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PASSAGE – 1

It is often said that India has got the third largest pool of scientific and technological manpower in the world. But, in spite of this large capable/ competent pool we seem to be poorly equipped with the requisite R&D to make a dent in the global market place. The harsh truth is that except for a few selected areas, breakthrough in technology including drive for indigenisation have met with limited success. There are neither adequate resources nor proper support to carry out fundamental research, development of indigenous technology or commercialisation of new technology by the Indian industries. It is not possible for an operating industry to carry out fundamental research for typical operational problem or develop technology suiting to own operating conditions.

For a developing country like India, where virtually majority of industrial parameters are 1/10th of world average, its economy needs massive continuing investment in industrial and infrastructure sector. Industrial development will continue to be heavily dependent on advanced technology. Technology and technology transfer are critical factors in development In India, considerable engineering, technology and consultancy capabilities/ expertise have been built up over the years in various sectors/disciplines. Several scientific and technical co-operation agreements have been made with a large number of developing and developed countries at government, enterprise, institution and industry association levels.

However, the issue of co-operation in the area of advanced technology is generally not appearing in these agreements. Western countries dumping shelved technology on developing countries or secretive in parting with their advanced process technology is old hat. Therefore, developing countries like India will be in a tight spot if they do not develop technologies by themselves or make judicious selection regarding choice of technology and sourcing the technology. The choice of technology and its source is an important aspect as it relates to quality and price of technology. The actual goal of transfer of technology is the establishment of scientific and technological capabilities rather than the mere transfer of plant and equipment.

Technology transfer consists of three major components; technology assessment, technology acquisition and assimilation and technology diffusion to local industries after incorporating the necessary degree of modifications. In reality, organisations usually fail to use the right technology and its source as many times they are not conversant with the latest development in the field, may be unaware of the emergence of new technologies and changing approaches to technology transfer. They may lack the professional skills to select a technology that is suited to local operating conditions and to acquire it on favourable terms. They are guided by past relations, current affiliations and terms and conditions set in the aid package. Thus the technology transfer process becomes often too costly and ineffective.

The principal form of technology transfer are licensing, outright purchase, joint venture with capital participation, technology transfer associated with buy back arrangement, technology transfer associated with loan agreement, technology transfer associated with plant operation and management contract, technology transfer forming part of a consultancy contract (supply of basic engineering), technology transfer associated with equipment supply contract or turnkey contract etc. The technologies, which are latest in the field are usually non negotiable and least available for acquisition. Whereas at the other end of the fulcrum exists the shelved technologies. Between the latest and the shelved technologies lie ample opportunities.

For successful transfer, in addition to finance, skilled and qualified personnel, such as academicians, scientists and technicians are equally important. Unless the importing organisation ensures the availability of such qualified personnel and resources, the technology transfer is bound to suffer or may prove ineffective. Technology transfer could be a multi-edged weapon which, if handled wrongly, may result in expensive/unwanted imports, hurting the technological progress and ultimately may lead to disaster. The national think tanks like R&D centres (CSIR and others), engineering and technology institutions (IITs, IISc, Roorkee University and others) and leading consultants like MECON can come forward to avoid such eventuality.

Interaction between industry, engineering consultancy organisation, R&D centres and academic institutions is very limited. These players work on seemingly disparate paths. There are specific reasons behind this. Industrial/ engineering consultants have limitations of time. Strong commitment to project objectives and adherence to the strict time schedule within which they have to complete the assignment is of paramount importance. By the time a technology is developed, it becomes very costly and sometimes outdated. Due to this reason, industry/engineering consultants have a tendency to avoid academic institutions and R&D centres.

As academic institutions and R&D centres do not receive due attention of industries, they prefer working in isolation. Working in isolation is associated with many constraints. The fact remains that the academics who do not understand the corporate world cannot survive and the corporate world that does not use good academic input can't grow. There has to be a mutual appreciation, instead of competing, they should complement each other. Truly speaking, there is a strong need for consultants to get support/ assistance from R&D centres/ educational institutions in upgrading their technical strength and strengthening design and engineering capabilities so as to enable them to render their services to Indian industries by undertaking multi faceted assignments under tight time schedule and stiff competition.

1. *The author seems to agree best with which of the following, as made out by the passage ?*
 - (1) The actual goal of technology transfer is the establishment of scientific and technological capabilities, rather than merely transferring plant and equipment.
 - (2) The technologies that are latest in the field are usually negotiable.
 - (3) Industry / engineering consultants take academic institutions and R & D centres into confidence.
 - (4) As industries recognise academic institutions and R & D centres, working in isolation is ruled out.
2. *According to the passage, technology transfer :*
 - (1) could be a multi edged weapon, which if handled wrongly, could hurt the technological process disastrously.
 - (2) involves skilled and qualified personnel.
 - (3) is a critical factor in the country's development.
 - (4) All of the above.
3. *According to the passage, academic institutions and industries :*
 - (1) cannot function together.
 - (2) should complement each other, instead of competing.
 - (3) should have exchange visits of their key personnel.
 - (4) both require governmental attention.
4. *As per the passage, which of the following cannot be the reason for India not achieving the desired level of success in technological break through ?*
 - (1) Lack of adequate resources and proper support to carry out fundamental research.
 - (2) Transfer of technology becoming a costly and an ineffective process.
 - (3) Commercialisation of the technology by the Indian industries has not taken place to the desired level.
 - (4) None of the above.
5. *The interaction between R & D centres and industries is very limited which, as per the passage, is because :*
 - (1) the perception of an academicians in the R & D centre is different from an industrialist.
 - (2) by the time the technology is developed, it is costly and outdated.
 - (3) the laws of the land act as a binding factor for the industrialist to patronise technology.
 - (4) there is no demand for technology.
6. *Which of the following goes against what the author has to state in relation to the passage ?*
 - (1) The transfer of technology has three components.
 - (2) Industrial development heavily depends on indigenous technology.
 - (3) The choice of technology has nothing to do with quality and price.
 - (4) India has the third largest pool of scientific and technological manpower in the world.
7. *All of the following are false, as per the passage, except that :*
 - (1) technologies, which are latest in the field, are usually non-negotiable and least available for acquisition.
 - (2) academicians can survive without understanding the corporate world.
 - (3) the revamping of the Indian economy is not possible by merely investing in industrial and infrastructural sector.
 - (4) industries need not have a good academic input for their growth.
8. *The passage relates to :*
 - (1) business.
 - (2) research & development.
 - (3) technology transfer.
 - (4) market awareness.
9. *A suitable title for the passage is :*
 - (1) Industry And Academics.
 - (2) Technology Transfer—A Must For Developing Countries.
 - (3) Proper Utilisation Of Scientific And Technological Manpower.
 - (4) Pricing The Technology.
10. *The author has handled the passage in a manner which is :*
 - (1) the statement of facts.
 - (2) imaginative.
 - (3) intuitive.
 - (4) debatable.

PASSAGE – 2

Participative management refers to getting the employees to feel as part of the organisation so that they can give their best to the organisation. If managements were to say that the employees should work hard for the well being of the management, they are not going to get the wholehearted commitment of the employees. It is also not going to be possible for the management to buy the commitment of the workers by throwing more money.

Most Japanese companies managed to get the involvement of their employees by finding common enemies in American companies, which is called Strategic Intent by Prahalad and Hamel. Anita Roddicks has managed to assemble a set of people who share a common vision –eco-friendly and socially relevant business –to run her cosmetic business called Body Shop. The company believes in profits-with-a-principle philosophy; they oppose testing on animals, help third-world economies through its trade, contributes to rain forest preservation efforts, is active in women's issues, and sets an example for recycling. Robert Semler of Semco Industries in Mexico has passed on the powers (even to determine wages and bonuses) down the line to the workers that he has been able to get the best out of his people.

Whatever be the approach, the companies that are able to share the benefits with its workers and get them united for a common purpose in a participative mode will only survive in the 21st century. Partnering takes up many forms, some as strategic alliances, networking, collaborations and co-operative. In a complex, knowledge intensive and information oriented 21st century it is not going to be possible for individual companies to come up with answers to all their problems by themselves. Companies will need to partner with several firms to compete effectively. At the very farthest, they need to partner with their customers and suppliers. At the farthest end, companies may even partner with their competitors which is called co-opetition.

The day of mass marketing is over. We are getting closer to the era of personalised products, Customerisation was commonly followed in both services and industrial products marketing. However, with flexible automation, it has come to be used in consumer product as well. A customer can sit in front of a computer terminal and design his own car, bicycle or jeans and get the same fabricated and delivered to his house the same day. Consider Japan's National Bicycle Industrial Co.:

Dealers fax National a set of specifications based on the customers' requirements for model, colour, components, and personal measurements. Computers digest the specifications and print out custom blueprints from which customer's bicycle is created of cut-to-fit and common parts. Robots do most of the welding and painting while skilled workers complete the assembly -including the silk-screening the customer's name on to the frame. Within a day, this one-of-a-kind bicycle (out of 11 million combination of parts) is finished, packed, and ready for shipment.

Finally, in order to survive, organisations should get into a perpetual learning mode. A learning organisation is one that seeks to create its own future; that assumes learning in an ongoing and creative process for its members; and develops, adapts and transforms itself in response to the needs and aspirations of people, both inside and outside itself

At the heart of a learning organisation lies the belief that enormous human potential lies locked, undeveloped in our organisations. Central to this belief is the conviction that when all members of an organisation fully develop and exercise their essential human capacities, the resulting congruence between personal and organisational visions, goals and objectives will release this potential.

The concept of learning organisation was popularised by Peter Senge. Organisational learning is an emergent, inductive process by which organisations assimilate values, ideologies and practices, either from their environments or their elite members. The knowledge so acquired is diffused across the entire organisations. Usually it remains embedded in the organisation and it is not easy to copy by the competitors. This has to be a continuous process and organisations that are successful in institutionalising perpetual learning will be more successful in the 21st century.

In times of drastic change, it is the learners who inherit the future. It is obvious that an institution whose mission is effective teaching and learning should automatically be a learning organisation. Ross, Smith, Roberts and Kleiner advocate this definition. "Learning in an organisation means the continuous testing of experience, and the transformation of that experience into knowledge -accessible to the whole organisation, and relevant to its core purpose." The core of learning organisation work is based upon five "learning disciplines" lifelong programmes of study and practice.

11. *All of the following is true, with respect to the passage, except that :*

- (1) it is the learners who inherit the future in times of drastic change.
- (2) organisations should get into a perpetual learning mode.
- (3) to be successful, organisations should not institutionalise learning.
- (4) for effective competition, companies will need to partner with several firms.

12. *Which of the following would best go along with what the author has to state in the passage ?*

- (1) A learning organisation seeks to create its own future.
- (2) Customerisation is not linked to consumer product but only confined to services and industrial product marketing.
- (3) The only way management can buy the commitments of the workers is by throwing more money.
- (4) All of the above.

13. *The passage explains participative management as one wherein :*
- (1) employees have a say in the running of the organisation.
 - (2) employees are made to feel as part of the organisation so that their best output can flow out with whole hearted commitment.
 - (3) employees have their representatives participating in the Board meetings.
 - (4) employees can claim their share of profits.
14. *As per the passage, all of the following are false except that :*
- (1) organisational learning is an emergent, inductive process.
 - (2) a learning organisation perceives learning as an ongoing and creative process for its employees.
 - (3) companies need to partner with their customers and suppliers.
 - (4) All of the above.
15. *As per the passage, organisations institutionalising perpetual learning :*
- (1) become riddled with problems arising of high employee awareness.
 - (2) lose out in the competition.
 - (3) become successful.
 - (4) will produce more armchair intellectuals than proactive ones.
16. *The most suitable title for the passage is :*
- (1) Learners Are Misfit In Today's Competitive Times.
 - (2) Management And Employees.
 - (3) Learners Are Inheritors Of The Future.
 - (4) Competition And Learning.
17. *The author has handled the passage :*
- (1) surmisingly.
 - (2) informatively.
 - (3) interrogatively.
 - (4) intuitively.
18. *The passage is, at best, an adaptation from :*
- (1) an article on learning and knowledge, applicable to the corporate set up.
 - (2) a write up, detailing various ways of acquiring knowledge.
 - (3) an analysis of the various work cultures prevailing in the organisation.
 - (4) None of the above.
19. *A conclusion drawn from the passage is that :*
- (1) realisation of corporate goals and objectives should be infused into the workers.
 - (2) survival of the organisations can be ensured if they get into a perpetual learning mode.
 - (3) a firm commitment is called for, from the employees.
 - (4) mass marketing has to be aggressive in order to meet the targets.
20. *The passage is related to :*
- (1) marketing.
 - (2) organisational strategies.
 - (3) business methods.
 - (4) methods for an organisation to win in the competition.

Detailed Solutions

1. **Ans.(1).** Options (2), (3) and (4) do not find place in the passage. Paragraphs five, seven and eight have their opposite stated and thus refute them. Option (1) is in place, as the third paragraph states and upholds them. Option (1) is the correct one .
2. **Ans.(4).** Each of the options finds a place in the passage. Options (1), (2) and (3) are upheld. Paragraphs six and two state and uphold them. Hence all the options are in place. However, option (4), their combination is the perfect one.
3. **Ans.(2).** Option (2) is intact. The last paragraph has a mention of it. Options (1), (3) and (4) are not appropriate, since the passage makes no mention of it.
4. **Ans.(4).** Each of the options (1), (2) and (3) is reason for technological break through not seeing the light of the day. The first and sixth paragraphs state and uphold them. Hence none of the options answer the question, leading to option (4) as the appropriate one.
5. **Ans.(2).** Options (1), (3) and (4) find no place in the passage, direct or implicit. Option (2) is the right one, for the passage, in the seventh paragraph, states and upholds it.
6. **Ans.(3).** Options (1), (2) and (4) find a mention in the passage. They are endorsed by the fourth, second and the first paragraphs respectively. Option (3) is out of place, as the third paragraph states just the opposite. Hence, option (3) is the one sought.
7. **Ans.(1).** Options (2), (3) and (4) are false, for the passage does not state or imply them. Option (1) is in place, since the fifth paragraph states it. Option (1) is the sought one.
8. **Ans.(3).** Options (1) and (2) are partially correct by themselves, but option (3) is the best one, for the passage is all about it. Option (4) is wrong.
9. **Ans.(2).** Options (3) and (4) are not suggested by the passage, direct or implicit. Option (1) finds its mention in the passage, but cannot be said to be the title for the passage. Option (2) is the correct one, for the passage is all about the need for developing countries to be technologically strong to register an impact in the global market, which is possible through technological transfer.
10. **Ans.(1).** In the passage, the author has stated facts. Option (1) is the correct one. Options (2), (3) and (4) are incorrect, for the passage does not reflect any of them.
11. **Ans.(3).** Options (1), (2) and (4) all find their place in the passage. The ninth, sixth and third paragraphs all state and uphold them. Option (3) is out of the place as the opposite of it is stated in the eighth paragraph. Option (3) is the one sought.
12. **Ans.(1).** Options (2) and (3) are false for the passage does not state them. The fourth and the first paragraphs have their opposite stated. Option (1) finds its place in the sixth paragraphs. Option (1) is the sought one.
13. **Ans.(2).** Option (2) is the one sought. The opening paragraph states and upholds it. Options (1), (3) and (4) are absurd, since the passage does not mention them.
14. **Ans.(4).** All the options (1), (2) and (3) are true, as evident from the eighth, sixth and the third paragraphs respectively. None of them is false. Hence option (4) is the correct one.
15. **Ans.(3).** Option (3) finds its place in the passage, in the eighth paragraph. It is the sought one. The remaining options can be ignored, as the passage has no place for them.
16. **Ans.(3).** The passage has placed great emphasis on organisational learning. Through knowledge and learning, the worker output increases. The organisation stands to benefit. Option (3) correctly represents this and is the apt title for the passage. Options (1), (2) and (4) are not correct representations and lose out.
17. **Ans.(2).** The contents of the passage are informative. The passage informs of changes taking place in an evolving manner, the better being replaced by the best. It does not surmise, interrogate or intuit. Hence options (1), (3) and (4) are eliminated, leaving option (2) as the correct one.
18. **Ans.(1).** Clearly, it is option (1), for the passage is about learning and knowledge, emphasized in the corporate culture in today's times. Options (2) and (3) are not appropriate sources from where the passage could have been extracted.
19. **Ans.(2).** The sixth paragraph says it all. The survival of the organisation can be ensured if the learning mode is perpetual. Option (2) best depicts this and is the apt conclusion. The remaining options are incorrect and can be discarded.
20. **Ans.(2).** The passage is about ways in which an organisation can survive and perform well. Option (2) best relates to this and is the chosen one. The remaining options are incorrect and can be eliminated.

Answer Keys

20.(2)	19.(2)	18.(1)	17.(2)	16.(3)	15.(3)	14.(4)	13.(2)	12.(1)	11.(3)
10.(1)	9.(2)	8.(3)	7.(1)	6.(3)	5.(2)	4.(4)	3.(2)	2.(4)	1.(1)