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Question Paper Version : A

Sixth Semester B.E/B.Tech. Degree Examination, June/July 2026
Multi-Disciplinary Research in Aeronautical Engineering

Time: 1 hr

Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. What is the primary characteristics of multidisciplinary research?
 - a) It combines knowledge from different fields
 - b) It focuses only on theoretical studies
 - c) It avoids collaboration
 - d) It restricted to one subject
 2. Why is multidisciplinary research important?
 - a) It creates isolated knowledge
 - b) It helps in solving complex problems by integrating multiple disciplines
 - c) It only benefits scientists
 - d) It discourage team work
 3. Which of the following is an example of multidisciplinary research?
 - a) Studying physics in isolation
 - b) Combining biology and engineering to develop medical devices
 - c) Conducting research only in literature
 - d) Studying mathematics without applications
 4. Which of these is NOT a challenge of multidisciplinary research?
 - a) Difficulty in communication among different discipliners
 - b) Lade of funding opportunities
 - c) Access to multiple perspectives
 - d) Integration of diverse methodologies

5. What is one of the key outcomes of multidisciplinary research?
 - a) Narrow understanding of a single field
 - b) Broader and more innovative solutions
 - c) Reduced collaboration between researchers
 - d) Limited real-world applications
6. Which of the following is a method used in multidisciplinary research?
 - a) Quantitative analysis only
 - b) Combining qualitative and quantitative methods
 - c) Ignoring scientific data
 - d) Avoiding data interpretation
7. The integration of multiple disciplines requires researchers to have :
 - a) Expertise in only on subject
 - b) An open minded approach and willingness to collaborate
 - c) No communication with other researchers
 - d) A single theoretical frame work
8. What is the role of technology in multidisciplinary research?
 - a) To limit the scope of research
 - b) To facilitate data collection, analysis and collaboration
 - c) To replace human researchers
 - d) To reduce the need for team work
9. One challenge in multidisciplinary research is :
 - a) Encouraging diverse perspective
 - b) Finding a common research language among disciplines
 - c) Using multiple research methodologies
 - d) Expanding the scope of study
10. Which of these is a common multi-disciplinary research field?
 - a) Astrophysics only
 - b) Environmental science combining biology, chemistry and policy making
 - c) Studying a single historical event
 - d) Conducting research in only one lab
11. How does multidisciplinary research contribute to solving global challenges?
 - a) By relying on a single discipline
 - b) By integrating multiple perspectives and expertise
 - c) By focusing only on theory
 - d) By avoiding new technology
12. Which of the following fields benefits the most from multidisciplinary research?
 - a) Only pure mathematics
 - b) Artificial intelligence combining computer science, neuroscience and ethics
 - c) Studies restricted to a single field
 - d) Traditional literature studies without application

13. What is real world example and multidisciplinary research?
 - a) Developing sustainable energy solutions using physics, engineering and environmental science
 - b) Studying grammar rules in language
 - c) Solving a mathematical equation in isolation
 - d) Writing an individual research paper without collaboration
14. How does multidisciplinary research help in healthcare?
 - a) By combining medicine, engineering and data science to develop better treatments
 - b) By limiting studies to one medical field
 - c) By reducing collaboration among researchers
 - d) By avoiding new technology
15. Which of these is major goal of multidisciplinary research?
 - a) Solving complex real world problems
 - b) Avoiding team work
 - c) Ignoring societal needs
 - d) Reducing the scope of research
16. Which of the following is NOT a barrier to multidisciplinary research?
 - a) Interdisciplinary conflicts
 - b) Lack of communication
 - c) Increase in knowledge integration
 - d) Funding limitations
17. Which approach is the best suited for multidisciplinary research?
 - a) Working in silos
 - b) Encouraging collaborations across disciplines
 - c) Avoiding new research methods
 - d) Limiting innovation
18. How do multidisciplinary teams enhance problem solving?
 - a) By integrating diverse knowledge and expertise
 - b) By focusing on a single perspective
 - c) By avoiding collaboration
 - d) By restricting knowledge sharing
19. Why is data analysis important in multidisciplinary research?
 - a) It helps in understanding patterns across different fields
 - b) It limits research scope
 - c) It focuses only on one discipline
 - d) It discourage innovation
20. Which of these is an example of an interdisciplinary study?
 - a) Using biology and computer science to develop AI-based medical diagnostics
 - b) Studying a single historical event without connections
 - c) Ignoring technology in research
 - d) Avoiding teamwork in projects
21. How does funding impact multidisciplinary research?
 - a) It supports collaboration across disciplines
 - b) It limit new projects
 - c) It discourages innovation
 - d) It prevents data sharing

22. What is a challenge in integrating multiple research methods?
a) Finding a common framework for different disciplines
b) Avoiding data collection
c) Focusing on single research field
d) Ignoring real-world applications
23. Why do Government encourage interdisciplinary research?
a) To address complex global challenges
b) To avoid new discoveries
c) To restrict technological advancements
d) To limit funding in scientific research
24. Which skill is essential for researcher in multidisciplinary fields?
a) Communication and adaptability
b) Working alone without collaboration
c) Ignoring other disciplines
d) Avoiding new methods
25. What are the biggest advantages of a multidisciplinary approach?
a) A broader understanding of real-world problems
b) Limiting research scope
c) Reducing innovation
d) Avoiding team collaboration
26. What is the primary goal of data collection?
a) To analyze data
b) To gather information relevant to the research data
c) To publish findings
d) To validate hypotheses
27. Which of the following is a qualitative data collection method?
a) Survey b) Interview c) Questionnaire d) Experiment
28. Quantitative data is best represented in :
a) Text format b) Images c) Numerical format d) Audio recording
29. Which method is most appropriate for large-scale data analysis?
a) Case study
b) Thematic analysis
c) Statistical analysis
d) Content analysis
30. A questionnaire with Likert scale responses is an example of :
a) Qualitative tool
b) Quantitative tool
c) Mixed method tool
d) Subject tool
31. Which of the following is not a data collection method?
a) Observation b) Interview c) Documentation d) Hypothesis

32. Data interpretation involves :
- a) Deleting invalid data
 - b) Converting raw data into meaningful insights
 - c) Only coding responses
 - d) Avoiding statistical analysis
33. A code book is typically used in :
- a) Literature review
 - b) Data analysis
 - c) Hypothesis writing
 - d) Conclusion
34. Which of these is essential in ensuring data quality?
- a) Fast collection
 - b) Random response
 - c) Validation and Verification
 - d) Ignoring bias
35. Which of the following increases data reliability?
- a) Ignoring outliers
 - b) Cross – Checking data
 - c) Using fewer participants
 - d) Only qualitative input
36. What is a common method for verifying survey data?
- a) Peer review
 - b) Follow up interview
 - c) Publishing results
 - d) Graph plotting
37. Which statistical tool is best for correlation analysis?
- a) Mean
 - b) T-test
 - c) Pearson's test
 - d) Mode
38. Which of the following is part of research documentation?
- a) Daily meetings
 - b) Lab manuals
 - c) Research dairy/log book
 - d) Podcasts
39. What is the primary purpose of a research plan?
- a) To secure funding
 - b) To provide a clear path for investigation
 - c) To confuse competitors
 - d) To finish writing faster
40. What is literature review part of?
- a) Research methodology
 - b) Data analysis
 - c) Documentation
 - d) Research plan
41. Plagiarism can be avoided by :
- a) Copying from different sources
 - b) Using citation tools
 - c) Using images only
 - d) Not writing a report
42. What is the best time to start documenting a research projects?
- a) After data collections
 - b) After publishing
 - c) From the beginning
 - d) After peer review

43. Research publishing typically requires :
- a) Coding skills
 - b) Proof of funding
 - c) Peer review and formatting
 - d) Only visual data
44. Which section contains the hypothesis in a research plan?
- a) Results
 - b) Introduction or methodology
 - c) Acknowledgment
 - d) Abstract
45. Which file format is widely accepted for publishing?
- a) .doc x
 - b) .PPT
 - c) .pdf
 - d) .x/sx
46. Good research management includes
- a) Ignoring deadlines
 - b) Proper time planning
 - c) Skipping ethics review
 - d) Only online survey
47. Who is responsible for research ethics?
- a) Only the supervisor
 - b) Only the university
 - c) Every researcher involved
 - d) The Journal editor
48. A research gap is :
- a) Software tool
 - b) A type of methodology
 - c) An unexplored area in existing literature
 - d) A data error
49. What is the final step before journal submission?
- a) Grammer check only
 - b) Finalizing research objective
 - c) Proof reading and formatting
 - d) Designing experiments
50. What is essential for Transparent research?
- a) Data fabrication
 - b) Selective reporting
 - c) Reproducibility
 - d) Skipping peer review

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