Reg. No.													

B.Tech/ M.Tech (Integrated) DEGREE EXAMINATION, MAY 2023
First/ Second Semester

21GNH101J – PHILOSOPHY OF ENGINEERING
(For the candidates admitted from the academic year 2022-2023)

Note:
(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 75

PART – A (20 × 1 = 20Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
1.	The earliest Civil Engineer is known by name	1	1	1	1
	(A) Imhotep (B) Babylon				
	(C) Teotihulan (D) Saqqara				
2.	The term engine is derived from	1	1	1	1
	(A) Greek (B) Latin				
	(C) English (D) Arabic				
3.	Modern ERA is between	1	1	1	1
	(A) 1114 and 1200 (B) 1104 and 1200				
	(C) 1174 and 1200 (D) 1074 and 1200				
4.	The first steam engine was built in	1	1	1	1
	(A) 1947 (B) 1698				
	(C) 1998 (D) 1647				
5.	_____ belongs to the major branch of metaphysics.	1	1	2	1
	(A) Physiology (B) Biology				
	(C) Ontology (D) Sociology				
6.	_____ ontologies describes concepts depending both on a particular domain and task	1	1	2	1
	(A) Reference (B) Application				
	(C) Theoretical (D) Metaphysical				
7.	What happens in the first stage of product life cycle?	1	1	2	1
	(A) Product development (B) Product growth				
	(C) Product maturity (D) Product decline				
8.	When a product is in its decline stage of its product life cycle, the average selling price will be	1	1	2	1
	(A) Higher (B) Average				
	(C) As decided by manufacturer (D) Lower				

9. _____ is the study of the natural world as it is   1 2 3 1
   - (A) Engineering
   - (B) Social
   - (C) Technology
   - (D) Science

10. Design as _____ is related to the conceptualization stages of making new products   1 1 3 1
    - (A) Activity
    - (B) Planning
    - (C) Execution
    - (D) Epistemology

11. Holland's theory describes _____ number of basic personality types.   1 2 3 1
    - (A) 2
    - (B) 4
    - (C) 6
    - (D) 8

12. _____ focus on ideas   1 2 3 1
    - (A) Creators
    - (B) Helpers
    - (C) Thinkers
    - (D) Doers

13. The _____ test your hypothesis by doing an experiment   1 1 4 1
    - (A) Scientific method
    - (B) Addie model
    - (C) Holland code
    - (D) Engineering method

14. _____ number of parts are involved in evaluation phase.   1 1 4 1
    - (A) 2
    - (B) 4
    - (C) 6
    - (D) 8

15. The final stage of engineering design process is   1 1 4 1
    - (A) Define problem
    - (B) Research ideas
    - (C) Communicate results
    - (D) Establish constraints

16. The prototype creation is involved in _____ phase of addie model.   1 1 4 1
    - (A) Evaluation phase
    - (B) Implementation phase
    - (C) Development phase
    - (D) Design phase

17. _____ is the most discussed aspect of sustainability.   1 2 5 1
    - (A) Environment
    - (B) Economic
    - (C) Ethical
    - (D) Equity

18. The American Association of Engineering Societies was established in   1 2 5 1
    - (A) 1997
    - (B) 1979
    - (C) 1897
    - (D) 1889

19. Development which meets the needs of current generations without compromising the ability of future generations to meet their needs   1 1 5 1
    - (A) Sustainability
    - (B) Diversity
    - (C) Equity
    - (D) Integrity

20. _____ are involved in planning and managing projects   1 2 5 1
    - (A) Actors
    - (B) Teachers
    - (C) Doctors
    - (D) Engineers

PART – B (4 × 10 = 40 Marks)
Answer ANY FOUR Questions

	Marks	BL	CO	PO

21. Explain briefly on non-motivated functions.   10 1 1 1

22. Explain reference ontology with regard to application ontology.   10 1 2 1

23. What are the four dimensions of engineering? Write short notes on these dimensions.   10 1 3 1

24. Differentiate between scientific method and engineering design.   10 1 2 1

25. What do you mean by CDIO engineers in industry? Explain in detail.   10 1 4 1

26. Mention the professional organizations available for engineers with a detailed note.   10 1 5 1

PART – C (1 × 15 = 15 Marks)
Answer ANY ONE Question

	Marks	BL	CO	PO

27. What do you mean by product life cycle? Explain its stages in detail.   15 1 2 1

28. Give detailed notes on RAISEC model.   15 1 2 1

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