## **B.TECH/CE/CHE /4TH SEM/HMTS 2001/2022**

# HUMAN VALUES AND PROFESSIONAL ETHICS (HMTS 2001)

Time Allotted: 3 hrs Full Marks: 70

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and <u>any 5 (five)</u> from Group B to E, taking <u>at least one</u> from each group.

Candidates are required to give answer in their own words as far as practicable.

# Group – A (Multiple Choice Type Questions)

		(Multi)	pie Choice Type Questio	nsj			
1.	Choo	se the correct alterna	tive for the following:	10 × 1 = 10			
	(i) Anand is brought up with strict patriarchal ideologies. Growing as an when a job prospect takes him to a western country, the notion of wempowerment shocks him greatly. The prime cause influencing Anand's acceptance of the foreign culture is (a) socialization (b) sense of right conduct (c) individual preference (d) conservativeness.						
	(ii)	makes him/he	er derive enjoyment by ca	oullying where the offender's ausing mental distress to the c) Id (d) values			
	(iii)	• •	d (b) freud, cooley				
	(iv)	Which household wast (a) Vegetable scraps (c) Rubber	-	potential? o) Metal d) Plastic.			
	(v)	If the shopkeeper realizes his duty for others and accepts not to overcharge a child customer at his shop, he is following  (a) Consequentialism (b) Non-consequentialism (c) Utilitarianism (d) Hedonism.					
	(vi)	Match the correct pair (A) Kohlberg (B) Schumach	(i) Approprianer (ii) Coming of	te technology Post-Industrial Society			

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		(C) George Ritzer (iii) Technology transfer (D) Edwin Mansfield (iv) Story of Heinz (a) (A)-(iv), (B)-(i), (C)-(ii), (D)-(ii) (b) (A)-(ii), (B)-(ii), (C)-(i), (D)-(iv) (c) (A)-(ii), (B)-(iii), (C)-(iv), (D)-(i) (d) (A)-(i), (B)-(iv), (C)-(iii), (D)-(ii)					
	(vii)	What is an ethical dilemma?  (a) An issue caused by not following guidelines  (b) Conflict between what's right and what's wrong  (c) Moral conflict between values  (d) Same as a professional dilemma.					
	(viii)	ii) Sustainable development is concerned with (a) society (b) ecology (c) economy (d) all the above.					
	(ix)	A company does not pay heed to employee work conditions but expects productivity to increase. This is a breach of  (a) societal justice (b) organizational values (c) professional code of ethics (d) sustainable development.					
	(x)	Company's sense of realization towards social community through volunteering and corporate social programs is known as  (a) progressive company (b) moral development (c) corporate social responsibility (d) sustainable industrialization.					
		Group- B					
2.	(a)	Write a short note on any one of the following:  (i) Maslow's 'Needs' and significance of Psychological values  [(CO1)(Remember/LOCQ)]  (ii) Mead's Stages of Development of 'Self' and Role of Socialization  [(CO1)(Understand/LOCQ)]  (iii) Social media and value inculcation.					
	(b)	[(CO1)(Analyze/LOCQ)] With suitable examples explain how engineers meet their Cognitive and Aesthetic needs towards ensuring social well-being.  [(CO4)(Understand/IOCQ)] $6+6=12$					

Case Study: Cancer Town. In 1980's the rising African-American community in New 3. Orleans (city in Louisiana) were prompted for Gordon Plaza to build their dream homes. The place was marketed by government as affordable housing project, funded by federal funds, only to be discovered later of its being a toxic dump. Environmental Protection Agency's (EPA) investigation in 1980 found the soil rich in arsenic, dioxins, polycyclic aromatic hydrocarbons (PHA) and high levels of lead. Out of 150 contaminants found in the soil, 49 were potentially cancer causing. From 1909 to

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1958 city's medical, municipal and industrial waste were dumped at this site and sprayed with now banned pesticide. Thus, later on developing a low-income housing

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project seemed lucrative on the land. Gordon Plaza has state's second highest cancer rates in Louisiana 745 cases per million.

The fight for relocation, right to clean and safe environment is on since 1990's and constantly met with unsuccessful results even with numerous attempts by black residents of Gordon Plaza. Shanon Rainey, a resident and activist for the cause laments "You knew this was a toxic landfill, so y'all used us as guinea pigs to see how long black folks can live on top of a toxic landfill."

(i) Discuss the case in the light of violation of human values, and state which type of values are being violated in the above case?

[(CO2)(Evaluate & Analyze/HOCQ)]

(ii) Taking from Maslow's Need-Priority theory, state which all needs can be correlated with the above case and how they are relevant in the present situation of the African-American residents of Gordon Plaza.

[(CO1)(Remember, Understand, Analyze/IOCQ)] (8 + 4) = 12

# Group - C

4. If Elliott doesn't litter because it's against his core values to do so, what stage of Kohlberg's moral development does this reflect? How do you define *morality* in today's world? Explain the levels of moral development suggested by Kohlberg.

[(CO2&CO4)(Understand/IOCQ)] (2 + 3 + 7) = 12

- 5. Dmitry, the City Engineer of Public Works is responsible for the wastewater treatment plant and reports to James about its operation. This city has several large food-processing plants that discharge large amounts of waste into the wastewater system ponds during every season.
  - When Dmitry informs James on plant's incapacity in handling potential overflow during rainy months, James pays no heed to Dmitry's concern and solutions, saying they will face the problem when it happens. He also replaces Dmitry by appointing a junior technician (Evan). Dmitry who is on probation is warned of termination if he reports the matter further. Though not taking any direct responsibility, Dmitry does help Evan without James' knowledge. During the winter, heavy storms occur in the city. It becomes clear to those involved that if the wastewater (from treatment plant) is not released, the ponds will overflow and will dump all of the waste into the river.
  - (i) How would you respond being in Dmitry's place (obligation to James, City Public Works, health of people and environment)?

[(CO3, CO4) (Evaluate and Analyze/HOCQ)]

(ii) How would you suggest Dmitry to prioritize his actions/ responsibilities to be fulfilled simultaneously? [(CO1)(Understand and Analyze/IOCQ)]

(6+6) = 12

## Group - D

- 6. Unless we give renewable energy a serious thought, the problem of energy crisis cannot be solved.
  - (i) Energy crisis is a major problem in recent days. Why?
  - (ii) Why is renewable energy important? Explain.
  - (iii) What are the main barriers to the development of renewable energy resources?

[(CO2&CO7)(Understand/IOCQ)]

(4+4+4)=12

7. Rajkot, Saurashtra Chemicals (Porbandar). The industrial accident at Nirma Group's soda ash plant incident killed two and injured two other employees on the site (October, 2021). The negligence on part of the safety department was found to be mainly responsible. According to workers even after repeated intimation to officials they did not respond to complaints over a vibrating iron platform holding the huge overloaded container with raw materials, and they instructed workers to continue working.

During factory work the iron platform came crashing and killing two workers on-thespot and injuring others. Being the second incident in less than two months, report finds workers had no safety gears and other precautionary measures following safety standards.

- (i) Explain in your words how industrial safety is significant for employer-employee relationship? [(CO1, CO2)(Remember and Understand/LOCQ)]
- (ii) Suggest at least four safety measures (in general) to be maintained in factories involving human-machine interaction. [(CO4)(Understand/IOCQ)]

(4 + 8) = 12

## Group - E

- 8. For the first time in history, the majority of human beings now live in cities and towns.
  - (i) What are the key observations from the ongoing trend of urbanisation in India? What potential challenges are they going to create in the future? Analyse.
  - (ii) What duties do humans have with respect to the environment, and why?

[(CO2&CO8)(Analyze/HOCQ)]

(7 + 5) = 12

9. 'Hearing' is a full-body experience for aquatic beings, which mostly for humans is focused on few organs in our heads and because of specifically designed eardrums together with the uncooperative border of air to skin, sound bounces off for terrestrial animals. In air, we hear only a low groan from passing vessels; but (below water) the sound transmitting down dissipates quickly causing sonic violence powered by merchant vessels, cargo ships, commercial liners, seismic blasts, engine roars, ship radios etc.

Sound pollution harms whales and other marine lives by blurring their sonic connections. Sediments from human activities on land cloud the water, similarly chemicals confuse the sense of smell of aquatic animals driving whales away from

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locating their prey as sonar/seismic blasts weaken their social connections too. This will affect the marine bio-diversity in the long run. Silence from humans is unlikely, for most of our oil, gas and food travels among continents by sea. There is little chance, therefore, that the noise will cease entirely. But quieter oceans are within reach.

(i) State how marine bio-diversity is relevant in Ecological ethics.

[(CO6)(Understand and Analyze/LOCQ)]

(ii) Suggest at least four steps to be implemented for controlling ocean pollution towards retaining ecological balance between humans and aquatic beings.

[(CO5)(Evaluate and Analyze/LOCQ)]

(4 + 8) = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	22.92	50	27.08

### **Course Outcome (CO):**

After the completion of the course students will be able to

- 1. Be aware of the value system and the importance of following such values at workplace
- 2. Learn to apply ethical theories in the decision making process
- 3. Follow the ethical code of conduct as formulated by institutions and organizations
- 4. Implement the principles governing work ethics
- 5. Develop strategies to implement the principles of sustainable model of development
- 6. Implement ecological ethics wherever relevant and also develop eco-friendly technology.

\*LOCQ: Lower Order Cognitive Question; IOCQ: Intermediate Order Cognitive Question; HOCQ: Higher Order Cognitive Question