



PAN AFRICA CHRISTIAN UNIVERSITY

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

**END OF SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN COMMUNITY DEVELOPMENT**

JANUARY-APRIL 2023 TRIMESTER

CAMPUS: ROYSAMBU

DEPARTMENT: COMMUNITY DEVELOPMENT

COURSE CODE: CDC 318

**COURSE TITLE: Appropriate Technology in Community
Development**

EXAM DATE:

DURATION: 3 HOURS

TIME: 5:30PM-8:30PM

INSTRUCTIONS

- Read the instructions and questions carefully before you write the answers.
- **Answer any TWO questions**
- *ALL PAC University's examination rules and regulations apply*

Question one

- a. Examine any **four** components you would consider in advancing technological receptivity. **(8 marks)**
- b. Explain any **six** reasons why many people are resistant to adopting appropriate technology. **(12 marks)**

Question two

- a. Using relevant examples, explain **four** factors to be considered during needs assessment to adopt appropriate technology. **(8 marks)**
- b. Explain **four** possible basic stages of technology transfer that could have been used in the technology referred to in 2 (a). **(12 marks)**

Question three

- a. Examine any five effects of conventional technology on the society. **(10 marks)**
- b. Explain any **five** reasons why you would advocate for appropriate technology in community development. **(10 marks)**

CDC 318 APPROPRIATE TECHNOLOGY
MARKING SCHEME

Question one

- c. Examine any **four** components you would consider in advancing technological receptivity. (8 marks)

- **Transferor:** Transferor can be called source and on the other hand it can be implied as the owner or holder of the knowledge. Transferor is the entity in TTP which sell the technology to the recipient. Based on the previously summarised literature, the transferor could be an individual, a company, or a country.
- **Transferee:** Transferee can be called recipient and on the other hand it is the beneficiary of technology and knowledge transfer. Transferee also is the entity in TTP which purchase the technology from the source. The transferee also could be an individual, a company, or a country.
- **Technology:** Many definitions exist concerning technology in literature. Based on the researcher's opinion, the best definition for technology is offer by Khalil. He defines technology as tools, processes, methods, product, systems employed in the creation of goods or in providing services and all the knowledge. In the other definition, technology is the most influential factor in a wealth creation system and that other factors contribute to the system.
- **Mechanism of transfer:** Since the transferee is the beneficiary of TT project, the mechanism of transfer should be chosen by transferee. Based on literature, there are three sorts of channels that allow the flow of technology; general channels, reverse-engineering channels and planned channels.
- **The transferor environment:** Set of conditions which in the transferor proceeds to sell the technology to transferee, is called the transferor environment. It is clear that environment is the profound term and it is needed to identify and introduce some determinative factors which can influence to TTP.
- **The transferee environment:** Set of conditions which in the transferee proceeds to purchase the technology from transferor, is called the transferee environment. It is clear that environment is the profound term and it is needed to identify and introduce some determinative factors which can influence to TTP.
- **The greater environment:** It is obvious that transferee and transferor have some same set of condition which can influence to TTP. Actually, the justified technology transfer broadcasting model covers them at the greater environment. It is surrounding both the transferor and transferee. Layers of this environment are sub-regional, regional, and global.

Any four components mentioned and explained (2 marks each = 8 marks)

- d. Explain any **six** reasons why many people are resistant to adopting appropriate technology. (12 marks)
- (1) *loss of control.* Individuals may resist changes because they feel that control over their life situation is taken away from them with changes that are imposed on them rather than being self-initiated.
 - (2) *Cognitive rigidity.* It still seems likely that some form of cognitive rigidity would be implicated in an individual's resistance to change.
 - (3) *Lack of psychological resilience.* It may also be that less resilient individuals are more reluctant to make changes because to do so is to admit that past practices were faulty, and therefore change entails a loss of face.
 - (4) *Intolerance to the adjustment period involved in change.* New tasks require learning and adjustment, and it may be that some individuals are more willing and able to endure this adjustment period.
 - (5) *Preference for low levels of stimulation and novelty.* It is thus reasonable to expect that people who resist change would exhibit a weaker need for novelty.

(6) *Reluctance to give up old habits.* When individuals encounter new stimuli, familiar responses may be incompatible with the situation, thus producing stress, which then becomes associated with the new stimulus.

Any six reasons mentioned and explained (2 marks each = 12 marks)

Question two

- c. Using relevant examples, explain **four** factors to be considered during needs assessment to adopt appropriate technology.

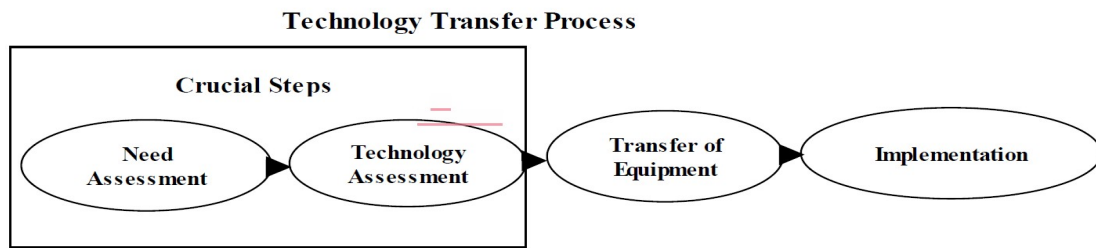
(8 marks)

Technology Assessment Factors			
Technical Factors	Economic Factors	Institutional Factors	Environmental Factors
Physical facilities (infrastructures and support technologies), Services and systems (operation, maintenance)	Human resources (both technical and non-technical expertise), Capital, land and other raw materials, Macro economic conditions, Market and property right (patents and licenses)	Organizational factors (structure, flexibility for change, decision making), Social factors (religion, taboos, language, concepts of time and honor, respect, work ethics), Cultural factors (taste, habit), Political factors (Political instability and corruption)	Geographical and climatic conditions, Ecological systems imbalance, human health effects, Effects of pollution, Resource depletion and environmental destruction

Any four factors mentioned, with examples and explained (2 marks each = 12 marks)

- d. Explain **four** possible basic stages of technology transfer that could have been used in the technology referred to in 2 (a). **(12 marks)**

- the **Needs Assessment** –indicating the needs to be satisfied by the technology and its strategic importance
- the **technology needs specification**-specifying the detailed requirements and constraints
- the specification and **assessment of direct and indirect effects** of the transfer of a technology (Awany, 2005; Madu, 1988).
- the **technology selection**- considering the available technologies



Any four relevant stages mentioned and explained (3 marks each = 12 marks)

Question three

- c. Examine any five effects of conventional technology on the society. **(10 marks)**

Cultural distortions and formation of dual societies:

The basic objectives of every society are to reduce the gap between the rich and poor. The experience so far in developing countries with the introduction of conventional industrial technology is that the gap is widening. The cultural pattern emerging as a result of the use of the products of modern technologies is largely alien to the traditional societies of developing countries.

Extravagant resource use and growth of consumerism

One of the most important features of modern technology is its strikingly high rate of resource utilisation. This feature of the conventional technologies was under severe criticisms from the era of technological revolution. In fact modern industrial technologies have created an invisible or indirect chain of resource use and the process is often irreversible that the resources are eventually being converted into commodities.

- d. Explain any **five** reasons why you would advocate for appropriate technology in community development. **(10 marks)**

- "are low in capital costs;
- use local materials whenever possible;
- create jobs, employing local skills and labour;
- are small enough in scale to be affordable by a small group for example a group of farmers;
- can be understood, controlled and maintained by villagers wherever possible, without high level of Western style education;
- can be produced out of a small metal working shop, if not in a village itself;
- suppose that people can and will work together to collectively bring improvements to their communities, recognising that in most of the world important decisions are made by groups rather than by individuals;