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**B.Tech. / M.Tech (Integrated) DEGREE EXAMINATION, JULY 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 40<sup>th</sup> minute.
- (ii) **Part – B** and **Part – C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 75

**PART – A (20 × 1 = 20Marks)**

Marks    BL    CO    PO

Answer **ALL** Questions

1. Mathematics and science were applied in all the fields in \_\_\_\_\_ era.
 

(A) Ancient era	(B) Middle era		
(C) Renaissance era	(D) Modern era		
2. A systematic enterprise that builds and organizes knowledge in the form of testable explanations is defined as
 

(A) Science	(B) Arts		
(C) Philosophy	(D) Engineering		
3. The science that deals with symbols governed by rules is defined as
 

(A) Social sciences	(B) Political sciences		
(C) Formal sciences	(D) Laws		
4. Identify the factor which does not fulfill the desired attributes of an engineer
 

(A) Leadership	(B) Earnings		
(C) Problem solving	(D) Creativity		
5. An element of realism dealing with world exists objectively in itself is referred as
 

(A) Philosophy	(B) Epistemology		
(C) Extreme	(D) Metaphysical		
6. Choose a relevant ontology which suits for a specific domain independent criteria.
 

(A) Functional ontology	(B) Reference ontology		
(C) Foundational ontology	(D) Domain ontology		
7. When a product has many competitors, then its average selling price will be
 

(A) Extreme	(B) Lower		
(C) Average	(D) Zero level		

8. A basic good used in commerce which is interchangeable with other goods of the same type is called  
 (A) Profit (B) Business tactics  
 (C) Modern technology (D) Commodity 1 2 2 12
9. The sum of all engineered tools, devices and process available is defined as  
 (A) Products (B) Technology  
 (C) Science (D) Epistemology 1 1 3 12
10. Identify the odd element from RIASEC model.  
 (A) Realistic (B) Social  
 (C) Conventional (D) Integrity 1 1 3 3
11. People prefer to work with data particularly in the numerical, statistical and record keeping realm are grouped under  
 (A) Organizers (B) Persuaders  
 (C) Thinkers (D) Helpers 1 2 3 12
12. A division of epistemology which is crucial to develop scientific initiatives is called  
 (A) Design epistemology (B) Planning epistemology  
 (C) Activity epistemology (D) Timing epistemology 1 2 3 1
13. The process of specifying requirements are done using  
 (A) Scientific methods (B) Engineering methods  
 (C) Classical business methods (D) Profitable methods 1 1 4 9
14. \_\_\_\_\_ model is practiced by instructional designers and training developers  
 (A) ADDIE model (B) RIASEC model  
 (C) SPIRAL model (D) DISERT model 1 2 4 12
15. The person who works to develop products by means of integrating technologies is refereed as  
 (A) Testers (B) Programmers  
 (C) Facilitators (D) Managers 1 1 4 1
16. The course of action that is carried out for checking the stability of individual components and its design is called  
 (A) Integration testing (B) Derived testing  
 (C) Unit testing (D) Recovery testing 1 2 4 12
17. The core concept of 3Es focusses on  
 (A) Technology (B) Assets  
 (C) Work (D) Equity 1 2 5 6
18. Ethics is a factor used in measuring the concept of  
 (A) Social license (B) Social impacts  
 (C) Cultural collaborations (D) Organization communication 1 2 5 2

- |   |   |   |   |   |
|---|---|---|---|---|
| 19. The overall employee performance and their satisfaction level can be improved by increasing | 1 | 2 | 5 | 9 |
| (A) Team performance  |   |   |   |   |
| (B) Machine performance   |   |   |   |   |
| (C) Investments   |   |   |   |   |
| (D) Requirements  |   |   |   |   |
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- |  |   |   |   |   |
|--|---|---|---|---|
| 20. Point out the professional duty which is not listed in fundamental canons. | 1 | 2 | 5 | 2 |
| (A) Hold paramount the safety and health                                       |   |   |   |   |
| (B) Perform services in all areas of their competence                          |   |   |   |   |
| (C) Issue public statement only in an objectives                               |   |   |   |   |
| (D) Act for each employee  |   |   |   |   |

**PART – B (4 × 10 = 40 Marks)**

Answer **ANY FOUR** Questions

- |  | Marks | BL | CO | PO |
|--|-------|----|----|----|
| 21. Explain engineering habits of mind and its criteria with a neat sketch.                            | 10    | 3  | 1  | 2  |
| 22. Classify the phases in product life cycle and brief each phase.                                    | 10    | 4  | 2  | 4  |
| 23. Elaborate the Holland's theory on personality types.   | 10    | 3  | 3  | 1  |
| 24. Interpret the types of dimensions on engineering.  | 10    | 3  | 3  | 12 |
| 25. Categorize the layers of CDIO and give a brief description of each layers with a suitable diagram. | 10    | 4  | 4  | 9  |
| 26. Summarize the various professional organizations for engineers.                                    | 10    | 3  | 5  | 12 |

**PART – C (1 × 15 = 15 Marks)**

Answer **ANY ONE** Questions

- |   | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 27. Deduce the layers of STEAM pyramid and express your views on including art into the STEAM pyramid. Also determine the relation between arts, mathematics, science, technology and engineering.  | 15    | 4  | 1  | 3  |
| 28. Priya is a senior software engineer in a multinational company who works in a U.S military project. She has chosen ADDIE model for her software development. Explain the ADDIE model with its phases and suggest your views of modifying the phases of the same model with reasons. | 15    | 4  | 4  | 4  |

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