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**MAJLIS PEPERIKSAAN MALAYSIA**

**(MALAYSIAN EXAMINATIONS COUNCIL)**

**Instructions to candidates:**

**DO NOT OPEN THIS QUESTIONS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

*There are fifty questions in this test. For each question, choose the most appropriate answer.*

*Indicate your answer in the separate answer sheet given.*

*Read the instructions on the answer sheet carefully.*

*Attempt* **all** *questions.*

**This question paper consists of 17 printed pages and 3 blank pages.**

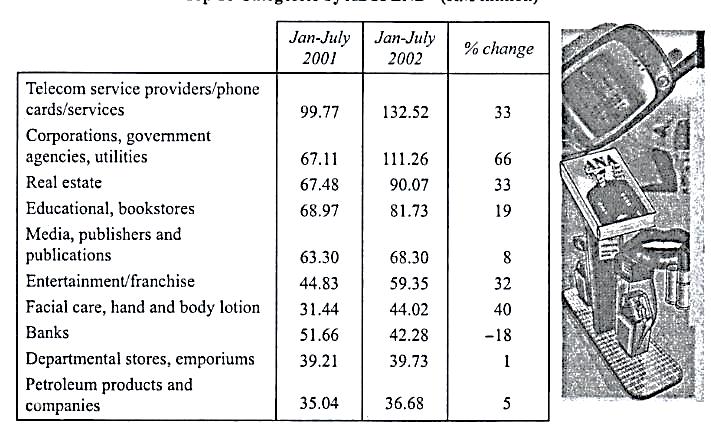
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*Questions* **1** *to* **15** *are based on the following passage.*

LONDON: William Sheridan's drawing skills were stuck at nursery level. His stick figures were the sort you (1) \_\_\_\_\_\_ expect a child to produce. But as (2) \_\_\_\_\_\_\_ was recovering after a heart transplant operation, (3) \_\_\_\_\_\_ very astonishing happened. Suddenly he was blessed (4) \_\_\_\_\_\_ an artistic talent that he just simply (5) \_\_\_\_\_\_ not recognise. He found himself producing beautiful (6) \_\_\_\_\_\_ of wildlife and landscapes. He was even (7) \_\_\_\_\_\_ amazed when he discovered the possible explanation - (8) \_\_\_\_\_\_ the donor was a keen artist! Sheridan (9) \_\_\_\_\_\_ been hailed as the latest example of (10) \_\_\_\_\_\_ phenomenon which sounds like science fiction, but (11) \_\_\_\_\_ intriguing a growing number of medical experts - (12) \_\_\_\_\_\_ an organ transplant it IS possible to (13) \_\_\_\_\_\_ character traits from the donor. Medical opinion (14) \_\_\_\_\_\_ general is sceptical over the issue. In (15) \_\_\_\_\_\_, some professors claimed that they had found a definite link, and this is called "cellular memory".

*Questions* **16** *to* **18** *are based on the following table.*

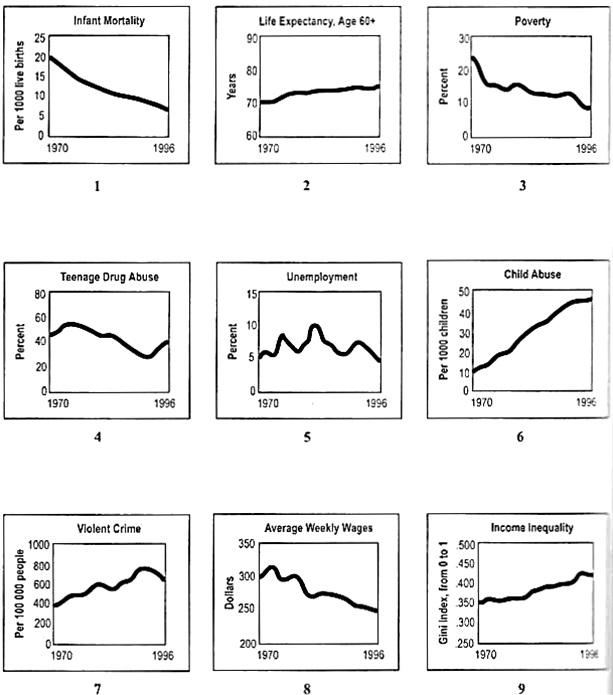
**Top 10 Categories by ADSPEND\* (RM million)**

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\* ADSPEND - Advertising Spending

(Adapted from *The Star*, September 21, 2002)

The graphs indicate whether life is getting better or worse for Country *X.*

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1. *Questions* **23** *to* **29** *are based on the following passage*

**Children as Eyewitnesses**

An issue that has concerned psychologist since the beginning of the twentieth century is whether the testimony of children is trustworthy. A first demonstrated by the German psychologist William Stern children tend to be less accurate than adults in their eyewitness accounts of rime, in an because they are more susceptible to leading questions (Templeton & Wilcox, 2000). Concerns about children as eyewitnesses have been supported by re ear h indicating that misleading information about events can distort children' memories of them. In an experiment that tested this finding, children 3 to 1- ears old listened to a story about a girl who had a stomach-ache after eating egg too fast. When asked questions about the story, the children answered correctly almost all of the time. But when asked if they remembered the story of a little girl who got a headache because she ate her cereal too fast, the children typically responded that they had. The effect of misleading questions was greater on the younger children than on the older ones (Ceci, Ross and Toglia, 1987).

Still another study revealing the fallibility of young children's testimony involved interviewing children 3 to 7 years old immediately after they had undergone a routine physical examination and several weeks later. Younger children remembered less information spontaneously and provided fewer details, and there was less consistency between their earlier and their later testimony. Though there was a difference in the accuracy of spontaneously recalled information, the younger children were less accurate in response to specific questions, and only 7-year-olds responded correctly at significantly above the level of chance guessing (Gordon & Follmer,, 1994).

Children are also more likely to guess when testifying, as in a study in which kindergarteners viewed a slide show of a staged theft and then were asked to identify the perpetrator from a line-up. Many identified a person in the lineup even when the perpetrator was not in the line-up. Moreover, some children who had made correct identifications when the perpetrator was present in the lineup later identified a person in a lineup in which the perpetrator was absent. This is an example of the tendency of children to guess or make up answers when they testify repeatedly about the same event (Ackil & Zaragoza, 1998; Beal, Schmitt & Dekle, 1995).

Not only are young children more fallible in their testimony than older children, children tend to be less accurate in their testimony than adults. One study compared adults and children in the accuracy of their memories for an event they experienced 2 years earlier. The children were less accurate in responding to "yes" or "no" questions and open-ended questions, and were more likely to fabricate responses to a question about a man's occupation. This tendency might have an effect on court cases "that take a long time to reach trial (Poole & White, 1993).

Of course, especially because of the prevalence of child sexual and physical abuse, courts must achieve a delicate balance between believing children's testimony and being sceptical of it (Goodman & Schaaf, 1997). Fortunately, children can give accurate testimony, provided that they are not given leading questions and provided that the questions are worded so that they can understand them (Brookes & Siegel, 1991). To promote accuracy in children's testimony, the questioning of children should be done by neutral parties rather than by individuals who are biased either towards or against believing the children's stories of abuse. Failure to do so might induce children to testify in a manner consistent with the questioner’s personal agenda.

(Adapted from Sdorow, L.M. & Rickabaugh, c.A. 2002. *Psychology*

5th edition. New York: McGraw-Hill Higher Education)

*Questions* **30** *to* **36** *are based on the following passage.*

India's rise as a leading source of software for the world is a strange phenomenon. Traditionally, agrarian economies first graduate to manufacturing before making the leap to become post-industrial service societies. One does not expect a country with a per capita Gross Domestic Product (GOP) of $3100, a literacy rate of 65 percent and 65 percent of the population in the rural sector to be an Information Technology (IT) superpower. Yet India's knowledge-based exports are expected to surpass $50 billion by 2010.

How did this happen? After independence in 1947, India was reeling from the effects of being part of the Empire, and took self-reliance very seriously. The first post-colonial leader, Jawaharlal Nehru, saw that India required a cadre of people trained in the latest technology and skills. So just over 50 years ago, the Indian Institutes of Technology (IIT) were set up to ensure that the best and the brightest Indians could get a quality education. During the decades of economic sluggishness that followed, the graduates of the IITs and other institutions of higher learning were often unemployed, and many migrated abroad.

Then came the liberalisation of 1991. The then Finance Minister Manmohan Singh took the bold step to remove the cobwebs of licensing and controls. This coincided with the advances in technology that made it possible to do remote work over satellite and fibre-optic cables. The capital markets bloomed with modern stock exchanges and foreign investors. The world's largest companies saw the potential of Indian human capital. And Bangalore happened.

Today India has more than 350 engineering colleges, producing several hundred thousand graduates per year. During the last year at Infosys Technologies, they received 1.3 million applications for 20 000 jobs. When the government recently proposed to limit the number of times an aspirant could apply to the IITs, there were riots on the streets of Delhi.

While the software revolution ended up creating jobs for the technically educated, further advances in broadband and Internet technology made it possible to perform a wide swathe of functions from India. Today you have firms doing everything from processing sales orders to fixed-income research to patent searches. These jobs are not only for engineers, but also for accountants and people with a basic science or arts degree.

The connection between education and social upward mobility has never been starker for the Indian people. There are countless examples of families sacrificing on basic necessities to ensure that their children get the right education. Demand for English classes, from the first grade onwards, is booming. But primary education remains the bane of India. For Indians older than 6, the national mean for years of schooling is 3. In neighbouring Sri Lanka it is 7.5. There is now a huge drive to ensure that basic education is made accessible to every Indian child. India's youthful demographics should be a competitive advantage, but it will be wasted without broader access to primary education.

The final frontier of the rise of Indian ion is in governance. India has the benefit of being a free society. The diversity of opinion, the traditional adherence to representational democracy and a vigorous free media help ensure that there is healthy debate, with check on the abuse of power and corruption. Yet there are still those who yearn for a harder regime, with less debate about development strategies and more action. And there is still too much government secrecy and corruption. The solution to this conundrum IS to marry all the strengths of India - its highly educated and globally aware talent, its democratic traditions and the power of modem information technology. If this is done, India could even be a model for nations seeking to go from developing to developed status on the strength of its education and knowledge economy.

(Adapted from *Newsweek* (Special Edition), December 2005 - February 2006)

*Questions* **37** *to* **43** *are based on the following*

**Putting Animals to Good Use**

Native Americans revere the coyote for survives. For conservationists, it is an integral part of scenery of pre-settler America. But for the sheep farmers of the Great Plains, it is simply a pest: a wolf in short pants, a killer of stock, worth only of eradication.

Attempts to control coyotes have concentrated on culling them. But coyotes have earned the respect they get from those who know them best: despite all efforts to slaughter them, they survive across a huge swathe of North America, munching on sheep with abandon. The country they share with the sheep is often open prairie, and hard to police. A fence for them is just and obstacle to overcome, and poisoned bait an accident waiting to happen to a passing bird of prey, as demonstrated by the death of many an eagle.

More effective solutions are clearly needed, and a new application of the ancient role of domestic animals as guardian provides one. It turns out that llamas have plenty of coyote scaring power. Being herbivores, they eat the same fodder as sheep, and have no desire to dine out on their charges. Llamas are naturally inquisitive, and intolerant of intrusion into their space. And the wily coyote is actually a small creature, easily intimidated, which usually hunts alone. Any old llama is more than a match for it.

This is no isolated example of the imaginative use of animals in an age that usually seeks a technological solution to even the simplest of problems. In Mozambique, African giant rats have been deployed to help clear some of the 500 000 landmines that litter the landscape after the country's long years of civil strife. Elsewhere, dogs have sometimes been used to clear the detritus of war. But rats are lighter, so less likely to detonate a buried mine, and smaller, so easier to transport. They also work harder and learn faster than dogs.

The rats are now about to be put to use in neighbouring Tanzania, this time to detect tuberculosis in saliva samples. Poor countries are seeing a huge increase in tuberculosis: the number of cases in Tanzania is expected to quintuple, to 10 million, by 2015. Early diagnosis vastly increases the chances of successful treatment. But a trained technician using conventional methods in a laboratory may be able to analyse no more than 20 samples in a day. Sniffer rats, however, can process over 2000 in the same time. Moreover the use of rats is non-invasive and cheap; it requires no fancy instruments, and employs locals who do not need to be highly trained.

Using animals to solve environmental problems is not a new idea. It was vigorously put into practice when a new faith in science swept nineteenth and early twentieth century Europe. And sometimes it worked. Thus the Australian ladybird brought to California a century ago was successful in controlling cottony cushion scale, a common citrus pest, and in 1931 stoats and weasels did a nifty job with a plague of water voles on the North Sea island of Terschelling. But these success stories were unusual. Much more common was the destruction or transformation of the environment, sometimes leading to the mass extinction of indigenous species.

This has been the story in New Zealand, for example, when the colonists tried to create a new-world land of opportunity in the image of the one they had left behind in Europe. Rabbits shipped in as a source of food for the settler soon ran rampant in the absence of natural predators and diseases. Stoats, brought in to deal with the rabbits, instead turned their attention to local ground-nesting birds, helping to drive several species to extinction.

Australia has been similarly afflicted by the cane toad, an unlovable amphibian brought from South America in 1935 to combat the sugar-cane beetle in Queensland. Since the beetle lives high on the cane, well beyond the toad's reach, the plan failed, but the toads, which exude a toxin lethal to predators, have spread all over the country.

Fortunately, some lessons have been learnt. Today, no one seriously thinks of simply dumping a wild creature - or rather, thousands of wild creatures - in new surroundings in the hope that a single desirable change will result: a process of management is applied, with a keen eye both on the entire range of the animals' characteristics and on the broader ecosystem in which they will live. Generally speaking, attempts to influence the environment nowadays aim to preserve and restore, not to transform.

(Adapted from *The Economist*, December 20,2003)

Questions 44 to 50 are based on the following passage.

I remember meeting a traditional medicine peddler at a *tamu* in Tambunan, Sabah. When I enquired where the vegetables and animal ingredients of his cures came from, he replied that he had collected them from the *hutan tropika Borneo*. Later I saw the same traditional medicine peddler negotiating for four sacks of roots and inner-bark shavings that a Dusun farmer had brought in a hired pickup. No wonder the peddler could not tell me the exact source of his medicines. He had obtained them from the local indigenous peoples who live in the *hutan tropika Borneo*. He himself had probably never set foot inside the forest.

Not long after that, I chanced upon two foreign cardiac surgeonresearchers who wanted the headman's help to locate certain dipterocarp trees that were flowering along the fringes of the lake then. In further conversation with them, I discovered that they had read that those trees carried the promise of a cure for heart disease.

In fact, in 1966, I.H. Burkill, in his two-volume A *Dictionary of the Economic Products of the Malay Peninsula*, listed more than 1000 items from the forests that were being used and had the potential for commercial exploitation - as medicines, food, personal care products, construction materials and other uses. More recently, Hanne Christensen in her *Ethnobotany of the Iban and Kelabit*, catalogues 1144 different plant species that had ethno-botanical value in just two traditional communities.

Clearly the wealth of knowledge that the forest-dwelling indigenous peoples have about the usefulness of the multitude of living things in their environment is extensive - and, invariably, no longer secret.

The pharmaceutical industry, in particular, continues to investigate and confirm the effectiveness of many medicines and toxins used by indigenous peoples, and profit enormously from its commercialisation. For example, three quarters of the 120 plant-based active compounds widely used in modem medicine today have the same modem therapeutic use as the traditional use of the plants from which they are derived.

The search continues. This is evidenced by the growing number of pharmaceutical companies and research institutions signing agreements with national or state governments to screen medicinal plants found in the traditional territories of indigenous peoples. Yet, indigenous peoples, while acknowledged as the holders of such knowledge, are not fairly compensated for the use of that knowledge. At most, their "rewards" is in the wages they get as collectors of the bio-resource or as guides for bio-prospectors.

There are threats today that seek to compromise both the traditional knowledge of indigenous peoples and the biodiversity of their forest homelands. Their lands are being converted to plantations, development projects or recreational sites. This inevitably involves the resettlement of indigenous peoples to new, unfamiliar areas. Other threats are less direct, yet have as much impact, such as their assimilation into mainstream society or their adoption of a different worldview.

Often, indigenous peoples have had to disregard (heir time-tested traditions at the expense of the environment. In this regard, I recall an incident that broadened my understanding of how peoples' attitude can change in a short time. Walking along a logging track with a group of indigenous people, we came across a kerameu tree laden with fruit. The purplish oval fruit 1 highly sought for its rich oil content. I was astonished when a member in the group started to hack at the tree. "Isn't there another way to get the fruits without killing the tree?" I asked. Their answer was short and clear: "If we do not cut it down, the loggers will bulldoze it and collect the fruit themselves."

When indigenous peoples' rights to their knowledge, culture or territories are not recognised and protected, the consequence on the biodiversity can be immense. Unfortunately, Article 8j of the Convention on Biological Diversity itself does not call for such protection, subjecting instead each country to its own national legislations. This needs to be reformed, for existing practices and legislations are still skewed away from the interests of the indigenous peoples and, consequently, of protecting biodiversity indirectly.

(Adapted from *The Star*, February 3, 2004)