

Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: RESEARCH METHODOLOGY

Subject Code: PHDRM100

Time allotted: 3 Hours

Max Marks: 60

Note: Note: The candidate is required to attempt all questions. The paper comprises of three sections. Section A contains one question each from Unit – I, Unit-II & Unit-III. Section B contains one question from Unit –IV and Section C contains one question from Unit-V of the syllabus.

SECTION A

- Q.1.**
- a. What is the importance of preparing concept note? 2 Marks
 - b. Differentiate between Qualitative and Quantitative research. 4 Marks
 - c. Enumerate the different limitations of research study. 6 Marks
- Q.2.**
- a. Explain Type I and type II errors. 2 Marks
 - b. Differentiate between true, quasi and non-experimental studies. 4 Marks
 - c. Classify research on the basis of objectives and differentiate each type with suitable examples 6 Marks
- Q.3.**
- a. Give a statement, each, to measure i) attitude, ii) intention. 2 Marks
 - b. What are the most commonly used scales for measurement of attitudes in research? 4 Marks
 - c. Why do you pretest a questionnaire? What happens if you don't do it? 6 Marks

SECTION B

- Q.4.**
- a. What is the role of judgement or rule of thumb in sample size determination? 2 Marks
 - b. Is it important to use estimations to arrive at a sample size for a study? Give reasons for your answer. 4 Marks
 - c. In a survey of 500 people, 60 percent responded with agreement to an Attitude question. Calculate a confidence interval at 95 percent to get an interval estimates for a proportion. 6 Marks

SECTION C

- Q.5.**
- a. Write the importance of patent information. 2 Marks
 - b. Write about Nuremberg code 1947. 4 Marks
 - c. What are the important points to be incorporated while writing the Introduction/ Background of the Research proposal? 6 Marks

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT

July 2023

Subject Name: Research & Publication Ethics

Subject Code: PHDRPE100

Time allotted: 3 Hours

Max Marks: 60

Note: Attempt all Questions

Q.1.

- | | | |
|----|--|---------|
| a. | Explain about philosophy and ethics in brief. | 2 Marks |
| b. | Analyze the nature of moral judgements and reactions in ethics. | 4 Marks |
| c. | Briefly explain the branches of philosophy and their importance. | 6 Marks |

Q.2.

- | | | |
|----|--|---------|
| a. | Analyze the concept of intellectual honesty and integrity in research. | 2 Marks |
| b. | Explain the consequences of mis-representation of data in research. | 4 Marks |
| c. | Explain following terms in brief (with one example, if any) fabrication, falsification and plagiarism and suggest ways to avoid plagiarism | 6 Marks |

Q.3.

- | | | |
|----|--|---------|
| a. | What is publication misconduct? Analyze the consequences of publication misconduct. | 2 Marks |
| b. | What is conflict of interest (COI)? What are different types of COI ? How COI is managed? | 4 Marks |
| c. | Explain various issues of authorship with the help of examples. What criteria must be fulfilled to become an author? | 6 Marks |

Q.4.

- | | | |
|----|---|---------|
| a. | Discuss various options for open access publications. | 2 Marks |
| b. | Explain the method of identification of predatory publications. | 4 Marks |
| c. | Write Short Notes on
i. JANE in research
ii. Salami slicing
iii. Role of SHERP/RoMEO in research | 6 Marks |

Q.5.

- | | | |
|----|---|---------|
| a. | Enumerate four reputed database for literature review. | 2 Marks |
| b. | Analyze the role of Elsevier journal finder and springer journal suggester. | 4 Marks |
| c. | Write Short Notes on:
i. SNIP & SJR
ii. h index
iii. impact factor | 6 Marks |

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: ADVANCES IN BIOCHEMISTRY

Subject Code: PHDBC110

Time allotted: 3 Hours

Max Marks: 60

Note: Attempt all Questions

Q.1.

- a. Explain the terms distribution coefficients and retention factor. 2 Marks
- b. What are the main characteristics of an ideal matrix for affinity chromatography? 4 Marks
- c. Write a detailed note on principle and application of affinity chromatography. 6 Marks

Q.2.

- a. What do you understand by Lac selection plasmid? 2 Marks
- b. How the major problems associated during construction of M13 phage based cloning vector are resolved? 4 Marks
- c. Discuss the pedigree of PBR322. 6 Marks

Q.3.

- a. Write the name of isotopes used for production of X-rays. 2 Marks
- b. Discuss the application of X-rays. 4 Marks
- c. Explain the method for production of X-rays? 6 Marks

Q.4.

- a. What is the most challenging issue facing genome sequencing? 2 Marks
- b. Why do you need to study genomes and proteomes of patients suffering from specific diseases? 4 Marks
- c. Comment on the genome projects on model organisms. 6 Marks

Q.5.

- a. What is the basis of mass spectrometric technique? 2 Marks
- b. What is 2D gel system? State its advantages and disadvantages. 4 Marks
- c. What are the tools for protein sequencing? Highlight the features and differences 6 Marks

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: Advances in Yoga Sciences

Subject Code: PHDYS110

Time allotted: 3 Hours

Max Marks: 60

Note: Attempt all Questions

Q.1.

- | | |
|--------------------------------------|---------|
| a. Define Hatha Yoga. | 2 Marks |
| b. Explain Chitta Vritti. | 4 Marks |
| c. Describe Shad Darshan in details. | 6 Marks |

Q.2.

- | | |
|---|---------|
| a. What is the role of a yoga teacher? | 2 Marks |
| b. Explain the techniques for mass instruction. | 4 Marks |
| c. Write the biography of Swami Shivananda. | 6 Marks |

Q.3.

- | | |
|---|---------|
| a. What is the importance of health in human life? | 2 Marks |
| b. Explain Ahara, Vihar, Achara and Vichara. | 4 Marks |
| c. Describe the role of yoga for physical, mental and spiritual health. | 6 Marks |

Q.4.

- | | |
|------------------------------------|---------|
| a. What is clinical research? | 2 Marks |
| b. Explain Chitta bhumis in brief. | 4 Marks |
| c. Describe dwadash roglakshan. | 6 Marks |

Q.5.

- | | |
|--|---------|
| a. What is applied research? | 2 Marks |
| b. What is the difference between Qualitative and Quantitative research? | 4 Marks |
| c. Explain the fundamentals of research in Yoga and its importance. | 6 Marks |

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: Advances in Nursing Sciences

Subject Code: PHDNS110

Time allotted: 3 Hours

Max Marks: 60

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

- a. What principles should you keep in mind while selecting an appropriate research topic? 2 Marks
- b. How would you apply principles and concepts of ethics while enrolling children as your study subjects while conducting research? 4 Marks
- c. As a research guide how will you critique research project of PG students? 6 Marks

Q.2.

- a. Differentiate between teacher oriented and student oriented learning environment. 2 Marks
- b. What are the advantages of creative teaching? 4 Marks
- c. Explain the role of a clinical instructor in application of learning theories for enhancing student learning in clinical area. 6 Marks

Q.3. You have been appointed as area supervisor in hospital. It has been reported to you that many nursing staff are being absent from duty without prior notice:

- a. Define leadership 2 Marks
- b. Explain importance of leadership in nursing practice 4 Marks
- c. Discuss which leadership style will you adopt in above-mentioned scenario to solve the problem? 6 Marks

Q.4. As a member of the internal quality assurance committee of the nursing college you are asked to prepare criteria for program evaluation

- a. List down the programmes in Nursing 2 Marks
- b. Discuss the models of programme evaluation 4 Marks
- c. Develop a tool for the evaluation of B.Sc Nursing programme 6 Marks

Q.5. Dynamic nature of any profession facilitates its advancement progressively

- a. Define Nursing as a practice profession. 2 Marks
- b. What are the factors influencing advances in nursing profession? 4 Marks
- c. Discuss the current advances in your clinical speciality. 6 Marks

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT

July 2023

Subject Name: ADVANCES IN MICROBIOLOGY

Subject Code: PHDMB110

Time allotted: 3 Hours

Max Marks: 60

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

- a. Define adjuncts. 2 Marks
- b. Differentiate between top fermented beer and bottom fermented beer. 4 Marks
- c. Discuss the golden era of microbiology. 6 Marks

Q.2.

- a. Explain how horizontal gene transfer is responsible for drug resistance? 2 Marks
- b. Write short note on National Immunization program and Schedule in India. 4 Marks
- c. Classify toxins. Discuss about exotoxins. 6 Marks

Q.3.

- a. Define superbugs. 2 Marks
- b. Write short note on Bioplastics. 4 Marks
- c. What are Xenobiotics? Discuss the biodegradation of Xenobiotics. 6 Marks

Q.4.

- a. Name the types of vaccines used for COVID-19 developed by various research groups. 2 Marks
- b. Define spoilage. Name the major microorganisms involved in spoilage of pharmaceutical products. 4 Marks
- c. Discuss major types of vaccines. 6 Marks

Q.5.

- a. Define plasmids. 2 Marks
- b. Write short note on cDNA Library. 4 Marks
- c. What are cosmids? Discuss their important properties. 6 Marks

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: Advances in Medical Physics

Subject Code: PHDMP110

Time allotted: 3 Hours

Max Marks: 60

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

- | | |
|--|---------|
| a. Define beam modifiers in radiotherapy. | 2 Marks |
| b. Write the difference between SSD and SAD techniques. Write about their applicability. | 4 Marks |
| c. Discuss the production of photon and electron beams in a linear accelerator. | 6 Marks |

Q.2.

- | | |
|--|---------|
| a. Define Interstitial Brachytherapy. | 2 Marks |
| b. Mention the significance of points A and B in carcinoma cervix brachytherapy. | 4 Marks |
| c. Briefly describe dosimetry in pelvic brachytherapy. | 6 Marks |

Q.3.

- | | |
|--|---------|
| a. What is IGRT treatment? | 2 Marks |
| b. Discuss the radiobiological aspects of SBRT Treatment. | 4 Marks |
| c. Explain the principle of Intensity modulated proton therapy (IMPT) with a suitable diagram. | 6 Marks |

Q.4.

- | | |
|---|---------|
| a. Write the role of grids in radiography. | 2 Marks |
| b. Enumerate artifacts encountered in computed tomography. | 4 Marks |
| c. Explain the principles and applications of Doppler ultrasound. | 6 Marks |

Q.5.

- | | |
|--|---------|
| a. Define the properties of Technetium 99m. | 2 Marks |
| b. Describe briefly about the detectors used in nuclear medicine. | 4 Marks |
| c. Write the working principles of SPECT and enumerate its applications. | 6 Marks |

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Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
July 2023

Subject Name: ADVANCES IN HUMAN RESOURCE MANAGEMENT

Subject Code: PHDMG112

Time allotted: 3 Hours

Max Marks: 60

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

- a. What is talent management programme? 2 Marks
- b. What are the key elements of performance management systems? 4 Marks
- c. Is it possible to characterize a typical talent? How do you avoid overlooking the recruitment of an applicant when screening is based on highly specific requirements dictated by the professional manager? 6 Marks

Q.2.

- a. What do you understand by onboarding? 2 Marks
- b. Explain barriers of Employee Engagement specific to the IT sector. 4 Marks
- c. What kind of engagement practices at organizations will best improve employee adaptability and commitment? 6 Marks

Q.3.

- a. What does a diverse workplace look like? 2 Marks
- b. Explain the term: Job enlargement and job enrichment 4 Marks
- c. What are the benefits and challenges of cultural diversity at the workplace? 6 Marks

Q.4.

- a. What do you understand by a repatriate? 2 Marks
- b. Discuss the advantages and disadvantages of ethnocentric versus geocentric staffing processes in an organization of your choice 4 Marks
- c. What is emotional intelligence? How is it helpful for an expatriate management in an organization? 6 Marks

Q.5.

- a. Who is a principal employer? 2 Marks
- b. Explain different sources of recruitment. 4 Marks
- c. What are the recruitment trends in the contemporary era and the challenges involved to hiring contract labor? 6 Marks

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