firemen, postmen, rubbish collectors, bus drivers and 57,000 varieties of civil servants have since marched through this opening.

Smith's thinking already seems to permit a great deal of government intervention. Add some modern economics and the floodgates open. For instance, theorists have shown that if just one price in an economy is different from the price under competition, efficiency may require every other price to be somewhat distorted as well. Less government intervention, it seems to follow, cannot be assumed to be better. Competition itself has changed out of recognition. Modern economies, it is said, are driven not by countless small producers, but by a handful of giant enterprises and monopolistic trade unions. And the rapid pace of industrial change has made the externality of pollution far more obvious than before, Smith, admittedly, is a bit thin on global warming.

Above all, many have forgotten something that Smith saw clearly, that every advantage granted by government to one part of the economy puts the rest at a disadvantage. Accordingly, he talked not of 'intervention' — a too-neutral word — but of 'preference' and 'restraint'. Modern governments offer preference as though it costs nothing: the beneficiaries demand it as a right.

But Smith went further than revealing the penalty in every preference. He also understood that ministers, like markets, fail. A great virtue of unfettered competition, he said, was that 'the sovereign is completely discharged from a duty, in attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient'. Many of the reasons why markets fail are also reasons why governments fail at the same task. If the consumer

refuses to reveal his preferences in a market setting, how are governments to discover them? All too often, moreover, government intervention is itself a cause of the market breaking down which becomes the reason for further rounds of intervention, and so on. In Britain, think of tax preferences for housing, rent controls, planning and regulations. In America, think of tax preferences for borrowing, deposit insurance, leverage buy-outs and financial market regulation.

In one crucial respect, Smith's arguments are even more powerful now than they were in his days. Naturally, he favoured free trade to prevent market failure: "By means of glasses, hotbeds, and hotwalls, very good grapes can be raised in Scotland, and very good wine, too, can be made of them at about 30 times the expense for which at least equally good can be brought from foreign countries. Would it be a reasonable law to prohibit the importation of all foreign wines, merely to encourage the making of claret and burgundy in Scotland?" Two centuries later, free trade is not just a matter of the cheapest supply; it is also the best way to force producers that might otherwise be near-monopolies to compete. It is perfect folly to complain that today's big companies render the invisible hand powerless, and to conclude that barriers to trade must go up: trade and competition need each other more than ever before.

Smith was a pragmatist. The principles he expounded on the proper role of government are flexible if anything, too flexible. They are a reminder that imperfect markets are usually cleverer than imperfect governments, but they cannot draw a line to separate good intervention from bad. If governments and voters could be guided by two Smithian precepts, however, the market system that has worked so well would work ever better.

First, the competitive clash of self-interest against self-interest, however imperfect, has built-in safeguards. Before governments exert their monopoly power to displace it, they must justify themselves. Let the burden of proof always be on them. Second, when preference or restraint are judged to be necessary, use market forces to apply them. Tariffs are better than quotas; taxes are better than bans or direct controls; allocating resources by price (for example, in health or education) is better than allocating them by fiat, even if the services are then provided 'free' (but never forget those inverted commas) to their consumers.

1. Smith's attitude to the virtues of self-interest can be best described as
 - a. pragmatic.
 - b. cynical.
 - c. skeptical.
 - d. supportive.
2. All of the following are reasons for market failure, except
 - a. the effects of private transactions on third parties.
 - b. people would like to consume goods without paying for them.
 - c. unfettered and unbridled trade.
 - d. government intervention.
3. Adam Smith is most likely to agree with which of the following statements?
 - a. It is necessary for capital to exploit labour if competition and low prices are endangered.
 - b. Businessmen would form cartels, given the chance.
 - c. Lesser government intervention is better.
 - d. Collective endeavour could be the basis of economic growth.

4. Which of the following situations is not an instance of market failure?
- a. A government practising apartheid
 - b. A specialist doctor charging high fees
 - c. Poor development of roads and railways
 - d. A murderer going scot-free
5. The 'free rider' problem results in the need for all of the following, except
- a. government laws to prevent crime.
 - b. a national defence budget.
 - c. a national R & D centre for an industry.
 - d. a United Nations Peace Keeping Force.
6. We can conclude from the passage that
- a. government control is often self-propagating.
 - b. rulers are prone to delusions.
 - c. governments often fail because markets also fail.
 - d. government actions rarely have justifications.
7. Based on the passage, we could say that Adam Smith would not support
- a. government intervention.
 - b. corporation.
 - c. taxes.
 - d. import licences.
8. Based on the passage, all of the following can be inferred, except
- a. governments must act only when necessary.
 - b. high custom duties are an acceptable way to restrict a change.
 - c. high taxation is better than bans.
 - d. the role of governments must be more flexible.

Passage – 2

In the 20th century, psychology made great progress and gained an increasing reputation. It benefited considerably from cooperation with other disciplines — from biology and medicine to statistics, cybernetics, and communication theory — and found important applications in healthcare, education, industry, and many other areas of practical human activity. During the early decades of the century, psychological thinking was dominated by two powerful schools — behaviourism and psychoanalysis — which differed markedly in their methods and their views of consciousness but nevertheless adhered, basically, to the same Newtonian model of reality.

Behaviourism represents the culmination of the mechanistic approach in psychology. Based on detailed knowledge of human physiology, behaviourists created a 'psychology without a soul', a sophisticated version of La Mettrie's human machine. Mental phenomena were reduced to patterns of behaviour, and behaviour to physiological processes governed by the laws of behaviourism, was strongly influenced by several trends in the life sciences around the turn of the century.

Wundt's experimental approach had been brought to the United States from Germany by Edward Titchener, the acknowledged leader of the 'structuralist' school of psychology. He attempted a rigorous reduction of the contents of consciousness to 'simple' elements and emphasized that the 'meaning' of mental states was nothing but the context in which mental structures occurred and had no further significance for

psychology. At the same time, the reductionist and materialist view of mental phenomena was decisively influenced by Loeb's mechanistic biology, and in particular by his theory of tropism — the tendency of plants and animals to turn certain parts in certain directions. Loeb explained this phenomenon in terms of 'forced movements' imposed on living organisms by the environment in strictly mechanistic fashion. This new theory, which made tropism one of the key mechanisms of life, had a tremendous appeal for many psychologists, who applied the notions of forced movements to a wider range of animal behaviour and, eventually, to human beings.

In the description of mental phenomena in terms of patterns of behaviour, the study of the learning process played a central role. Quantitative experiments on animal psychology, opened up the new field of experimental animal psychology, and theories of learning were developed by most schools of psychology, with the notable exception of psychoanalysis. Among these learning theories, behaviourism was not influenced by Pavlov's work on conditioned reflexes. When Pavlov studied salivation in response to stimuli coinciding with the provision of food, he took great care to avoid all psychological concepts and to describe the dogs' behaviour exclusively in terms of their reflex systems. This approach suggested to psychologists that a more general theory of behaviour could be formulated in purely physiological terms. Vladimir Bekhterev, founder of the first Russian laboratory of experimental psychology, outlined such a theory, describing the learning process in strictly physiological language by reducing complex behaviour patterns to compounds of conditioned responses.

The general trends of moving away from concern with consciousness and toward strictly mechanistic views, the new methods of animal psychology, the principle of the conditioned reflex, and the concept of learning as a modification of behaviour were all assimilated into Watson's new theory, which identified psychology with the study of behaviour. To him behaviourism represented an attempt to apply to the experimental study of human behaviour the same procedures and the same language of description that had been found useful in the study of animals. Indeed, Watson, like La Mettrie two centuries before him, saw no essential difference between humans and animals. Man, he wrote, 'is an animal different from other animals only in the types of behaviours he displays'.

It was Watson's ambition to raise the status of psychology to that of an objective natural science, and to do so, he adhered as closely as possible to the methodology and principles of Newtonian mechanics the eminent example of scientific rigour and objectivity. To subject psychological experiments to the criteria used in physics required that psychologists focus exclusively on phenomena that can be registered and described objectively by independent observers. Watson became a vigorous critic of the introspective method used by James and Freud as well as Wundt and Titchener. The whole concept of consciousness, which resulted from introspection, was to be excluded from psychological terminology. "Psychology as the behaviourist views it, is a purely objective, experimental branch of natural science which needs consciousness as little as do the sciences of chemistry and physics," wrote Watson. It would certainly have been a great shock to him had he known that only a few decades later, a leading physicist, Eugene Wigner, would state, "It was not possible to formulate the laws (quantum theory) in a fully consistent way without reference to consciousness."

In the behaviourist's view, according to Watson, living organisms were complex machines reacting to external stimuli, and this stimulus-response mechanism was of course modelled after Newtonian physics.

It implied a rigorous causal relation that would allow psychologists to predict the response for a given stimulus and, conversely, to specify the stimulus for a given response. In actual fact, behaviourists seldom dealt with simple stimuli and responses, but studied entire constellations of stimuli and complex responses, which were referred to respectively as 'situations' and 'adjustments'. The basic behaviourist assumption was that these complex phenomena could always, at least in principle, be reduced to combinations of simple stimuli and responses. Thus, the laws derived from simple experimental situations were expected to apply to more complex phenomena, and conditioned responses of ever-increasing complexity were seen as adequate explanations of all human expressions, including science, art, and religion.

A logical consequence of the stimulus-response model was a tendency to look for the determinants of psychological phenomena in the external world rather than within the organism. Watson applied this approach not only to perception but also to imagery, thinking, and emotions. All these phenomena were seen not as subjective experiences, but as implicit modes of behaviour in response to external stimuli. Since the process of learning is especially suitable for objective experimental research, behaviourism became primarily a psychology of learning. Its original formulation did not contain the concept of conditioning, but after Watson had studied Bekhterev's work, conditioning became the main method and explanatory principle of behaviourism. Accordingly, there was a strong emphasis on control that was in keeping with the Baconian ideal that has become characteristic of Western science. The aim of dominance and control of nature of 'behaviour engineering' to human beings.

One consequence of this approach was the development behaviour therapy that attempted to apply conditioning techniques to the treatment of psychological disorders through the modification of behaviour. Although, these efforts can be traced back to the pioneering work of Pavlov and Bekhterev, they were not developed in a systemic way until the middle of this century. Today 'pure' behaviour therapy is totally symptom — or problem-oriented. Psychiatric symptoms are not regarded as manifestations of underlying disorders but as isolated instances of learning maladjustive behaviour, to be corrected by appropriate conditioning techniques.

9. Psychoanalysis differed from behaviourism theorists in its
 - I. methodology.
 - II. qualitative experiments.
 - III. tenets of consciousness.
 - a. II only
 - b. III only
 - c. I and III
 - d. I and II
10. It can be inferred from the passage that to the behaviourists, learning is
 - a. building up of abstract concepts.
 - b. modification of behaviour.
 - c. mental reconstruction.
 - d. internalising, thinking and feeling.
11. It can be learnt from the passage that the psychoanalysts did not carry out quantitative experiments on animals because
 - a. they believed in conducting experiments on behaviour modification directly on human beings.
 - b. they advocated reduction of complex behaviour patterns to conditioned responses.
 - c. they didn't believe that learning is a process of response to certain stimuli.
 - d. they attempted reduction of the contents of consciousness to simple elements without actual experiments, using mechanistic model.

12. Based on the assertions in the passage, it can be inferred that La Mettrie was
a. mechanistic in his approach. b. a psychosociologist.
c. a psychoanalyst. d. a neo-Freudian.
13. Watson's objection to introspective method stems from
a. the fact that introspection is a mechanistic view of studying behaviour.
b. his disbelief in experimental method in studying responses.
c. his criticism of Newtonian physics and the methods followed in physics.
d. his disagreement to subjective study of consciousness.
14. Wigner criticised behaviourists by
a. pointing out that subjectivity and objectivity are prerequisites in the study of existence.
b. claiming that formulation of physical theories is not possible without referring to consciousness.
c. stating that conditional reflex is a result of trial and error .
d. by supporting La Mettrie's definition of man as a complex of psychological processes.
15. The term 'adjustments' is used in the passage to denote
a. stimuli. b. thinking. c. reflexes. d. responses.
16. 'Behavioural engineering' in the context of the passage implies
a. controlling behaviours through conditioning techniques.
b. behaviour modification through introspection.
c. using engineering principles in learning behaviours.
d. psychology of learning through observation and limitation.

Passage – 3

Falling commodity prices prove to be a surprising benefit for Asia. They're helping to keep the world's richest economies healthy and inflation-free. And that's crucial to Asia's recovery.

When world commodity prices began to slide in early 1997, many analysts warned that a protracted slump would hurt Asian countries. After all, falls in prices of tropical products like coconut oil, palm oil, timber and foodstuffs blighted much of the region after World War II. In the 1950s, Burma and the Philippines went cap in hand to the International Monetary Fund because of balance of payments problems, followed by Indonesia and India in the 1960s. "Lower commodity prices mean we're worse off", says Malaysian economist R. Thillainathan, reflecting these lingering fears.

True, those commodity-induced slumps of the past were never likely to be repeated this time around: Commodity exports play a much smaller part in Asia's economies than they did four decades ago. (In many countries, they have shrunk to less than 20 per cent of total exports from more than 50 per cent after World War II.) Moreover, since many commodities are priced in US dollars, the region's exporters have benefited from Asia's currency free-falls. But what no one foresaw two years ago was that lower commodity prices would actually be a boon to Asia. Low prices — in particular, for oil — have been among the keys to keeping inflation and interest rates in check in the world's richest economies. The United States and other members of the Organisation for Economic Cooperation and Development (OECD) (notable exceptions,

Japan and South Korea) have thus been able to keep their economies buoyant and increase their non-commodity imports from Asia.

“The best thing going for Asia’s recovery now is a strong OECD economy, which is being helped by low commodity prices,” says Gary Clyde Hufbauer, senior fellow at the Institute for International Economics, a politically moderate Washington-based think tank.

The danger now, economists say, is that several factors, among them dwindling corporate profits, falling consumer spending and rising inflation, could cause those rich economies — and most importantly, the US — to slow.

“The strong growth in the West has bought Asian countries a lot of time,” says Andrew Szamosszegi, senior research fellow at the Economic Strategy Institute, an international trade think tank in Washington. “If that growth slows, it could make it more difficult for them to recover.”

That’s why many economists argue that it’s in Asia’s interest for commodity prices to stay low, as they are forecast to. Some countries, notably oil-rich Indonesia, might benefit from a rebound in prices. But higher commodity prices would likely put pressure on OECD central bankers to raise interest rates to head off inflation. That would slow economic growth and, in turn, non-commodity imports from Asia. The effect, overall, would probably hurt most Asian countries more than it would help them. “Keeping inflation at bay worldwide is the biggest single factor in Asian recovery now”, says Michael Delaney, an international trade specialist and diplomat-in-residence at the East-West Centre in Hawaii.

The price of virtually every commodity exported by Asia and imported by the OECD has fallen sharply from its 1997 peak. The reasons: Record world output caused by both better technology and changes in government policies, combined with slumping demand in Asia. The widely watched index (based on a basket of key commodities used in OECD countries) produced by Bridge-Commodities Research Bureau is down 25 per cent from its high in May 1997. The Dow Jones-AIG commodity index, meanwhile, has fallen by almost 50 per cent from its early 1997 high. In 1998 alone, the World Bank estimates, prices for metals and minerals as well as agricultural commodities declined by an average of 16 per cent.

More important, prospects for a recovery in prices are dim. A World Bank study released on February 3 concludes that prices will begin to recover only slightly during the next year, due to continued oversupply. Critically, oil prices are expected to remain depressed at \$15 per barrel this year and next, compared with an average of \$19 in 1997. (The main reason is over-production, by countries both inside and outside OPEC, the Organisation of the Petroleum Exporting Countries.) Commodity prices may rise gently in the coming decade, but by 2010, real prices — those settled on commodities exchanges — are still expected to be below their 1997 levels, according to the World Bank study.

While aspects of the link between falling commodity prices and falling retail prices are unclear, economists agree that cheaper commodities have helped keep inflation low in the US and Europe by lowering production costs.

The seven leading OECD economies recorded consumer price inflation of just 1.4 per cent in the 12 months to November 30, compared with 2.3 per cent for all of 1996, before the commodity price slump

began. In the US, retail inflation fell to 1.6 per cent last year; in 1996, it was 3.3 per cent. If food and energy prices are excluded, however, US retail price inflation actually rose last year to 2.4 per cent from 2.2 per cent in 1997.

“The recent period of widespread declines in commodity prices has certainly had an impact on consumer prices,” says Patrick Jackman, an economist at the US Government’s Bureau of Labour Statistics in Washington, which computes the country’s consumer price indexes. It’s helping to hold prices down across the board.

That has been a key reason why the US and other developed economies keep chugging along. Other factors include growth associated with Internet businesses, heady consumer confidence, a booming US stock market and better-managed monetary policy. As a result, imports from Asia are well above last year’s levels in most non-Asian OECD countries.

In the first 11 months of 1998, for example, US imports from Asia rose four per cent from a year earlier, to \$301 billion. Because commodity imports were cheaper due to the price slump, the rise in the total was presumably due to non-commodity purchases climbing more than four per cent.

To be sure, some of the increase in OECD imports is a response to cheaper prices caused by currency devaluations in Asia. But the greater importance of strong OECD economic growth is shown by the fact that countries like China and Japan, whose currencies remain strong, also maintained or increased their exports to the US in the first 11 months of 1998.

For the US, a corresponding collapse of exports to Asia meant a \$148 billion trade deficit with the region during this period — a widening of 35 per cent from the same period in 1997. Japan and China accounted for three-quarters of the total, but Taiwan, Malaysia, Indonesia, South Korea, Thailand and the Philippines all ran surpluses of between \$5 billion and \$10 billion.

“There is a great sucking sound,” says Delaney of the East-West Centre. “The US is sending a \$15 billion cheque to Asia every month.”

That leaves open the question of how long buoyant exports of non-commodities to OECD countries will last. While the World Bank is ruling out any strong recovery of commodity prices, it might take less than that to reverse the current situation. Even a perceived bottoming out of commodity prices, especially oil and foodstuffs, which have the biggest effect on OECD prices, could put upward pressure on producer and consumer prices in those countries.

Some economists say commodity prices are so low that it would take a fairly large rise to have any effect on inflation. That’s because wages and other inputs are now a more important factor in inflation than commodity prices in OECD countries. “Commodities are less important in an information-based economy”, notes Dan Griswold, a trade specialist at the Cato Institute, a Washington think tank.

But the conventional wisdom of the economists is that central bankers — schooled in the old ways — will jump on any sign of recovering commodity prices and raise interest rates to head off inflation. “Rightly or

wrongly, most central bankers in OECD countries still see commodity prices as a harbinger of inflation,” says Hufbauer of the Institute for International Economics. “We could say goodbye to easy money very quickly, if commodity prices rose, say, 10 per cent.”

Shrinking OECD trade deficits would translate into falling trade surpluses for most Asian countries. If that happened, the same region that turned to the IMF for help in the 1950s and 1960s because of a commodity price slump could find itself the unlikely victim of a commodity-price recovery.

17. “Lower commodity prices mean we’re worse off,” says Malaysian economist R. Thillainathan, reflecting these lingering fears. The fear is based on which of the following?
 - a. Fall in prices of tropical products like coconut oil, palm oil, timber and foodstuffs blighted much of the region after the World War II.
 - b. A large chunk of Asian export is commodities.
 - c. Increasing commodity prices in Asia triggers off inflation in the wealthy nations who import from Asia.
 - d. Lower commodity prices in Asia would allow higher imports from the Asian countries.
18. The OECD economy looks strong and continues to be heavy importers from Asia. However, this could be attributed to which of the following?
 - a. Most of the Asian countries have devalued their currency.
 - b. The inflation continues to be low in the OECD countries.
 - c. The central banks have maintained interest rates at low levels to maintain low inflation.
 - d. Consumer spending continues to be higher than the Asian countries.
19. All the increase in OECD imports cannot be attributed to currency devaluation in Asia because
 - a. the commodity prices are low in Asia.
 - b. commodity exports play a much smaller part in Asia’s economies than they did four decades ago.
 - c. countries which have not devalued their currency have shown a growth in exports to OECD countries.
 - d. US and other developed economies have seen growth associated with Internet businesses, heady consumer confidence, booming stock markets and better-managed monetary policy.
20. The author feels that most of the central bankers are schooled in old ways as
 - a. they link increases in commodity prices to inflation too quickly.
 - b. they increase interest rates to head off inflation, but this affects the economic growth.
 - c. they slow down the economy, when they see a possibility of inflation.
 - d. they try to discourage imports from Asia.
21. Which of the following is an appropriate title for the passage?
 - a. *Commodity Prices in Asia*
 - b. *Asia’s Dependence on OECD Countries*
 - c. *Recovery, and Not Slump, in Commodity Prices Causes Slowdown in Asia*
 - d. *Imports from Asia Continue to Grow in Most Non-Asian OECD Countries*

22. The tone of the passage can be best described as
a. ironical. b. analytical. c. didactic. d. descriptive.
23. It can be inferred from the passage that
a. all Asian countries would benefit from inflation-free western economies achieved due to low commodity prices.
b. crucial to Asia's recovery is sustained growth in Western countries.
c. commodity prices have bottomed out and are not likely to dip in the long term.
d. Both (a) and (b)
24. Each of the following would assist an Asian recovery, except
a. a strong OECD economy.
b. devaluation in Asian currencies.
c. record output of commodity products by Asian countries.
d. US sending a \$15 billion cheque to Asia every month.

Passage – 4

The increasing number of accidents during the 1960s and the growing interest in environmental improvements gave rise to the passage of the Occupational Safety and Health Act (OSHA) in 1970. The Act provided for various kinds of standards and aims to ensure safe and healthy working conditions for employees who had previously been inadequately covered by state safety legislation. The Act also included stiff penalties and enforcement procedures to ensure compliance. Additionally, violators of the Act could be imprisoned for certain violations.

One of the most important legal rulings affecting selection procedures occurred in 1971 — the case of *Griggs vs Duke Power Company*. In the *Griggs* decision, the US Supreme Court adopted the interpretive guidelines set out under Title VII, that is, tests must fairly measure the knowledge or skills required in a job in order not to discriminate unfairly against minorities. This action, single-handedly, made invalid any employment test of diploma requirement that disqualified blacks at a substantially higher rate than whites (even when this was not intended) if this differentiation could not be shown to be job-related.

The *Griggs* decision had even wider implications. It made most intelligence and conceptual tests used in hiring illegal unless there was direct empirical evidence that the tests employed were valid. This crucial decision placed the burden of proof on the employer. It is now the responsibility of the employer to provide adequate support that any test used does not discriminate on the basis of non-job-related characteristics. For example, if an employer requires all applicants to take an IQ test, and the results of that test will be used in making the hiring decision, the burden of proof is on the employer to substantiate that individuals with higher scores outperform on the job those individuals with lower scores.

Note that nothing in the court's decision precludes the use of testing or measuring procedures. What it did was to place the burden of proof on management to demonstrate, if challenged, that the tests used provided a reasonable measure of job performance.

In 1972, the Equal Employment Opportunity Act (EEOA) was passed, which provided a series of major amendments to Title VII of the Civil Rights Act. Probably of greatest consequence, the Equal Employment Opportunity Commission (EEOC) was given authority to effectively prohibit all forms of employment discrimination based on race, religion, colour, sex, or national origin. The EEOC now had the power to file civil suits against organisations if the commission was unable to secure an acceptable resolution of discrimination charges within 30 days of its filing. The EEOC also expanded Title VII coverage to encompass employees of state and local governments, employees of educational institutions, and employers or labour organisations with 15 or more employees or members (previously the law had covered only firms with 25 or more employees).

In 1973, the Comprehensive Employment and Training Act (CETA) was passed, amending the Manpower Development and Training Act of 1962. In 1979 alone, CETA provided 7,25,000 public jobs, costing nearly \$12 billion to operate. CETA lasted until 1982. Its success, at best, is questionable, for only a few people were permanently placed in organisations.

Legislation was also passed to eliminate discrimination against handicapped people, protect and promote the rights of veterans, protect an individual's retirement, and extend the age for mandatory retirement.

The Vocational Rehabilitation Act of 1973 extended to the disabled the same protections available to racial minorities and women. The Act requires companies receiving \$2,500 or more annually in federal contracts to take affirmative action to recruit, employ, and advance all qualified handicapped individuals, including the making of reasonable accommodations to the physical and mental limitations of handicapped employees. Congress has been concerned with the rights of veterans since Second World War. There have been many Selective Service Acts, and they reaffirm the right of a veteran to be hired into a former job or a similar position. More recently, the Veterans' Readjustment Act of 1974 specifically provided for employment opportunities for veterans of the Vietnam War.

The Employee Retirement Income Security Act (ERISA) was passed in 1974. The purpose of the Act was to deal with the largest problem posed by private pension plans — people were not getting their benefits. The design of private pension plans had almost always required a minimum tenure with the organisation before the individual was guaranteed a right to pension benefits. Typically, employees had to be with the organisation ten or more years before they gained a permanent right (called vesting) to those benefits, and in some cases, the only way employees could get their pensions was to stay until retirement. In the latter situation, an employee with 25 years' service who was discharged at the age of 60 would have no rights to pension benefits. The intent of ERISA was to correct these inconsistent and sometimes arbitrary practices.

In 1975, the Supreme Court decision in the case of *Albamarle Paper Company vs Moody* clarified the methodological requirements for using and validating tests in selection. Four black employees challenged their employer's use of tests for selecting candidates from the unskilled labour pool for promotion into skilled jobs. The court endorsed the EEOC guidelines by noting that Albamarle's selection methodology was defective because (1) the tests had not been used solely for jobs for which they had previously been validated; (2) the tests were validated for upper-level jobs alone but were used for entry-level jobs; (3) subjective supervisory ratings were used for validating the tests, but the ratings had not been done with care; and (4) the tests had been validated on a group of job-experienced, white workers, whereas the tests were given to young inexperienced, and often non-white, candidates.

Possibly one of the most far-reaching pieces of legislation was the 1978 set of amendments to the Age Discrimination Act of 1967. The time at the age of 65. Under this law, most workers were not required to retire until they reach the age of 70. (In 1986, this 70-age cap was eliminated, meaning there is now no mandatory retirement age). Coverage of this Act is widespread. It includes workers in private firms that have more than 19 employees and nearly all state and local government workers except police officers and fire fighters. The law eliminates, altogether, mandatory retirement based on age for most employees of the federal government

The Supreme Court's decision (1979) in the case of the United Steel Workers of America vs Weber appears to have important implications for organisational training and development practices and for the larger issue of reverse discrimination. In 1974, Kaiser Aluminium and the United Steel Workers Union set up a temporary training programme for higher-paying skilled trade jobs, such as electrician and repairer, at a Kaiser plant in Louisiana. Brian Weber, a white employee at the plant, who was not selected for the training programme, sued on the grounds that he had been illegally discriminated against. He argued that blacks with less seniority were selected over him to attend the training solely due to their race. The question facing the court was: Is it fair to discriminate against whites in order to help blacks who have been longtime victims of discrimination? The justices said that employers can choose to give special job preference to blacks without fear of being harassed by reverse discrimination suits brought by other employees. The ruling was a strong endorsement of voluntary affirmative action efforts — goals and timetables for bringing an organisation's minority and female workforce up to the percentages they represent in the available labour pool. Organisations can use this decision to justify giving special preference for jobs to blacks so as to correct racial imbalances in their workforce without fear of being challenged in the courts.

The Job Training Partnership Act of 1983 (which amended the 1973 Comprehensive Employment and Training Act) focuses on the issues of unemployment and underemployment. Its purpose, similar to the training acts before it, is to provide services for the economically disadvantaged individual. Through services such as training (provided at the federal, state and local levels), disadvantaged individuals are helped to become more self-supporting.

A last point should be made before we move on. We have discussed only public policy actions by the federal government. In addition to the legislation and executive orders at the federal level, most states have laws similar to Title VII of the Civil Rights Act and additional legislation that affects local hiring and promotion policies. While we have not discussed these because of their number and diversity, you should be aware that there is another level of government that affects HRM practices.

25. A suitable title for this passage could be
 - a. *The Griggs Decision vs Dubese Power Company.*
 - b. *The Evolution of Human Resource Management.*
 - c. *Civil Rights, 1975.*
 - d. *Equal Opportunity Rights of Blacks vs Whites.*
26. Which of the following is not mentioned in the passage?
 - a. The Griggs case secured in 1971.
 - b. Practising of Trade Monopoly is against the Trade Act, 1972.
 - c. The ERISA was passed to deal with pension plans.
 - d. EEOA was passed in 1972.

27. Albemarle's selection process was faulty due to all of the following reasons except
- the tests were used for entry level jobs though not validated to do so.
 - the supervisory ratings used to validate were subjective.
 - the test did not measure the competences it was supposed to measure.
 - the tests were often given to a group of young inexperienced white candidates who they were not meant for.
28. The 'OSHA' Act was implemented to ensure
- non-discrimination against the whites of America.
 - non-discrimination against the blacks of America.
 - safe and healthy employee working conditions.
 - lifetime employment opportunity.
29. Mandatory retirement age of 70 was removed by the
- Age Discrimination Act 1967.
 - 1986 amendment.
 - 1978 amendment.
 - Federal Government Act.
30. Reverse discrimination suits cannot be supported because
- it is better than normal discrimination.
 - black representation in workforce is minimal.
 - it is considered sort of voluntary affirmative action effort.
 - it encourages competition.
31. Rehabilitation Act of 1973 requires companies to
- take voluntary affirmative action.
 - be accommodative to physical and mental limitations of employees.
 - extend retirement age.
 - Both (a) and (b)
32. Arrange the following Acts chronologically in the order of their implementation.
- EEOA, OSHA, ERISA, VRA
 - EEOA, CETA, VRA, ERISA
 - OSHA, EEOC, TITLE VII, ERISA
 - TITLE VII, CETA, EEOA, JTPA

Passage – 5

Don't look now, but you're being watched. Don't flip this page either, for news of this event will be darted across electronically to the issue-planners over at A & M, who might decide to replace such venerable reports on market research (MR) with others more likely to grab your attention.

Okay, that was a lie. What's true is that in the US, the instant a customer buys anything, the information is transmitted to the marketer's headquarters. There are computer terminals at every retail transaction point. Some retail chains even have a live picture of what's moving off the shelves.

In India, retailing has traditionally been . . . well, a low-information field of haphazard activity. Thankfully, it has all begun to change. The past three years have seen a wave of modern retailing ventures, and global chains such as Wal-Mart and Mark & Spencer are expected to enter India in some years.

The need for information is projected to grow at a furious pace, and MR firms are expected to get into retail research in a big way. Research International (RI) India, part of the UK-based MR group, has already done it.

RI (I) is eyeing 'marketers' rather than 'traders', and is banking on tools crafted from global experience (its client roster includes Sears Roebuck, McDonald's and Tesco).

With dozens of multi-crore projects sprouting up across the country, the business has suddenly become viable. "It is typical of the big retail outlets that the investments could take up to 10 years to pay off," says H. Pradeep, associate vice-president, RI (I) study, for example, reveals that consumers are not deeply affected by the unavailability of their regular soap brand at their regular retail outlet. The feeling varies from indifference to mild irritation, and most brands can easily be substituted by another in the same price-appeal bracket (the alternative being to try another shop). This is not good news for marketers of deep-loyalty brands of premium soap.

The above research was carried out by using a technique called Storemind. The approach is usually tailor-made to fit the specific requirements of the manufacturer (and the category), involving both qualitative and quantitative approaches such as observation and customer tracking.

Another RI (I) survey — this time of a retail chain selling premium fabrics — reveals that 'purposive shopping' is high in this market. One of every three purchases made is for a special occasion. Impulse purchases are negligible, and the brand decision is largely taken before the shopper steps out of the house. This has different implications for marketers.

RI (I) offers a broad range of research techniques, covering store location, service measurement and customer response. After all, the increase in the number of Indian working women — and the accompanying pressure on time — is bound to have widespread ramifications.

Since organised retailing is a new thing in India, most of RI (I)'s revenues are likely to come from start-up ventures. So, prelaunch services are expected to do quite well. Of these, site evaluation will probably be the biggest draw. RI (I)'s model claims to make reasonably accurate projections of likely turnover, profile of likely customers and competition. Then, there is a customer profile study, which can provide a retailer with information on visitors to the store. The 'origin' of customers can be identified, to plot 'catchment' areas. These studies also provide measures of store awareness, usage, image and, so on.

Other prelaunch possibilities include a tool to pre-test a new retailing proposition. The burst of music stores aiming to be teenage 'hand-outs' has convinced many prospective retailers that it's no point unless one has a clear traffic attracting strategy.

The one big stumbling block, however, could simply be the 'nerd' problem that afflicts badly conducted MR. Written-down propositions often fail to convey what kind of atmosphere the shop is likely to have, and so respondents respond purely on the basis of attributes such as 'wares available', 'location' and 'decor', which miss out on all the rest of it.

The firm also specializes in 'tracking' studies, which are done once the business gets going, and provide performance indicators. Plus, it offers special observational studies, which tend to be qualitative, takes on shopping behaviour. "Observation is the primary research tool," says Ranjan Banerjee, who heads Renaissance, a Pune-based retail management consultancy, and recommends *Why We Buy*, a book on

the subject by Paco Underhill of Envirosell, a top American retail researcher. Retailers in the US even have data on ideal mannequin postures, let alone the precise placement coordinates. Indian shopping behaviour is likely to prove a more fascinating field of study than in America. This is because the Indian shopper has only just entered a new phase of evolution, and attitudes are shifting rapidly. Here's just one indicator: confident shoppers no longer feel the need to limit their browsing because the days of 'shopkeeper reproach' are fading away.

Most of the current general knowledge of Indian shopping behaviour has been obtained from a recent study by KSA Technopak, a Delhi-based retail consultancy, which shows that the experience has started taking precedence over the actual acquisition of products, and old-style retailers risk losing customers if they don't orient themselves to customer aspirations. According to Banerjee, Renaissance also has a bank of shopping behaviour insights gleaned from local observational studies.

But all that is barely enough. And the learning has only just begun. Indian retailers need a lot more probing done, particularly in areas of specific interest to them. While some generalisations can be made, buyer behaviour differs vastly from category to category. The case of specialized lingerie stores, for example, has been an issue of much debate.

RI (I) intends satisfying retailers' need for information in a multitude of areas. The firm even has the wherewithal to conduct 'mystery customer research', which provides a picture of what happens on a typical shopping trip. Another tool is Purchase Plus, which attempts to evaluate the extent to which the customer's choice of brand is influenced after he/she enters a store intending to purchase a specific item. This could be of importance to marketers who must make decisions on promotional budget allocations. All in all, RI (I) hopes to provide a basis on which a marketer can monitor a publicity strategy.

Storemind, of course, is what RI (I) expects to be its best seller. And this takes into account all sort of things, answering all sorts of questions. If used in addition to household panel data, it could help marketers get a good fix on their respective markets. This is all the more critical for new retailers who lack the learning acquired over decades by old-timers. Across the world, one of the biggest barriers to entering the retail business is not real estate, but the pool of consumer knowledge that gets built over the years. In fact, it is this experience that has helped local retailers in South America stave off the multinational attack. MR can't provide a perfect substitute, but it can surely help new entrants. Several other MR firms are expected to launch their own retail intelligence programmes shortly. After all, the changes are going to become faster than ever before. Who would have imagined five years ago that you could have walked into a music store, grabbed a cup of coffee and coolly put on a pair of headphones to sample the hottest new music in town?

33. According to the passage, for products such as premium fabrics
- consumers are not very affected by lack of availability of their regular brand and most brands can easily be substituted by another in the same price-appeal bracket.
 - consumers would rather try another shop than substitute their regular brand with another.
 - consumers make the brand choice before they step into the shop.
 - consumers are happy as long as they get one of three brands that are uppermost in their minds.
34. Which of the following is unlikely to be a service offered by RI?
- | | |
|-------------------------------------|-----------------------------------|
| a. Evaluation of brand image | b. Projections of likely turnover |
| c. Demographic profile of consumers | d. Cost-cutting techniques |

35. According to the passage, Indian shoppers are
 a. lacking in sophistication and confidence.
 b. laggards compared to international shoppers.
 c. afraid of inviting the displeasure of the shopkeeper if they go on browsing beyond a point.
 d. entering a new phase of evolution.
36. According to the passage, buyer behaviour
 a. is common to all underdeveloped countries. b. differs from state to state.
 c. differs from category to category. d. is common to all evolved consumers.
37. The extent and the way by which a consumer's brand choice is affected after he enters a shop can help take decisions on
 a. advertising budgets. b. marketing tactics.
 c. promotional budgets. d. retailing strategy.
38. Market research, according to the author,
 a. can help old retailers boost their sales, while new retailers cannot use the information much because of lack of experience.
 b. can act as a substitute for experience in the retail business.
 c. will help marketers rather than traders
 d. All of these
39. The biggest barrier to entering retail business is
 a. delayed pay-offs on investments. b. high real estate cost.
 c. lack of customer knowledge. d. None of these
40. The tone of the passage is
 a. descriptive. b. narrative. c. sarcastic. d. indifferent.

Direction for questions 41 to 45: Sentences given in each question, when properly sequenced, form a coherent paragraph. The first and last sentences are 1 and 6, and the four in-between are labelled A, B, C and D. Choose the most logical order of these four sentences from among the four given choices to construct a coherent paragraph from sentences 1 to 6.

41. 1. India's experience of industrialisation is characteristic of the difficulties faced by a newly independent developing country.
 A. In 1947, India was undoubtedly an under-developed country with one of the lowest per capita incomes in the world.
 B. Indian industrialization was the result of a conscious, deliberate policy of growth by an indigenous political elite.
 C. Today India ranks fifth in the international community of nations if measured in terms of purchasing power.
 D. Even today, however, the benefits of Indian industrialisation since independence have not reached the masses.
 6. Industrialisation in India has been a limited success; one more example of growth without development.
 a. CDAB b. DCBA c. CABD d. BACD

42. 1. The necessity for regional integration in South Asia is underlined by the very history of the last 45 years since the liquidation of the British empire in this part of the world.
- A. After the partition of the Indian subcontinent, Pakistan was formed in that very area which the imperial powers had always marked out as the potential base for operations against the Russian power in Central Asia.
 - B. Because of the disunity and ill-will among the South Asian neighbours, particularly India and Pakistan, great powers from outside the area could meddle into their affairs and thereby keep neighbours apart.
 - C. It needs to be added that it was the bountiful supply of sophisticated arms that emboldened Pakistan to go for warlike bellicosity towards India.
 - D. As a part of the cold war strategy of the US, Pakistan was sucked into Washington's military alliance spreading over the years.
6. Internally too, it was the massive induction of American arms into Pakistan which empowered the military junta of that country to stub out the civilian government and destroy democracy in Pakistan.
- a. ACBD b. ABDC c. CBAD d. DCAB
43. 1. The success of any unit in a competitive environment depends on prudent management sources.
- A. In this context, it would have been more appropriate, if the concept of accelerated depreciation, together with additional incentives towards capital allowances for recouping a portion of the cost of replacements out of the current generations, had been accepted.
 - B. Added to this are negligible retention of profits because of inadequate capital allowances and artificial disallowances of genuine outflows.
 - C. One significant cause for poor generation of surpluses is the high cost of capital and its servicing cost.
 - D. The lack of a mechanism in Indian tax laws for quick recovery of capital costs has not received its due attention.
6. While this may apparently look costly from the point of view of the exchequer, the ultimate cost to the government and the community in the form of losses suffered through poor viability will be prohibitive.
- a. ADBC b. BCDA c. CBDA d. DBAC
44. 1. It is often said that good actors can get out of a play more than the author has put into it.
- A. A good actor, bringing to a part his own talent, often gives it a value that the layman on reading the play had not seen in it, but at the utmost, he can do no more than reach the ideal that the author has been in his mind's eye.
 - B. In all my plays I have been fortunate enough to have some of the parts acted as I wanted; but in none have I had all the parts so acted.
 - C. That is not true.
 - D. He has to be an actor of address to do this: for the most part, the author has to be satisfied with an approximation of the performance he visualised.
6. This is so obviously inevitable, for the actor who is suited to a certain role may well be engaged and you have to put up with the second or third best, because there is no help for it.
- a. BACD b. DACB c. CADB d. DCBA

45. 1. All human beings are aware of the existence of a power greater than that of the mortals — the name given to such a power by individuals is an outcome of birth, education and choice.
 A. Logically, therefore such a power should be remembered in good times also.
 B. Their other philanthropic contributions include the construction and maintenance of religious places such as temples or gurudwaras.
 C. Industrial organisations also contribute to the veneration of this power by participating in activities such as religious ceremonies and festivities organised by the employees.
 D. This power provides an anchor in times of adversity, difficulty and trouble.
6. The top management/managers should participate in all such events, irrespective of their personal choice.
- a. CADB b. BCAD c. DACB d. DBCA

Direction for question 46: Sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the four choices to construct a coherent paragraph.

46. A. Her extreme youth, as well as her sex, have contributed to the generally-held opinion that she was so much an author in her own right, as a transparent medium through which passed the ideas of those around her.
 B. Mary Shelley herself was the first to point to her fortuitous immersion in the literary and scientific revolutions of her day as the source of her novel Frankenstein.
 C. Passive reflections, however, do not produce original works of literature, and Frankenstein, if not a great novel, was unquestionably an original one.
 D. "All Mrs Shelley did," writes Mario Praz, "was to provide a passive reflection of some of the wild fantasies which were living in the air about her."
- a. ADBC b. DCBA c. BDCA d. BADC

Direction for questions 47 to 50: The opening line of a paragraph is given. From the alternatives, choose the one that rearranges the statements numbered A, B, C and D such that they form a coherent paragraph and follow the opening line.

47. An established business which is able and willing to invest in its development into mail order trading will usually engage the services of a suitable advertising agency.
- A. Unfortunately, however, too often the newcomer is left to his own creative devices, which are likely to be few and underdeveloped.
 B. But should a suitable agency be persuaded to accept the account, life should be much easier for the new business.
 C. But an individual beginner with limited financial resources will be extremely fortunate to find such an agency.
 D. There are few agencies with the real depth of experience in the mail order field and even fewer that will be prepared to invest their time and money in nursing a beginner without the inducement of a substantial fee.
- a. DCBA b. CDBA c. CADB d. ACDB

48. Jenny decided to be a great producer, and *The Sheik* was the story she chose to produce.
 A. Andrew refused to play the part of *The Sheik*.
 B. Jenny was equally determined to be the heroine, so they argued back and forth.
 C. But she ran into snag at once.
 D. He wanted to be the lady who gets carried off on the Sheik's horse.
 a. ABCD b. ADBC c. CADB d. ACDB
49. As I went about to the other workrooms, I realised that every painting was a self-portrait even when it was a still life or a scene over the roofs of Paris.
 A. With every brush stroke the artist was mercilessly exposed; he could conceal nothing, he could pretend to be another person, but in the end, he would fool no one.
 B. For no man ever pictured anything but himself, his core, the things he was basically.
 C. An artist had one thing to say, and only one; he might flail about, seek new techniques, forms, colours, combinations, subjects, but intrinsically, he would always paint the same canvas, write the same book.
 D. Only now, years after having read through the works of Shakespeare, Dickens and Scott, I realise that even the most prolific writer created only one novel; the true and complete portrait of himself.
 a. BADC b. ABCD c. CADB d. ADCB
50. India and Japan have finally agreed to disagree.
 A. But last week on his visit to India, Japanese Prime Minister Yoshiro Mori made it clear that while it may not be business as usual until New Delhi signs the CTBT, Tokyo wasn't averse to chipping away at sanctions to develop a 'new partnership for the 21st century'.
 B. The main thrust of this new partnership, of course, is in the field of information technology.
 C. As a start Mori announced Japanese aid for two major Indian projects, totalling about \$178 million, would resume.
 D. Tokyo was one of the harshest critics of Pokhran II, and imposed stringent sanctions.
 a. ACBD b. DABC c. DACB d. CBAD

Direction for questions 51 to 55: Fill in the blanks of the following sentences using the most appropriate word or words from among the options given for each.

51. When children become more experienced with words as visual symbols, they find that they can gain meaning without making ____ sounds.
 a. aural b. audible c. vocal d. intelligible
52. To a greater or lesser degree all the civilised countries of the world are made up of a small class of rulers ____ and of a large class of subjects ____ .
 a. formed by a small minority ... who are uncivilised
 b. powerfully corrupt ... pointless crusaders
 c. corrupted by too much power ... corrupted by too much passive obedience
 d. who are ruled ... who ruled

53. Most political leaders acquire their position by causing a large number of people to believe that these leaders are ____ by altruistic desires.
a. actuated b. convinced c. categorised d. led
54. ____ seems to be casting its shadow over virtually all commentaries and discussions on the fixed income securities markets in the recent past.
a. The government's huge borrowing programme in the urgent fiscal
b. The mammoth borrowing programme of the government in the current fiscal
c. In the current fiscal, the mammoth borrowing programme of the government
d. The huge borrowing programme of the government for the current fiscal
55. The ____ killing of Kashmir's power minister by a Pakistani terrorist organisation is obviously meant as a/an ____ from Pak to the leaders of the Hurriyat Conference against entering into a political dialogue with the Indian Government.
a. ruthless ... treat b. lethal ... remembrance
c. brutal ... warning d. bloody ... indicator.

Section – II

Direction for questions 56 to 58: Answer the questions based on the following information.

Two numbers among A, B, C, D, E and F are positive odd integers. Two of these numbers are positive even integers. The remaining two are both equal to zero. The numbers satisfy the following conditions:

- I. $5(A + B + C + D + F)$ is odd.
- II. $A + C$ is not even.
- III. $EC = 2AD$, but AD is greater than BE.

56. The two odd numbers are
a. A and E b. B and E c. D and F d. A and C
57. The two even numbers are
a. F and D b. C and E c. C and D d. B and F
58. The numbers which are both zero, are
a. B and E b. B and F c. D and F d. A and C

Direction for questions 59 and 60: Answer the questions based on the following information.

Two among the four girls E, G, K and L are twins.

- I. T is the grandmother of both E and L.
- II. S is the brother of G, but not of K.
- III. K is of the same age as G but is younger than E.
- IV. R is the sister of L, but not the sister of either E or K.

59. The twins are
a. G and L b. E and L c. E and G d. G and K
60. The oldest among them is
a. L b. K c. E d. G
61. The ratio of the altitudes of a triangle is 2 : 3 : 4. Find the sides of the triangle, if its perimeter is 91 cm.
a. 42, 26, 23 b. 42, 28, 21 c. 40, 30, 21 d. 36, 24, 31
62. In decimal system there are 10 digits 0, 1, 2, 3, ... till 9. Similarly, there is a system which has only 3 digits 0, 1 and 2. Numbers represented in such systems are called base 3 or trinary numbers. $N = 3^{89} + 1$ is a number in the decimal system. M is the trinary equivalent of this number. How many zeroes are there in M?
a. 90 b. 89 c. 88 d. None of these
63. All the two-digit natural numbers are selected which have their unit's digit greater than their ten's digit. If all these numbers are written one after the other in a series, how many digits are there in the resulting number?
a. 90 b. 72 c. 36 d. None of these

64. What is the remainder when 7^{83} is divided by 20?
 a. 13 b. 3 c. 7 d. None of these
65. If $N = 1! + 2! + 3! + 4! + \dots + 50!$, then which of the following will exactly divide N?
 a. 5 b. 3 c. 7 d. None of these
66. $N(x)$ is the product of the first x prime numbers. Mr Calculus was trying to figure out what is the total number of factors that $N(x)$ has. If he takes the value of $x = 10$, find the number of factors that Mr Calculus would have found out.
 a. 11 b. 2^{10}
 c. ${}^{10}C_0 + {}^{10}C_1 + {}^{10}C_2 + \dots + {}^{10}C_{10}$ d. Both (b) and (c)
67. Two identical vessels are filled with alcohol. From the first vessel 'a' litres of the solution is taken out and replaced with 'a' litres of water. From the resulting mixture 'a' litres of the mixture is removed and again replaced with 'a' litres of water. The same operation is done in the second vessel the same number of times, but the amount of solution removed and replaced with water is '2a' litres. What fraction of the volume of the vessels is 'a' if the strength of alcohols in the two vessels finally is in the ratio 25 : 16?
 a. $\frac{1}{4}$ b. $\frac{4}{5}$ c. $\frac{2}{3}$ d. $\frac{1}{6}$
68. A firm has tractors of four models A, B, C and D. Four tractors (two of model B and one each of models C and D) plough a field in 2 days. Two model A tractors and one model C tractor take 3 days to do this job. Three tractors one each of models A, B and C take 4 days to do the same task. How long will it take to do the job if a team is made up of four tractors of different models?
 a. $\frac{10}{7}$ days b. $\frac{14}{7}$ days c. $\frac{13}{7}$ days d. $\frac{12}{7}$ days
- Direction for questions 69 and 70:** Answer the questions based on the following information.
 At a 10,000 m ski race, Pawan starts first and is followed later by Upendra. The speed of Upendra is 1 m/s more than that of Pawan's. When Upendra catches up with Pawan, Pawan increases his speed by 2 m/s, while that of Upendra remains unchanged. As a result, Upendra finishes 7 min 8 s after Pawan. If the distance had been 500 m more, then Upendra would have finished 7 min 33 s after Pawan.
69. The time gap between the start of Pawan and Upendra is
 a. 2 min b. 2.5 min c. 3 min d. 1 min
70. The speed of Upendra is
 a. 4 m/s b. 5 m/s c. 3 m/s d. 2 m/s
71. A rectangular plot of area 900 sq. m is to be fenced: two adjoining sides with bricks and two others with wooden fence. One metre of the wooden fence costs Rs. 10 and one metre of the brick fence costs Rs. 25. Sujit, the contractor, has been given Rs. 2,000 to complete the task. Sujit will be in
 a. profit b. loss c. no profit no loss d. Data insufficient

72. There are five consecutive integers a, b, c, d and e such that $a < b < c < d < e$ and $a^2 + b^2 + c^2 = d^2 + e^2$. What is(are) the possible value(s) of b ?
- a. 0 b. 11 c. 0 and -11 d. -1 and 11

Direction for questions 73 and 74: Answer the questions based on the following information.

The Department of Telecommunications (DoT) has four slabs of telephone rates: T_1, T_2, T_3 and T_4 . In T_1 for every 3 s or part thereof, you have to pay Rs. 2. In T_2 for every 5 s or part thereof you have to pay Rs. 2.20. In T_3 for every 9 s or part thereof you have to pay Rs. 4 and in T_4 for every 12 s or part thereof you have to pay Rs. 5.

73. If you have to make a 2 min call in T_3 , how much will you pay?
- a. Rs. 53.3 b. Rs. 56 c. Rs. 60 d. Rs. 52
74. In case of a one minute call, how much cheaper is the slab T_3 in comparison to slab T_1 ?
- a. 12% b. 30% c. 33.33% d. None of these
75. A contractor did not have space in his garage for 8 of his trucks. He, therefore, increased the size of his garage by 50% which gave him space for 8 more trucks than he owned altogether. How many trucks did he own?
- a. 32 b. 48 c. 40 d. 45
76. In the following multiplication, all the numbers from 1 to 8 have been used exactly once $\frac{6a}{b c} \cdot \frac{defg}{}$.
- Each letter represents a distinct digit. What is the value of $a + b + c + d + e + f + g$?
- a. 28 b. 30 c. 24 d. None of these
77. If $f(x) = x!$ and $f^n(x) = f\{f^{n-1}(x)\}$ (for $n \geq 2$), for how many x 's $f^n(x) = x$, where n, x are natural numbers?
- a. 1 b. 2 c. 3 d. None of these

Direction for questions 78 and 79: Answer the questions based on the following information.

In an examination, 6,300 students appeared comprising of four papers and a student is considered passed if and only if he passes in all four papers.

Passed – 1,430
 Passed in history – 3,630
 Passed in geography – 3,660
 Passed in civics – 3,510
 Passed in economics – 3,570
 Passed in at least three subjects – 2,630

78. How many candidates passed in geography, but failed in one or more subjects?
- a. 1,200 b. 1,820 c. 2,230 d. 3,670
79. How many candidates failed because of having failed in two or more subjects?
- a. 790 b. 1,820 c. 2,230 d. 3,670

80. In the six statements given below, exactly one is false, find out which one is false.
- A is taller than B.
 - B is taller than D.
 - C is taller than D.
 - D is taller than C.
 - B is taller than C.
 - A is taller than C.
- a. IV b. I c. V d. VI
81. All the numbers from 105 to 498 are listed down in the ascending order. Ramu picks up every seventh number starting from 105 and prepares a list of these numbers. Ramu's assistant sums up all the numbers in this list. What is the total sum so obtained?
- a. 11757 b. 17757 c. 17157 d. 71157
82. An urn contains 5 white and 7 black balls. A second urn contains 7 white and 8 black balls. The ball is drawn from the first urn and put into the second urn without noting its colour. Now if a ball is drawn from the second urn, the probability that it is white, is
- a. $\frac{98}{192}$ b. $\frac{89}{192}$ c. $\frac{77}{192}$ d. $\frac{61}{192}$
83. Two cars P and Q are moving at uniform speeds on two straight roads at right angles to each other at 50 km/hr and 25 km/hr respectively. P passes the intersection of the road when Q has still to move 50 km to reach it. What is the shortest distance between the cars during the journey?
- a. $20\sqrt{5}$ km b. 50 km c. 25 km d. $25\sqrt{2}$ km
84. The maximum number of identical coins from which a faulty one (weighing less than all others) can be found in three weighings on a simple balance is
- a. 24 b. 25 c. 26 d. 27
85. A painter needs 3 days to paint the walls of a room. How long would it take working at the same rate, to paint a room twice as long, twice as wide and twice as high?
- a. 6 days b. 9 days c. 24 days d. None of these
86. The function Add $[x, y]$ is defined as increase in the volume of the solution by $x\%$, by adding water only for y number of times. If we operate this function on a 3 : 2 solution of milk and water with the function being Add $[25, 2]$, what is the final ratio of milk to water in the solution?
- a. 67 : 55 b. 48 : 77 c. 25 : 9 d. 25 : 16
87. A circle of radius 6.5 cm is circumscribed around a right-angled triangle with the sides a , b and c cm. a , b and c are all natural numbers. What is the perimeter of the triangle?
- a. 30 cm b. 26 cm c. 28 cm d. Data insufficient

Direction for questions 88 and 89: Answer the questions based on the following information.

The percentage volumes of alcohol in three solutions S1, S2 and S3 form a geometric progression in that order. If we mix the first, second and third solutions in the volume ratio of 2 : 3 : 4, we obtain a solution containing 32% alcohol. If we mix them in the ratio 3 : 2 : 1, by volume, we obtain a solution containing 22% alcohol.

88. What is the percentage of alcohol in S1?
a. 6% b. 12% c. 18% d. None of these
89. If we mix S2 and S3 in the ratio 3 : 2 by volume, what will be the percentage of alcohol in this resultant solution?
a. 36% b. 36.3% c. 33.6% d. None of these

Direction for questions 90 to 92: Answer the questions based on the following information.

A car leaves A for B. Simultaneously, a motorcycle whose speed is lesser than that of the car leaves for A from B. They meet on the way at X. At the time that the car and the motorcycle meet, another motorcycle with the same speed as the first, leaves from B for A. This motorcycle meets the car at Y. The distance between X and Y is $\frac{2}{9}$ of the distance between A and B. Had the speed of the car been 20 km/hr less than its original speed, the first meeting would have occurred 3 hr after the start time and the distance between the first and the second meeting points would have been 72 km.

90. What is the distance between 'A' and 'B'?
a. 150 km b. 200 km c. 250 km d. 300 km
91. What is the speed of the car?
a. 25 km/hr b. 30 km/hr c. 40 km/hr d. 80 km/hr
92. What is the speed of the motorcycle?
a. 10 km/hr b. 5 km/hr c. 40 km/hr d. 80 km/hr
93. A factory has to deliver 1,100 parts to a client. The parts are packed in boxes of three types A, B and C. The box A can hold 70 parts, box B can hold 40 parts and box C can hold 25 parts. The cost of delivery for box A is Rs. 20, for box B is Rs. 10 and for box C it is Rs. 7. How many boxes of each type should be used in order to minimize the cost of delivery? (All the boxes must be used to full capacity.)
a. 4 of C and 25 of B b. 12 of C and 20 of B
c. 10 each of A and B d. 14 of A, 1 of B and 4 of C
94. The number of solutions of the equation $4x(x - 3) - 5|2x - 3| + 13 = 0$ is
a. 1 b. 2 c. 3 d. 4
95. What is the number of integers greater than a million that can be formed using the digits 2, 3, 0, 3, 4, 2 and 3?
a. 240 b. 320 c. 360 d. 380

96. What is the probability that product of two integers chosen at random has the same unit's digit as the integers themselves?
- a. $\frac{3}{10}$ b. $\frac{1}{25}$ c. $\frac{4}{15}$ d. $\frac{7}{15}$
97. If $3x + 2$, $x + 2$, $2x - 2$ are in GP, then one value of x can be
- a. a positive integer b. a negative integer c. an irrational number d. a complex number
98. All three-digit numbers, in which the ten's digit is a natural number and is a perfect square, are formed using the digits 1 to 9. The sum of all such numbers is
- a. 134005 b. 270540 c. 170055 d. 149085
99. If $\frac{bx - ay}{b} = \frac{cy - bz}{c} = \frac{az - cx}{a}$, given that $\begin{pmatrix} bx \neq ay, \\ cy \neq bz, \\ az \neq cx \end{pmatrix}$. Which of the following is true?
- a. $ab + bc + ca = 0$ b. $ab - bc + ca = 0$ c. $ab + bc - ca = 0$ d. $ab - bc - ca = 0$
100. The sum of the squares of any three consecutive odd numbers increased by 1 is divisible by
- a. 10 b. 9 c. 12 d. 18
101. A doting father bought 25 Cadbury's Dairy Milk chocolates for his three children. In how many ways can he distribute it among them taking care that each one of them gets at least one chocolate?
- a. 351 b. 276 c. 552 d. 702
102. The graph $y = 2x + 4$ is reflected about the Y-axis. The graph so formed will have the equation
- a. $y = 2x - 4$ b. $y = -2x + 4$ c. $y = 4x - 2$ d. None of these
103. The area of the quadrilateral formed by the points (1, 8), (3, 4), (5, 8) and (-3, 4) is
- a. 10 b. 15 c. 20 d. 25
104. Four balls are drawn at random from a bag containing 5 white, 4 green and 3 black balls. The probability that exactly two of them are white is
- a. $\frac{14}{33}$ b. $\frac{7}{16}$ c. $\frac{18}{33}$ d. $\frac{9}{16}$
105. Shakaal 'The Gangster' is in a big fix. He has to select 3 people from his gang of 15 people which includes Monu and Sonu. In how many ways can Shakaal select 3 people following these given conditions?
- I. If Monu is selected, Sonu is not selected.
II. If Sonu is selected, Monu is not selected.
- a. 156 b. 442 c. 224 d. 424

Direction for questions 106 and 107: Answer the questions based on the following information.
 $F(n)$ is defined as the unit's digit of the sum of the factorials of all natural numbers from 1 to n .

106. What is the value of $F(100)$?

- a. 0 b. 3 c. 5 d. 6

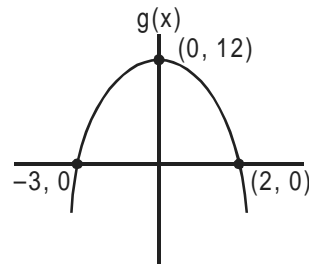
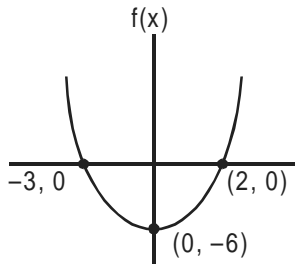
107. What is the value of $G(5)$, where $G(n) = F(n) - F(n - 1)$, n is a natural number?

- a. 0 b. 5 c. 6 d. 4

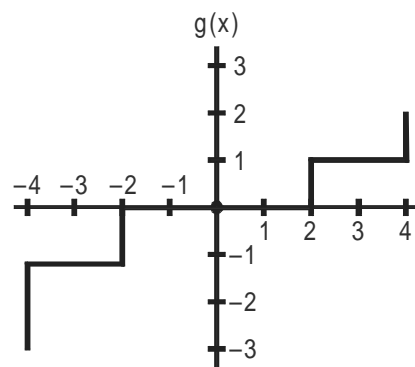
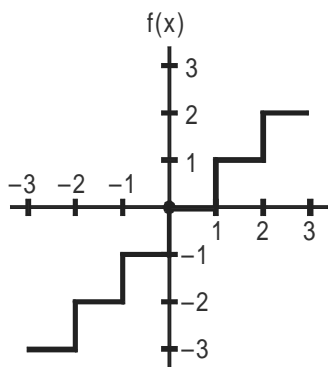
Direction for questions 108 and 109: Mark the answers as

- a. if $f(x) = 2g(x)$
 b. if $f(-x) = 2g(x)$
 c. if $f(x) = \frac{1}{2}g(x)$
 d. None of these

108.



109.



110. Any natural number greater than 1 can be written as sum of two other natural numbers. If N is any natural number, in how many ways can you write it as a sum of two natural numbers?

- a. $\frac{N+1}{2}$ if N is odd b. $\frac{N+1}{2}$ if N is even c. $\frac{N-1}{2}$ if N is odd d. $\frac{N-1}{2}$ if N is even

Section – III

Direction for questions 111 to 120: There are 10 arguments given below. Read each of the passages and answer the question that follows it.

111. Researchers at Warwick have made an electronic nose to smell fruits. They have shown that their e-nose can be used to predict the ripeness of bananas as well as other fruits. Their leading edge technology has already produced general purpose, desk top size electronic noses. The e-nose mimics the human organs.

If the statements above are true, which of the following must also be true?

- a. It is possible to develop an e-tongue which will be able to detect taste.
 - b. It may be possible to develop an e-tongue which will be able to detect taste.
 - c. The e-nose has an array of sensors to detect odours.
 - d. The study doesn't consider other potential uses of e-nose in which sense of smell is applicable.
112. A new battery introduced into the market lasts 50 per cent longer than ordinary alkalines and discharges energy more quickly. The cathodes of today's batteries typically use manganese dioxide and during discharge two molecules of this compound chemically react and absorb two electrons. The cathode of the new battery relies on a pure form of iron which can absorb three electrons.

It can be inferred from the above passage that

- a. the new battery will eventually cost more than the conventional alkaline batteries.
 - b. manganese dioxide is not suited to make alkaline batteries.
 - c. absorption of three electrons by iron used in the cathode is responsible for the longer life of the battery.
 - d. the energy discharge of a battery is inversely proportional to its life.
113. Fuel can be extracted from water by pulling apart H_2O into its constituent elements, hydrogen and oxygen. Hydrogen, highly inflammable in air, can be burned to release heat or can be used in devices called fuel cells which generate electricity directly in air, and its use would make cities far more healthier places.

Which of the following, if true, would cast the most serious doubt about the above argument?

- a. Fuel produced from hydrogen could be used only in selected application areas.
 - b. Pulling apart of hydrogen from the water molecule requires conventional sources of energy that are polluting.
 - c. Using water as a source of energy necessitates generation of large sums of money.
 - d. Privatisation of energy production from water is not possible as water is national wealth.
114. To understand refrigeration, pour a small quantity of petrol in your hand and expose it to the atmosphere. The petrol evaporates leaving a cooling sensation. This is because, the petrol has taken the heat from the hand and transformed it into vapour.

The line of reasoning used in the above argument is

- a. providing an example for a generalised phenomenon.
- b. drawing an analogy between two similar phenomena.
- c. pointing out the contrast between two apparently identical phenomena.
- d. comparing the similarities and differences between two causes.

115. Too much meat and too little fruit and fibre could be the cause of 80 per cent of intestinal cancer. Even 10 per cent of lung cancer risk seems to be dietary. To avoid such problems it is advisable for those in Northern Europe and in the US to double their intake of plant-based food in line with the Mediterranean diet.

Which of the following can be inferred from the above statement?

- a. More number of people use non-vegetarian caterers.
 - b. Cancer is more rampant in the US.
 - c. The diet of Northern Europe and the US comprises mainly of meat.
 - d. Mediterranean diet is a planned diet for people suffering from cancer.
116. A recent study discovered that coffee consumption is associated with low risk of heart disease and death than tea, which seems to have the opposite effect. The researchers agree that this is not in line with popular expectation. Tea is well-known in reducing the risk of certain chronic complaints. This is one of the latest scientific U-turns.

It can be inferred from the above that the study

- a. refutes an existing belief.
 - b. accommodates findings of previous research.
 - c. puts forth a hypothesis for verification.
 - d. validates an existing notion.
117. If you are highly emotional and experience frequent mood swings, chances are that you are extremely sensitive to smells, shows a study. The researchers recruited about 30 men and women and tested their ability to detect varying concentrations of different scents. When the results were compared with data from personality tests, they found that emotionality was the only character that corresponded with sensitivity to smells.

If the above statement is true, which of the following must also be true?

- a. Human personality is classifiable based on the sensitivity to certain scents.
 - b. Highly emotional people are sensitive to smells.
 - c. Feelings and odours are processed in the same part of the brain.
 - d. Mood swings are caused by certain neurons located in the brain.
118. If the water of a lagoon is grimy, the bottom cannot be visible.

Which of the following is analogous to the above statement?

- a. Real depth is different from apparent depth.
 - b. Body and mind are two sides of the same coin.
 - c. One cannot predict a person's behaviour unless one knows him closely.
 - d. Only when the mind is made tranquil, is it possible for the knowledge of the self to be revealed.
119. Aspirin could prevent the deafness produced by the world's most widely used antibiotics. Damage to the tiny hair cells of the inner ear is a side effect of certain glycosides in antibiotics. Scientists have found that salicylate prevents the damage.

Which of the following can be inferred from the above?

- a. Aspirin has certain antibiotic effects.
- b. Salicylate is an ingredient in aspirin.
- c. Most drugs have side effects.
- d. Aspirin is an ingredient in certain antibiotics.

120. In order to ease the traffic congestion, the transport planners decided to have a sophisticated system of elevated monorail travel in the city. However, it was pointed out by somebody that a metro rail system would be a more effective solution to the traffic problem. The plan was thus stalled. Moreover, since a budget had not been drawn up for the project, it was deemed fit to stall the work of the monorail for some time. In the meanwhile, the traffic planners of the city decided to build an efficient system of subways and flyovers in the city with the aim of easing the same problem. At the instant when the planners were preparing to award the contracts to the concerned parties, the transport planners came up with the contention that the subways interfered with the site of a pillar of the monorail system. The traffic planners had to give up the idea and think of other possible solutions.

We can infer which of the following from the above passage?

- a. The city authorities felt that the monorail system was essentially impractical.
- b. There is a strong contention between the two groups of planners in the city.
- c. The monorail system will be revived in the future.
- d. None of these

Direction for questions 121 to 125: Read each of the five problems given below and choose the best answer from among the four given choices.

121. Ash, Chettiar, Jaanu, Krishna and Liz are professional deep-sea divers. Ash is at a depth of 210 m. Jaanu is 47 m above Ash. Chettiar is 87 m below Jaanu. Krishna is 30 m below Liz. Liz is 110 m above Ash. At what depth (in metres below sea level) is each of the divers?
- a. Ash 100, Jaanu 130, Chettiar 250, Krishna 163, Liz 210 below sea level
 - b. Ash 210, Jaanu 163, Chettiar 250, Krishna 100, Liz 130 below sea level
 - c. Ash 210, Jaanu 163, Chettiar 250, Krishna 130, Liz 100 below sea level
 - d. Ash 163, Jaanu 250, Chettiar 100, Krishna 210, Liz 130 below sea level
122. Mary needs snacks for all of the students going on the field trip. She bought 9 boxes of granola bars containing a total of 88 bars. She wanted variety, so she purchased three different flavours. The almond chunky granola bars were packed 8 to a box, the chewy chocolate chip bars came 10 to a box, and the raisin nut package containing 12 per box. She bought the most boxes of almond chunky but had the most raisin nut bars. How many boxes of each flavour did she buy?
- | | |
|---------------------------------|---------------------------------|
| a. 2 box — almond chunky | b. 4 box — almond chunky |
| 4 box — chewy chocolate chip | 3 box — chewy chocolate chip |
| 3 box — raisin nut granola bar | 2 box — raisin nut granola bar |
| c. 3 box — almond chunky | d. 4 box — almond chunky |
| 2 box — chewy chocolate chip | 2 box — chewy chocolate chip |
| 4 box — raisin nut granola bars | 3 box — raisin nut granola bars |
123. I started out the journey from the badlands and got my car tank full to its capacity, 12 gallons exactly. However, the moment I started out, the fuel tank sprung a leak. I travelled at 50 mph until I ran out of fuel exactly 4 hr later. I know that the car runs 25 miles for each gallon. How much fuel had I lost through the leak?
- | | | | |
|--------------|--------------|--------------|--------------|
| a. 4 gallons | b. 5 gallons | c. 6 gallons | d. 3 gallons |
|--------------|--------------|--------------|--------------|

124. At a recent birthday party, four mothers were there with their children — aged 1, 2, 3 and 4. From the clues below can you work out whose child is whose and their relevant ages?

It was Jane's child's birthday party. Brian is not the oldest child. Sarah had Anne just over a year ago. Laura's child will be 3 next birthday. Daniel is older than Charlie. Teresa's child is the oldest. Charlie is older than Laura's child.

- | | |
|---|---|
| a. Jane with Charlie who is 3
Teresa with Daniel who is 4
Laura with Brian who is 2
Sarah with Anne who is 1 | b. Sarah with Anne who is 3
Teresa with Daniel who is 4
Laura with Brian who is 2
Jane with Charlie who is 1 |
| c. Jane with Charlie who is 3
Laura with Brian who is 4
Teresa with Daniel who is 2
Sarah with Anne who is 1 | d. Sarah with Anne who is 3
Laura with Brian who is 4
Teresa with Daniel who is 2
Jane with Charlie who is 1 |

125. A sequence of odd numbers is written in the following manner:

1, 3, 3, 3, 5, 5, 5, 5, 7, 7, 7, 7, 7, 7 . . . so on. If the sequence is written till the 200th term, which is the last term of the sequence?

- a. 39 b. 29 c. 27 d. 60

Direction for questions 126 to 130: The tables below gives the construction investment indices for roads and bridges for five major cities with the base month being January 1998.

Roads	Jan. 1998	June 1998	Jan. 1999	April 1999	May 1999	June 1999	July 1999	Aug. 1999	Sept. 1999
Delhi	100	100.25	105.54	106.88	108.11	108.11			
Chennai	100	101.08	105.49	106.44	106.39	106.27			
Kolkata	100	101.59	97.48	99.39	103.08	103.59	103.13		
Hyderabad	100	100.2	100.17	101.23	102.08	103.21	103.91	103.2	103.87
Bangalore	100	100.78	103.57	105.07	104.51	105.09			.

Bridges	Jan. 1998	June 1998	Jan. 1999	April 1999	May 1999	June 1999	July 1999	Aug. 1999	Sept. 1999
Delhi	100	101.51	106	107.5	107.6	107.8			
Chennai	100	100.76	104	104.9	105	104.9			
Kolkata	100	101.16	93.33	94.59	102	102	102.2		
Hyderabad	100	100.21	100.4	102.1	103.8	103.7	103.4	102.9	
Bangalore	100	100.85	103.1	102.2	101.2	101.9			

126. What was the total cost for roads in June 1999 in Bangalore?

- a. Rs. 10.5 crore b. Rs. 10.8 crore c. Rs. 11 crore d. Data insufficient

127. What is the amount spent in April 1999 on roads in Chennai, if the amount spent in January 1998 is Rs. 20 crore?
 a. Rs. 21.29 crore b. Rs. 106.44 crore c. Rs. 50 crore d. Data insufficient
128. What was the percentage of amount spent on constructing roads in 1999 across all the cities?
 a. 20% b. 30% c. 53% d. Cannot be determined
129. If the investment in the construction of bridges is in the ratio 1 : 2 for the cities Kolkata and Hyderabad in January 1998, find the ratio of the investments in June 1999.
 a. 1 : 2 b. 102 : 207.4 c. 1 : 1 d. 204 : 103.7
130. The five cities Delhi, Chennai, Kolkata, Hyderabad and Bangalore spent Rs. 100 crore, Rs. 10 crore, Rs. 20 crore, Rs. 40 crore and Rs. 20 crore respectively on bridges in January 1998. Find the total investment in June 1999 on the bridges in these five cities.
 a. Rs. 200.35 crore b. Rs. 220.15 crore c. Rs. 215.35 crore d. None of these

Direction for questions 131 to 140: Each question is followed by two statements I and II. Mark the answer

- a. if the question can be answered by any one of the statements alone, but cannot be answered by using the other statement alone.
 b. if the question can be answered by using either statement alone.
 c. if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.
 d. if the question cannot be answered even by using both statements together.
131. If $y = 3$, are x , y and z in an arithmetic progression?
 I. $5x = 7y - 5z$
 II. $x = 1$
132. Is $\triangle ABC$ an obtuse-angled triangle?
 I. $\angle B + \angle C = \angle A + 70^\circ$
 II. $\angle A = \angle C - \angle B - 20^\circ$
133. If ab is greater than 0, then is $ab > bc$?
 I. $a + b + c = 5$
 II. $a + c = 0$
134. If a , b , c and d are positive integers, then is $abcd$ odd?
 I. $\frac{a}{bcd}$ is even.
 II. bcd is odd.

135. p, q, r and s are positive integers. Which is the greatest of these?
- I. $\frac{p}{3} < \frac{q}{4}$
 - II. $s + 2q = r$
136. ABC is a right triangle in which AC is the longest side. If angle $A = 40^\circ$, what is $\angle DEA$?
- I. D and E are mid-points of AB and AC respectively.
 - II. Angle $C = 50^\circ$
137. $7x + 10y$ is positive. Is $x > y$?
- I. y is negative.
 - II. x is positive.
138. What is a unique two-digit positive number, if
- I. the number is six times the sum of its digits?
 - II. the number obtained by reversing the digits is greater than the original number by 9?
139. Is $c > a$?
- I. $b < a$
 - II. $c = 9$ th root of $8!$ and $b = 8$ th root of $9!$
140. Is V a perfect square? (V is a positive integer.)
- I. V is divisible by 16.
 - II. $(V + 1)$ is a perfect square.

Direction for questions 141 to 145: Answer the questions based on the following information.

The table below gives the currency rates of different currency in the countries listed. The value in each cell gives the amount of local currency (country) you will receive in exchange of one unit of the currency in the column.

CROSS CURRENCY RATES											
COUNTRY	USD	AUD	GBP	CAD	FRF	DEM	ITL	JPY	SGD	CHF	AED
US	-----	1.6311	0.6350	1.4633	6.7680	2.0180	1997.80	105.85	1.7120	1.6635	3.6728
Australia	0.6131	---	0.3893	0.8971	401495	1.2372	1224.85	64090	1.0496	1.0199	2.2518
Britain	1.5748	2.5686	----	2.3044	10.6582	3.1779	3146.14	166.69	2.6961	2.6197	5.7839
Canada	0.6834	1.1146	0.4340	---	4.6252	1.3791	1365.27	72.34	1.1700	1.1368	2.5099
France	0.1478	0.2410	0.0938	0.2162	---	0.2982	295.18	15.64	0.2530	0.2458	0.5427
Germany	0.4955	0.8083	0.3147	0.7251	3.3538	---	989.99	52.45	0.8484	0.8243	1.8200
Italy	0.0005	0.0008	0.0003	0.0007	0.0034	0.0010	----	0.05	0.0009	0.0008	0.0018
Japan	0.0094	0.0154	0.0060	0.0138	0.0639	0.0191	18.87	---	0.0162	0.0157	0.0347
Singapore	0.5841	0.9527	0.3709	0.8547	3.9533	1.1787	1166.94	61.83	---	0.9717	2.1453
Switzerland	0.6011	0.9805	0.3817	0.8797	4.0685	1.2131	1200.96	63.63	1.0292	---	2.2079
UAE	0.2723	0.4441	0.1729	0.3984	1.8427	0.5494	543.94	28.8200	0.4661	0.4529	---
RATES AS OF 6.48 PM IST Wednesday March 15, 2000											

USD - US dollar

CAD - Canadian dollar

ITL - Italian lira

CHF - Swiss franc

AUD - Australian dollar

FRF - French franc

JPY - Japanese yen

AED - dirham

GBP - British pound

DEM - Deutsche mark

SGD - Singapore dollar

141. The rate of the UAE dirham as against the Japanese yen in Japan is
 a. 0.0347 b. 28.82 c. 18.87 d. Cannot be determined
142. As compared to the Canadian dollar, the Australian dollar is expensive by what percentage in the US?
 a. 18% b. 2% c. 11.47% d. 50%
143. A traveller from the US buys Canadian dollars by converting 1,000 US dollars. He converts all of them into Australian dollars in Australia. How many Australian dollars does he have?
 a. 897 AUD b. 1312.70 AUD c. 1631.15 AUD d. 1114.60 AUD
144. A banker buys US dollars converting British pound from Britain and sells them in Australia converting it into British pounds. What is his return on investment?
 a. 156% b. 2.2% c. 4% d. 0%

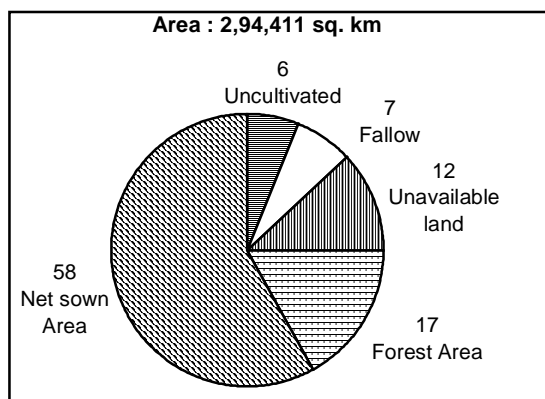
145. In which country would the conversion of a British pound give you the maximum amount of local currency?
- a. US b. Australia c. Italy d. Japan

Direction for questions 146 to 150: Answer the questions based on the following information.

The following table gives the foodgrain production in million tonnes, livestock in millions, and milk production in million litres in UP in 1998-99.

Land utilization in UP

UP on India's agriculture map			
Item	India	UP	Rank
Wheat	58.5	22.56	First
Sugar cane	249.25	108.43	First
Rice	79	10.1	Third
Maize	9.57	1.39	First
Fruits	32.89	3.35	Third
Vegetables	71.57	9.6	Third
Mango	9.2	1.99	Second
Potato	136.61	64.86	First
Livestock	406.1	317.3	First
Milk production	63.5	11.2	First



146. If the production of sugarcane was lesser by 23% in UP, then by how much should the production in rest of India be increased to compensate for this shortfall?
- a. 17.7% b. 23.1% c. 25.9% d. 10%
147. The share of UP's production of wheat, rice and maize as a part of the all-India production is
- a. 11.35% b. 23.15% c. 34.05% d. Cannot be determined
148. In 1999-2000, if 12% of the fallow land in UP was used for production of fruits and vegetables and gave a yield of 14 tonnes per hectare, then what is the percentage increase in production of fruits and vegetables in UP? (1 hectare = 10,000 sq. m. Vegetables exclude potato and fruits excluding mango.)
- a. 2.7% b. 3.5% c. 26.7% d. Cannot be determined
149. Since earnings from fruits is four times that from sugarcane for a farmer, 5% of sugarcane producers shift to fruit production. The percentage increase in the incomes of these farmers is
- a. 5% b. 150% c. 300% d. Data insufficient
150. The percentage share of the top three items in the list in UP's agriculture is
- a. 70% b. 80% c. 90% d. Cannot be determined

Direction for questions 151 to 155: Answer the questions based on the following information.

Five friends Amit, Betty, Cathy, Danny and Earl each play one of the five games football, badminton, table tennis, carrom and softball. Also each one of them likes to eat one of Chinese, South Indian, Gujarati, Italian or Mughlai food. Football, table tennis and softball are all ball games. Table Tennis and carrom are indoor games.

- A. Amit does not like South Indian and Mughlai food and plays a ball game.
- B. Betty and Danny do not play ball games and one of them likes Italian food.
- C. Cathy hates Mughlai food and plays an indoor ball game.
- D. Earl has Chinese food and plays softball.

151. Who plays table tennis?
a. Amit b. Betty c. Cathy d. Cannot be determined
152. Amit's favourite food and game are respectively
a. Italian and table tennis b. Mughlai and carrom
c. Gujarati and football d. Cannot be determined
153. Who likes Italian food?
a. Betty b. Cathy c. Danny d. Cannot be determined
154. Who plays carrom?
a. Betty b. Cathy c. Danny d. Cannot be determined
155. Which of the following cannot be a possible combination?
a. Earl, Chinese, softball b. Betty, Italian, carrom
c. Danny, Mughlai, badminton d. Cathy, South Indian, football

Direction for questions 156 to 160: Answer the questions based on the following information.

	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2K
New phone connections	26950	39651	63278	77857	126278	2E+05	2E+05	2E+05	4E+05	658088
Public telephones	2481	2400	1708	1787	2349	3046	3522	4264	10048	16902
STD stations	22	87	105	82	202	275	302	333	222	567
New exchanges	13	23	17	21	9	26	12	22	79	358
OF Network (in km)	49	103	122	612	994	758	1475	919	2567	8487
Microwave Network (in km)	180	250	700	866	642	940	3183	2306	1548	3668
Investment (in crore)	112	182	296	298	500	477	470	551	697	1154
Teledensity (%)	AP	0.51	0.57	0.67	0.78	0.97	1.2	1.43	1.76	2.36
	All India	0.6	0.69	0.8	0.95	1.16	1.41	1.72	2.1	2.55

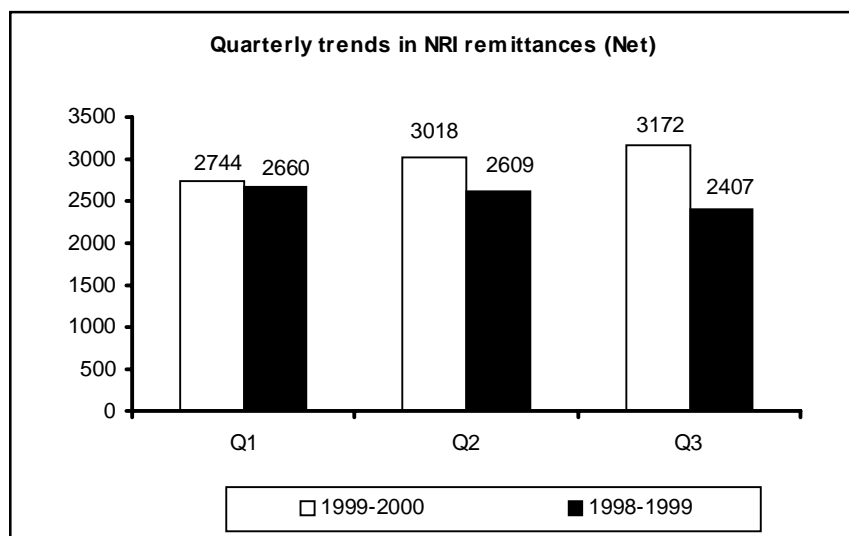
Teledensity is defined as the number of phones as a percentage of the population of that region.

156. What was the percentage increase in the number of new phone connections from 1990-91 to 1999-2000?
a. 23% b. 15% c. 142% d. None of these

157. What was the average of the percentage increase in the number of STD stations from 1995-96 to 1998-99?
 a. -13.27% b. -6.4% c. -4.42% d. 26.5%
158. What is the population of AP in 1999-2000?
 a. 19.64 million b. 20.15 million c. 24.32 million d. Data insufficient
159. In 1995-96, if ratio of the number of new telephones to the existing phones is 1 : 20, find the population of AP in 1995-96 (neglect the public telephone, STD network)?
 a. 350 million b. 323 million c. 348 million d. 310 million
160. If the ratio of telephones in AP and all-India is 1 : 50, find the ratio of their population in 1997-98.
 a. 42 : 1 b. 1 : 42 c. 60 : 1 d. None of these

Direction for questions 161 to 165: Answer the questions based on the following information.

The great Indian diaspora is doing its bit for the Indian economy. Foreign currency remittances by Indians residing abroad has gone up. An analysis of the quarterly trend in remittances indicate that remittances have gone up significantly in each quarter this year. While this is good news for their families it is even better news for the economy as these remittances are adding to the forex kitty. Cumulative inflows during April-December 1999 amounted to \$8,934 million as compared to \$7,676 million in the previous year. This upsurge in remittances has improved the balance of payments outlook as this has helped to narrow down the current account deficit this year.



161. The percentage increase in the net remittance in the Q2 of 1999-2000 as compared to 1998-99 is
 a. 15.7% b. 21.2%
 c. 23.7% d. 13.6%
162. The NRI remittances (net) in Q1 of 1999-2000 shows a/an ____ over Q3 of 1998-99.
 a. decrease of 25% b. increase of 19%
 c. increase of 14% d. Remained steady

163. In Q3, the ratio of net remittances by NRIs in 1998-99 to 1999-2000 is
a. 0.23 b. 0.76 c. 1.32 d. 0.83
164. Which among the following ratios is the largest?
a. $\frac{(Q1)1999 - 2000}{(Q1)1998 - 99}$ b. $\frac{(Q1)1999 - 2000}{(Q2)1998 - 99}$ c. $\frac{(Q3)1999 - 2000}{(Q1)1998 - 99}$ d. $\frac{(Q2)1998 - 99}{(Q3)1998 - 99}$
165. By what percentage did the remittances in 1999-2000 increase as compared to 1998-99 for the three quarters?
a. 16.4% b. 12.3% c. 14.1% d. 8.6%