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**UNIVERSITY OF PETROLEUM
AND ENERGY STUDIES**



End Semester Examination – April, 2017

Program/course:	MBA IFM	Semester –	IV
Subject:	Infrastructure for Rural & Social Sector & E Governance	Max. Marks	: 100
Code	: MDSI 804	Duration	: 3 Hrs
No. of page/s:	4		

Section- A 10x2=20

Complete the abbreviation

DDUGJY, NREP, PMGSY, SGRY, MoRD, NABARD, MNREGA, RWSS, IADP, PURA

Section- B 4x5=20

1. What is community development program? Explain.
2. What Balwant Rai Rehta committee suggested for improvements in the panchayti raj system?
3. Name the districts which were selected as part of PURA. Any **five**.
4. Write down the role of NABARD for rural development.

Section-C

ANSWER ANY 2 QUESTIONS 2x15=30

1. Write a short note on DDUGJY.
2. Describe the selection process of private players for PURA.
3. Write short notes on:
 - a. RWSS
 - b. PMGSY

Section D 30

THE debate on science and technology (S&T) policy in independent India has largely taken place around the shifting role of the state in phases; ranging from the strong promotion of S&T, pursuit of self-reliance and dominant role of the public sector under the Nehruvian state, to the ongoing phase of state withdrawal, attenuation of self-reliance and indigenous research, and heightened influence of foreign governments and multinational companies on public policy, including in S&T. This analytical framework has undoubted validity, especially as regards organized industry and for the main current of scientific and technological research institutions and universities. Agricultural research and extension too have

been extensively analyzed, both within this broad framework and otherwise, and there is a vast literature available on these subjects.

Regrettably, there has been little or no rigorous effort to understand the meaning and policy implications of these successes and failures, especially in terms of the S&T content. The present essay too does not propose to take on this Herculean task. A few brave forays have, however, been made into examining processes of innovation with an emphasis on innovation ecosystems and institutional behavior, highlighting the systemic constraints that inhibit sound technological innovation by mainstream S&T institutions, whereas more nimble non-governmental organizations get better results by building wider linkages and taking a more holistic view of how technologies articulate economically and socially.

Other academic analyses, mostly through a few case studies, have tended to highlight the incompatibility or even contradiction between 'western' science and technology and indigenous knowledge, between 'modernist' perspectives and those rooted in traditional and craft based systems, to elucidate the failure of new technologies to meet the requirements of their intended rural users in their lived contexts.

Rural off-farm vocations have themselves always had a distinct presence in different governmental programmes in India since independence, thanks mainly to the Gandhian movement and the evolution of various developmental schemes under the Khadi and Village Industries (KVI) umbrella, a quite unique policy and institutional framework in developing countries. Household industries and non-farm occupations have long figured in schemes of different government departments of rural development, small or rural industries, and even S&T, especially in the various avatars of rural self-employment and anti-poverty programmes such as the Integrated Rural Development Programmes (IRDP) and its successor versions till the current National Rural Livelihoods Mission. What is germane for purposes of this essay is that through all these changes, there has been a peculiar continuity. Uniformly through the decades, while the financial, institutional and demographic targeting dimensions have changed considerably, there has been no consideration of technological content and little substantive technical input into these programmes bar the odd standard tools or equipment. Even the few but significant innovations relevant to rural non-farm livelihoods emerging from different S&T institutions or NGOs have been completely ignored in the mainstream of developmental efforts targeting rural non-farm vocations under the rural development or village industries umbrellas, with none of the many field-tested technologies emerging out of the stable of the Department of Science and Technology or CSIR finding any place or role.

There is no evidence, no specific report or study that may be cited here, to suggest any conscious or policy decision to explain this absence of S&T content. It cannot be anybody's argument that S&T is irrelevant to this context. All artisanal trades embody hundreds or even a few thousand years of evolving knowledge and technical skills in India, also incorporating new learning and skills from other cultures, and a vast array of agro-processing and other secondary-sector vocations and activities have been an integral part of rural India, and all involve complex issues of S&T. If, nevertheless, all these

developmental programmes targeting the rural non-farm sector have ignored S&T, explanations must lie elsewhere than in irrelevance.

One could perhaps point a finger at the notorious compartmentalization of the Indian governmental system and the apparently Herculean efforts required by different departments to synergize their not inconsiderable efforts and programmes. But over how many five year plans or how many decades? And if interdepartmental efforts have not been tried or have not taken shape, how is it that efforts at bringing in significant S&T content into the rural non-farm sector were not made either from within each department or sector, such as rural development or village industries, or through initiatives from integrative structures such as the Planning Commission or other higher levels of government?

It is also significant that major, influential civil society platforms that have championed rural empowerment through guaranteed rural wage employment and other social nets have been silent on the issue of rural non-farm livelihoods or even the role of S&T in rural empowerment in more general terms.

One is therefore left to conclude that there is a systemic 'blindness' of the policy establishment and the state developmental system as a whole, including the mainstream S&T establishment, and also of much of academia and the 'third sector', to issues of science and technology relevant to the rural non-farm sector and the large class of artisans, small and marginal farmers, agricultural labour, women and others whose livelihoods are rooted in off-farm activities. This huge and persistent systemic chasm in the Indian policy ecosystem and, in the S&T ecosystem has, along with other structural biases and institutional failings, contributed to the now chronic deprivation of these sections, steep decline in the economic weight of their occupations and activities, worsening of the terms of trade between rural and urban industrial areas, and their increasing disconnect from the developmental mainstream.

That there is urgent need to address job creation in the rural non-farm sector can scarcely be gainsaid if even the most coarse data are considered. India has around 69% rural population with half to two-thirds of them living in poverty. With all the hype about rapid urbanization, India is projected to still have around 50% of its population in rural areas in 2050. Employment in agriculture is declining, and the urban industrial sector is witnessing 'jobless growth', so where will the jobs come from to meet the poverty burden? If the expected trickle-down effects do not materialize, and there is no evidence so far that it will, then it seems fairly evident that substantial job creation must take place in the rural non-farm sector.

The utter lack of understanding of the role of technology can also be seen in the handicraft sector, the other major sector involving rural and peri-urban artisans and other workers. Whereas handicrafts, especially exports, have often been hailed as an Indian success story, with exports rising steadily in dollar terms, it is also well known that India's share of the global handicraft market is a relatively meager 2% approximately. Whereas many studies in India speak of needing to increase market share through export promotion drives, better designs and better targeting of specific markets, as usual the elephant in the room, technology, is mostly and in practice ignored.

In contrast, countries such as China, Thailand, Malaysia and the Philippines have over the years invested in upgradation of technologies in manufacturing for high productivity and quality standards, human resources and institutional arrangements in the wider modern handicrafted products sector, generically classified in world trade as 'gifts and decoratives', with telling results in exports, sales volumes, skill enhancement and employment creation. An official Indian study, acknowledging that China has a massive 30% share of the global market in handicraft items, notes that this is mostly due to the 'tremendous mechanization [that] has taken place in China' and the industry in China being 'more oriented towards production of craft items by use of technology and mass scale production.'

Could it be that problems faced by artisans, craftspersons and workers in other rural non-farm vocations in India are opaque to the class-caste elite that dominates the policy and S&T establishments? Total unfamiliarity with the lived circumstances of the rural artisan and crafts worker, and even more so, complete unfamiliarity with their techniques and their felt needs for improved or new technologies, would mean that the caste-class elite constituting the policy establishment is in fundamental ways simply unable to understand these needs and then address them.

To reiterate, these limitations are of course not insuperable, notwithstanding the deep biases and limitations imposed by cultural upbringing, transmitted ideologies, a stilted educational system carrying all these biases, and the distant remove from rural settings at which institutions of S&T and of governance work in India. Conscious efforts by many practitioners over the years, especially in S&T capable NGOs along with some notable exceptions in institutions and supporting governmental departments, and on rare occasions through collaboration between such actors, have shown exceptional results in many cases in terms of application of science, development of new or improved technologies and models for sustainable rural enterprises, and evolving exemplars of alternative development trajectories.

Case studies show that where such successes have been achieved, those NGOs or others engaged in developing technological solutions have worked in close partnership with rural user groups, have based their work on felt needs of the users and their lived socio-economic contexts, have factored in institutional and other dimensions, and have built-in long-term collaborations between technology developers and rural users such that there is a resultant sustainable and qualitative shift in knowledge, skill and capability level.

Given its long if the chequered history of promoting rural industrialization and, for all the weaknesses of existing institutions and programmes, considerable accumulated experience and capability, India is uniquely placed among developing countries to take up this challenge. But to do so, the dark side of the moon must be well lit and many more must travel there.

- 1. Analyze the case and explain the role of science and technology (S&T) for rural development with suitable examples.**