

PRE Ph.D. EXAMINATION – APRIL 2023

Time: 3 Hours

Max. Marks: 100

PAPER – I

RESEARCH METHODOLOGY

Q.P. Code: 7001

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Describe the steps of developing the research protocol with suitable example.
2. Describe different types of analytical study design

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Define the FINER and SMART in research with suitable examples.
4. Describe the steps of writing the materials and methods in thesis writing
5. Write the steps of writing the research protocol for grant.
6. Describe the Title – Consistency with research questions and objectives with suitable examples
7. Describe Systematic Review and steps in Systematic Review.
8. Describe steps of selecting title for research with suitable examples.

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**FACULTY OF MEDICINE
PAPER – II**

Q.P. Code: A23101

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Discuss molecular characteristics of pediatric Acute Lymphoblastic Leukemia (ALL). Discuss risk stratification & treatment strategies of ALL. (8+6+6)
2. Discuss solid tumors in children. Discuss the management and prognosis of solid tumors in children. Add a note on long-term effect of chemotherapy & radiotherapy in children. (8+7+5)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Supportive care in pediatric oncology.
4. Immunotherapy care in pediatric ALL.
5. Down's syndrome and acute leukemia.
6. Oncological emergencies – list them and discuss management of febrile neutropenia.
7. Recent advance in treatment of HLM.
8. Discuss the genetics & management of retinoblastoma.

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**FACULTY OF MEDICINE
PAPER – II**

Q.P. Code: A23102

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Enumerate the epigenetic changes occurring in mammalian cells. (5+15)
Describe the epigenetic mechanism involved in cancer.
2. Explain the hereditary predisposition in cancer. Add a note on (10+10)
modifiable risk factors of cancer.

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Enlist the biochemical features of cancer cells.
4. Discuss the role of oncogenes in cancer development with examples.
5. Discuss any two tumor markers used for detection of prostate cancer.
6. Discuss the risk factors & biology of prostate cancer.
7. Describe the molecular basic of proto-oncogene activation.
8. Discuss the principle of techniques to determine epigenetic markers.

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**FACULTY OF MEDICINE
PAPER – II**

Q.P. Code: A23103

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. a. Draw neat labeled diagrams of interior and exteriors of posterior cranial fossa.
b. Write indications of approach to posterior cranial fossa.
c. Discuss various applied surgical consideration for transodontoid approach to posterior cranial fossa.
d. Mention complications of various surgeries of posterior cranial fossa.
2. a. Mention various syndromes associated with neurological disturbances at skull base.
b. How do you evaluate clinically and with investigations the various neurological deficits secondary to skull base abnormalities?

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Describe the various procedures with their indications, merits and demerits of skull base reconstruction.
4. What is current procedural terminology code (CPT codes)? Enumerate and discuss the CPT codes for various skull base surgeries.
5. Discuss the standardization of steps to be followed, pre-operatively, operatively and post-operatively to avoid the possibilities of medical negligence out of skull base surgeries.
6. Describe indications and steps of transorbital neuro-endoscopic approach to anterior cranial fossa.
7. Write with description how do you design the validation proforma to assess the outcome of quality of life after various skull base surgeries.
8. Draw a neat labelled diagram of cavernous sinus. Discuss the various causes and management of cavernous sinus thrombophlebitis.

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Max. Marks: 100

**FACULTY OF PHYSIOTHERAPY
PAPER – II**

Q.P. Code: A23501

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Define obesity. Explain in detail various assessment techniques used in obesity with evidences.
2. Explain the physiological effects of callisthenic exercises. Write the importance of callisthenic exercises on PCOS. (14+6)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Ultrasound findings in PCOS.
4. Evidence based physiotherapy for PCOS with recent advances.
5. Explain the patho-physiology of PCOS.
6. Explain various components of yoga & its effect on PCOS.
7. Explain various alternative therapies for management of PCOS with evidences.
8. Explain diet and its importance in management of PCOS.

PRE Ph.D. EXAMINATION – APRIL 2023

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Max. Marks: 100

**FACULTY OF PHYSIOTHERAPY
PAPER – II**

Q.P. Code: A23502

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. How does iron deficiency anemia impacts mother and child health and write a note on role of physiotherapy in low birth weight baby.
2. How you will assess a know case of iron deficiency child and manage its Neuro behavioral problems.

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. How you will perform general movement assessment among the babies having developmental disabilities.
4. What are the different BSID tools are available and they differ from each other, also mention reliability and validity.
5. Write about risk infants screening tools. Write in brief about Brisance Screens II
6. Write about various Government schemes for anaemia eradication in India.
7. Write about protocol for iron supplementation to pregnant female also write briefly about its effects on maternal and newborn health.
8. Write in brief about iron Metabolism and its role on brain development of foetus and newborn during pre and post natal period.

PRE Ph.D. EXAMINATION – APRIL 2023

Time: 3 Hours

Max. Marks: 100

**FACULTY OF SCIENCE:
INTERDISCIPLINARY RESEARCH / STUDIES**

PAPER – II

Q.P. Code: A23701

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Describe the biology & risk factors of prostate cancer. (10+10)
2. Discuss the cancer metastasis with respect to primary & secondary tumor growth and cancer invasion & extravasations. (10+10)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Determinate the etiology of cancer.
4. Describe hallmark of cancer.
5. Describe in principle of DNA isolation and gel electrophoresis techniques.
6. Describe the principle, application and advantages of Restriction Fragment Length Polymorphism (RFLP).
7. Discuss the staging of prostate cancer and histo-pathological findings in prostate cancer.
8. Discuss principle, application and advantages & Next Generation Sequencing (NGS).

PRE Ph.D. EXAMINATION – APRIL 2023

Time: 2 Hours

Max. Marks: 50

PAPER – III

BIOSTATISTICS

Q.P. Code: 7003

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write an essay on parametric and nonparametric tests, their meaning and situations of their applications including underlying assumptions.
2. Describe measures of central tendency and measure of dispersion along with their advantages and disadvantages.

SHORT ESSAY QUESTIONS:

5 X 6 = 30

3. What is the area within $\bar{x} \pm SD$, $\bar{x} \pm 2SD$, and $\bar{x} \pm 3SD$?
4. Explain the Measures of Dispersion for Quantitative variate along with their utility.
5. Describe Simple random sampling including its limitations and benefits.
6. Explain Chi-square test with suitable examples, including its limitations.
7. Write short notes on Expected Outcomes of a research with suitable example.
