

TED (21) – 4001
REVISION 2021

Reg.No.....

Signature.....

FOURTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING AND
TECHNOLOGY / COMMERCIAL PRACTICE / MANAGEMENT
(Common to all Diploma Programmes)

COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

Time: 3 hours

Maximum Marks: 75

PART A

I. Answer all questions in one word or one sentence. Each question carries one mark.

(9 x 1 = 9 Marks)

1	What are the different types of indigenous knowledge systems?	M 1.01	R
2	What are the 4 characteristics of indigenous knowledge	M 1.01	R
3	List any 4 skills required for a community	M 1.01	R
4	What is meant by organizational skills	M 1.01	R
5	What is the limitation of traditional teaching techniques?	M1.02	U
6	Define water management.	M 4.04	R
7	What is rain water harvesting?	M 4.04	U
8	Mention any 2 methods of modern irrigation	M 2.02	R
9	Define a community	M 1.01	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks

(8 x 3 = 24 Marks)

1	Why is Indigenous/ Traditional knowledge important?	M 1.01	R
2	Explain the challenges to indigenous knowledge	M 1.01	U
3	What are the Methods for Recording Indigenous Knowledge?	M 2.02	U
4	What is the role of digital library in making IK information accessible?	M 1.02	U
5	What are the tools of recording IK?	M 3.03	U

6	Write a short note on indigenous education system	M 1.01	U
7	Explain the traditional irrigation system followed in India	M 3.03	U
8	What are the different branches of Ayurveda?	M 1.01	R
9	What is the importance of water management?	M 4.04	U
10	Explain in detail about the texts used in ancient education system	M 3.03	R

PART C

III. Answer all questions. Each question carries seven marks

(6 x 7 = 42 Marks)

III	What are the essential applications of indigenous knowledge? OR	M 1.01	R
IV	Explain the methods of preserving indigenous knowledge.	M 1.02	U
V	Explain the procedures need to be followed when collecting, recording, and documenting IK OR	M2.02	U
VI	Explain the Gurukula system of ancient education	M2.02	U
VII	Write in detail about the modern education system OR	M 3.03	U
VIII	Explain the technological growth occurred in construction industry	M 3.03	U
IX	Briefly explain the different methods of conservation of water in ancient times OR	M4.04	R
X	Explain the various waste management techniques followed in the community nowadays	M4.04	U
XI	Briefly explain the modern methods of water management OR	M 4.04	U
XII	Briefly explain the need of conserving energy	M 4.04	U

XIII	Explain the various traditional practices followed in India in the field of education, construction, irrigation, folklore.	M 1.01	U
OR			
XIV	Why is schooling considered as a 'way of life' and recommend some techniques to improve the quality of education	M 3.03	U

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

QSTN NO	ANSWER	SPLIT UP SCORE	TOTAL
PART A			
1	Agriculture, medicine, security, botany, zoology, craft skills and linguistics, construction, games	1	1*9=9
2	Adaptive, holistic, humble, responsible, moral	1	
3	Empathy,patience,flexibility, organizational skills, communication skills, ethics and non-judgmental, documentation skills.	1	
4	A set of techniques used by an individual to facilitate the efficiency of future-oriented learning, problem-solving, and task completion.	1	
5	In traditional teaching techniques, teachers are the only source to provide knowledge.	1	
6	<i>Water management is a process of developing, optimizing and planning of water resources via many practices which are defined by many policies and regulations</i>	1	
7	Rainwater harvesting is the simple process or technology used to conserve rainwater by collecting, storing, conveying and purifying of rainwater that runs off from rooftops, parks, roads, open grounds, etc. For later use.	1	
8	Drip irrigation and sprinkler irrigation	1	
9	Any group of three or more people with shared values, norms, identity, or interests etc. Is known as a community .	1	
PART B			
1	<ul style="list-style-type: none"> • Indigenous knowledge provides problem-solving strategies for local communities • Learning from indigenous knowledge can improve understanding of local conditions. • Understanding indigenous knowledge can increase responsiveness to clients. • Adapting international practices to local conditions can improve the impact and sustainability of our work. • Indigenous knowledge can help to reduce poverty. • Sharing of indigenous knowledge within and across communities can enhance cross-cultural understanding 	1X3	3
2	<ul style="list-style-type: none"> • Lack of adequate documentation of local practices. • Lack of documentation and promotion of adaptations and improvements • Decreasing faith of many people in their own knowledge and practices in the growth of modern methods 	1X3	3

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021


SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

3	<ul style="list-style-type: none"> • Increasing competition from external inputs • Background research: identify area/people to plan with, review of secondary sources of information. • Develop relationship with local people: build a positive relationship based on trust. • Jointly identifying problems and opportunities, • Develop draft project proposal: set goal, objectives, methodology. • Meet with local leaders and people. • Reformulate proposal based on feedback from community • Select methods and prepare for each thoroughly. • Field data collection and analysis with these local people • Jointly evaluating and re-planning activities. 	0.5 each	3
4	<ul style="list-style-type: none"> • Preparing ik databanks (inventories and registers) • Making ik accessible to the community by means of marketing strategies • Developing collection development policies for ik, bearing in mind the implications of the storage media for its preservation • Developing standardized tools for indexing and cataloguing ik systems; • Compiling bibliographies of ik resources 	1X3	3
5	<ul style="list-style-type: none"> • Tool no. 1 interviewing • Tool no. 2 group discussions • Tool no. 3 mapping it is a method for collecting information on where certain resources or features are located. • Tool no. 4 historical comparison describes conditions, techniques, and practices in different time periods • Tool no. 5 matrix a method for listing items and recording their characteristics. 	3	3
6	<ul style="list-style-type: none"> • Indigenous education was imparted at home, in temples, pathshalas, tols, chatuspadis and gurukuls. • There were people in homes, villages and temples who guided young children in imbibing pious ways of life. • Temples were also the centres of learning and took interest in the promotion of knowledge of our ancient system. • Students went to viharas and universities for higher knowledge. • Teaching was largely oral and students remembered and meditated upon what was taught in the class. 	3	3

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

7		Define each	3
8	<p>The branches of ayurveda</p> <ul style="list-style-type: none"> • Kayachikitsa: internal medicine • Bala: paediatrics • Graha: treatment of diseases arising from possession by pathogens, evil spirits, etc. Mainly diseases of a mental nature. • Urdhvanga: dealing with the eyes, ear, nose, throat and dentistry 	3	3
9	<ul style="list-style-type: none"> • Water management is important as it helps to establish the expectations of future irrigation. • The unequal distribution across the country, makes most of the population face water scarcity. • The requirement of water in urban areas is higher than the availability. • Since rainfall in india is highly seasonal, water is required to irrigate crops • Conserving water also saves energy. • water conservation also saves finances. • installing a water meter at home will enable use of less water, and lead to lesser charges • Lesser consumption of water will maintain more water in the environments and help sustain the wetland habitats for plants, wildlife and aquatic life 	0.5x6	3
		3	

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

10	<p>The ancient system of education in India included the education of all the texts mentioned in the options, i.e., Vedas, Brahmanas, Upanishads, and Dharma Sutras. These texts form the foundation of Hindu philosophy and religion and are collectively known as the "Vedas and Vedanta."</p> <ul style="list-style-type: none"> • The Vedas are the oldest and most sacred texts of Hinduism and are considered the source of all knowledge. They are divided into four parts - Rigveda, Yajurveda, Samaveda, and Atharvaveda - and contain hymns, mantras, and rituals. • The Brahmanas are commentaries on the Vedas and explain the meaning and significance of the rituals described in the Vedas. They also provide guidance on how to perform the rituals correctly. • The Upanishads are philosophical texts that explore the nature of the self, the universe, and the relationship between the two. They are considered the final part of the Vedas and contain some of the most profound insights into Hindu philosophy. • The Dharma Sutras are texts that provide guidance on social and moral conduct and are part of the broader corpus of Hindu law known as the Dharma Shastras. They are attributed to various ancient Indian sages and provide guidance on how to live a virtuous life. 		3
PART C			
3	<ul style="list-style-type: none"> • Natural resources management, sustainable social relationships, natural remedies and medicines, environment conservation, ik in development projects • Cultural preservation – • Land claim processes - indigenous geographies used as the basis for land selection and for developing approaches to native control. • Resource management practices - involving a wide array of knowledge concerning species and species habitats. • Land use regulation - tk used in locally-based planning processes to determine local and regional perspectives about who is most affected by developments. • Environmental monitoring - to depict and record changes related to the well-being of a people over time. • Conservation of plant diversity- against overexploitation; habitat loss and fragmentation; global climate change; • Species introductions & invasions. 	1 mark each	7
4	<ul style="list-style-type: none"> • Record and use ik: document ik so that both the scientific and local community have access to it and can utilize it. • raise awareness in the community about the value of ik: record and share ik success stories in songs, plays, story-telling, videos and other traditional or modern means of communication. • Encourage people to take pride in their knowledge. • help communities record and document their local practices: • get local people involved in recording their ik by training them as researchers and providing means of documentation. (computers, video equipment, etc.) • Make ik available: disseminate ik back to the community through newsletters, videos, books and other media. • observe intellectual property rights: have agreements so that ik is not misused and benefits return to the community from which it 	1 mark each	7

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

5	<p>originates.</p> <ul style="list-style-type: none"> • Define your study objectives. • determine content and extent of the study: • Select methods for recording and documentation • Prepare for each method thoroughly before going to the community. • Collect as much relevant information as you can about the community and related topics before you enter the community. • Obtain permission from the community before you start the study or project • explain to the community, in detail, the study or project objectives • Discuss with the community the possible benefits of the study • Learn the meaning of local terms • Methods such as interviews, sorting, ranking, building taxonomies, and observation can help match indigenous and western terms 		7
6	<ul style="list-style-type: none"> • Gurukuls, also known as ashrams, were the residential places of learning • Situated in forests, in serene and peaceful surroundings, hundreds of students used to learn together in gurukuls. Women too had access to education during the early vedic period. • During that period, the gurus and their shishyas lived together helping each other in day-to-day life. • The main objective was to have complete learning, leading a disciplined life and realising one's inner potential. • Students lived away from their homes for years together till they achieved their goals. • The gurukul was also the place where the relationship of the guru and shishya strengthened with time. 		7
7	<p>As per the constitution of india, school education was originally a state subject —that is, the states had complete authority on deciding policies and implementing them. There is a national organization that plays a key role in developing policies and programmes, called the national council for educational research and training (ncert) that prepares a national curriculum framework. Each state has its counterpart called the state council for educational research and training (scert). The school system in india has four levels: lower primary (age 6 to 10), upper primary (11 and 12), high (13 to 15) and higher secondary (17 and 18). The lower primary school is divided into five “standards”, upper primary school into two, high school into three and higher secondary into two. The modern teaching methods are collaborative learning, spaced learning, flipped classroom, self learning, gamification, vak teaching, and crossover learning are various types of modern teaching method.</p>		7
8	<p>In the course of the civil wars, fires and looting destroyed virtually all of the wood-based dwellings including grand palaces and public buildings.</p>		7

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

9	<p>• Thus, an entire tradition of wood-based urban construction (which may have taken several centuries to develop) was destroyed. • But it also led to a greater emphasis on the use of more lasting construction materials. • the very social conditions that destroyed technological progress in one direction gave birth to technological progress in another. • sculptural finds from the mauryan period indicate that mauryan sculptors of that time had achieved a high degree of proficiency in working with stone. • they must have had tools and implements that enabled them to create smoothly modelled and highly polished representations of human and animal figures. • later civilizations in india employed these skills not only for the purposes of sculpting but also for creating entire monuments constructed from a variety of hard building materials. • for instance, various methods for preparing cements were developed, and by the 7th century, cement of highly durable quality came into use in the construction of important monuments that survive to this day</p> <ul style="list-style-type: none"> • jhalara-the rectangular shaped stepwells (steps down to a well) that have tiered steps on three or four sides, were constructed to collect the water from the upstream reservoir or a lake. • the oldest known jhalara dates back to 550 ad and was built to fill the water demand-supply gap during the season of scanty monsoon. these are beautiful structures and quite efficient • talab-talabs are the medium-sized reservoirs more than 5 bighas (1 bigha = 0.33 acres). • they are either natural or man-made structures which were used to store water for household consumption and drinking purposes. • they were also built to regulate the flow of water and prevent flooding. • the largest man-made talab in india (area-wise) is the lake hirakud in odissa built on mahanadi. it has the area of 750 sq.km.. • bawari is an another type of stepwells built around the reservoirs to narrow and deepen them, which helps in minimizing the loss of water through evaporation. • in the areas where rainfall is scanty, like rajasthan, the bawari was the intricate part of cities' water storage network. • with the construction of the canal that used to divert the rainwater into the human-made tanks, the major water issues of the population were solved. • also, the water could percolate into the ground and raise the water table, thus recharging the aquifers. • • taanka is like a modern-day tank used in rainwater harvesting system, for storing huge amount of water. • this water harvesting technique is indigenous to the thar desert region of rajasthan. 	Meth ods-1 3x2	7
---	--	--------------------------	---

**DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION**

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

10	<ul style="list-style-type: none"> • the taanka is built as a cylindrical paved underground pit which is filled by rainwater received from rooftops, courtyards or other manmade catchment areas. • it can store water which can last throughout the dry season and can save the tedious labour of fetching water from distant places, to meet everyday necessities <p>• landfill <i>in this process, the waste that cannot be reused or recycled are separated out and spread as a thin layer in low-lying areas across a city. a layer of <u>soil</u> is added after each layer of garbage</i></p> <ul style="list-style-type: none"> • incineration • <i>incineration is the process of controlled combustion of garbage to reduce it to incombustible matter such as ash and waste gas.</i> • waste compaction <i>the waste materials such as cans and plastic bottles are compacted into blocks and sent for recycling</i> • biogas generation <i>biodegradable waste, such as food items, animal waste or organic industrial waste from food packaging industries are sent to bio-degradation plants. in bio-degradation plants, they are converted to biogas by degradation with the help of <u>bacteria</u>, fungi, or other microbes.</i> • composting <i>all organic materials decompose with time. food scraps, yard waste, etc., make up for one of the major organic wastes we throw every day. the process of composting starts with these organic wastes being buried under layers of soil and then, are left to decay under the action of microorganisms such as bacteria and fungi</i> • vermicomposting <i>vermicomposting is the process of using worms for the degradation of organic matter into nutrient-rich manure</i> 	Methods- 1 3x2	6+1=7
11	<p>rainwater harvesting</p> <ul style="list-style-type: none"> • <i>rainwater harvesting is a very effective method of conserving natural water and replenishing the groundwater level.</i> <p>water metering</p> <ul style="list-style-type: none"> • <i>another efficient way of cutting down water wastage is to install water meters and measure the amount of water that is being used in residential and commercial buildings.</i> <p>greywater recycling <i>is a method of saving used and waste water from kitchen sinks, washing machines and showers, which is then recycled for usage in toilets, for watering plants, etc.</i></p> <p>pressure reducing valves <i>a pressure reducing valve basically controls the amount of pressure in a hydraulic system. these valves ensure a pre-set level of water that is to be used</i></p>		7
12	<ul style="list-style-type: none"> • reduce living expenses 		7

**DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION**

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

13	<ul style="list-style-type: none"> • benefits the environment and protects wildlife • less power plants • promote health • energy resources like coal, oil, and natural gas can cause pollution and medical complications. conservation of energy makes sure less carbon footprint and hence less pollution. • energy conservation minimizes carbon dioxide emissions into the atmosphere, lowering the chances of global warming. • water is a limited resource, and <i>hydropower plants need a lot of it to produce energy.</i> • to make sure there is always a supply of clean water, the water needs to be cleaned and conserved. • conservation of energy reduces habitat destruction. • energy conservation will put an end to the threat of energy shortages. <p>Education system</p> <ul style="list-style-type: none"> • the ancient system of education was the education of the vedas, brahmanas, upanishads and dharmasutras. • writings of charaka and sushruta were also some of the sources of learning. • sources of learning were drawn from various disciplines such as itihas (history), anviksiki (logic), mimamsa (interpretation) shilpashastra (architecture), arthashastra (polity), varta (agriculture, trade, commerce, animal husbandry) and dhanurvedya (archery). • indigenous education was imparted at home, in temples, pathshalas, tols, chatuspadis and gurukuls. there were people in homes, villages and temples who guided young children in imbibing pious ways of life. temples were also the centres of learning and took interest in the promotion of knowledge of our ancient system. students went to viharas and universities for higher knowledge. teaching was largely oral and students remembered and meditated upon what was taught in the class. <p>the branches of ayurveda</p> <ul style="list-style-type: none"> • kayachikitsa: internal medicine • bala: paediatrics • graha: treatment of diseases arising from possession by pathogens, evil spirits, etc. mainly diseases of a mental nature.urdhvanga: dealing with the eyes, ear, nose, throat and dentistry <p>construction in the course of the civil wars, fires and looting destroyed virtually all of the wood-based dwellings including grand palaces and public buildings.</p> <ul style="list-style-type: none"> • thus, an entire tradition of wood-based urban construction (which may 	7
----	---	---

DIPLOMA EXAMINATION, APRIL 2023
SCHEME OF EVALUATION

REVISION: 2021

SUBJECT CODE: 4001 – COMMUNITY SKILLS IN INDIAN KNOWLEDGE SYSTEM

14	<p>have taken several centuries to develop) was destroyed. • but it also led to a greater emphasis on the use of more lasting construction materials. • the very social conditions that destroyed technological progress in one direction gave birth to technological progress in another. • sculptural finds from the mauryan period indicate that mauryan sculptors of that time had achieved a high degree of proficiency in working with stone. • they must have had tools and implements that enabled them to create smoothly modelled and highly polished representations of human and animal figures. • later civilizations in india employed these skills not only for the purposes of sculpting but also for creating entire monuments constructed from a variety of hard building materials. • for instance, various methods for preparing cements were developed, and by the 7th century, cement of highly durable quality came into use in the construction of important monuments that survive to this day</p> <p>Education means studying in order to obtain a deeper knowledge and understanding of a variety of subjects to be applied to daily life. education is not limited to just knowledge from books, but can also be obtained through practical experiences outside of the classroom.</p> <ol style="list-style-type: none">1. provides stability2. provides financial security3. needed for equality4. allows for self-dependency5. make your dreams come true6. a safer world7. confidence8. a part of society9. economic growth on a national level10. can protect you		7
----	--	--	---