

**Entrance Examination – 2018**  
**(Ph.D. Admissions - January 2019 Session)**

**Ph.D. Health Sciences**

**Hall Ticket Number**

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**Time: 2 hours      Total Marks: 80**  
**(Part A 40 marks + Part B or C 40 marks)**

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**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE  
ANSWERING.**

**INSTRUCTIONS**

1. This booklet has Seventeen (17) pages. Please check thoroughly for all the pages.
  2. Enter the Hall Ticket number on the first page of this booklet as well as on the OMR sheet.
  3. There are two PARTS in the question paper – PART A (Question numbers 1-40) and PART B or C (Question numbers 41 - 80). In case of a tie, marks obtained in PART A will be considered for resolving the tie. Part A section of 40 marks is common to the 2 streams of study for which this examination is conducted.
  4. Part B and C is organized as follows and clearly highlighted and color coded:
    1. B = Public Health
    2. C = Nursing
  5. Candidates who have applied for a specific stream of study have to answer PART A which is common to both streams and then select the stream (B or C) as applicable to their selected stream in the application from PART B or C. **ONLY ONE STREAM ("B" OR "C") CAN BE ANSWERED BY ANY CANDIDATE IN THE ENTRANCE EXAMINATION AND HAS TO BE MARKED CLEARLY ON THE OMR ANSWER SHEET.**
  6. All answers have to be answered only in the provided and customized OMR sheet.
  7. Scientific calculators are not permitted.
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**PART A (COMMON TO THE 2 STREAMS OF STUDY).**

- 1. Agriculture refers to science and art of:**
  - A. Cultivating the soil
  - B. Raising crops
  - C. Rearing cattle
  - D. All of above
- 2. ABC in First Aid refers to:**
  - A. Airway, Breathing & Circulation
  - B. Affordable, Balanced & Cost Effective
  - C. Airway, Breathing, & Communication
  - D. Assistance, Blood & Circulation
- 3. The '108' service in India refers to all except:**
  - A. Emergency Medical Service
  - B. Emergency Police Service
  - C. Emergency Fire Service
  - D. Emergency Child Protection Service
- 4. Autism refers to:**
  - A. Infection caused by self
  - B. Temporary illness that cures itself as the child grows
  - C. A disorder of neural development characterized by impaired social interaction
  - D. Disorder where the individual is deaf and dumb
- 5. The acronym "SOP" stands for \_\_\_\_\_.**
  - A. sample operational plan
  - B. single operational plan
  - C. standard operating plan
  - D. standard operating procedure
- 6. Which of the following is not an ethical guideline for conducting research with humans?**
  - A. Getting informed consent of the participant
  - B. Telling participants they must continue until the study has been completed
  - C. Keeping participants' identity anonymous
  - D. Telling participants they are free to withdraw at any time.
- 7. "Bioinformatics" encompasses all these disciplines except:**
  - A. Medicine
  - B. Sociology
  - C. Maths/Physics
  - D. Biology
- 8. MIS stands for:**
  - A. Management interview systems
  - B. Management integrated systems
  - C. Management information systems
  - D. Management integrity systems

9. "AMCHI" refers to a:

- A. Chinese medicine
- B. Korean Martial art
- C. Japanese tea
- D. Tibetan medicine

10. The South African nation is described as a Rainbow nation and is attributed to:

- A. Nelson Mandela
- B. Oliver Tambo
- C. Thabo Mbeke
- D. Desmond Tutu

11. Society is defined as:

- A. A conglomeration of people
- B. A group of people bound by rules
- C. An association with regulated membership
- D. An organized association patterned on the norms of interaction

12. A family of married couple with their children is:

- A. Joint
- B. Extended
- C. Nuclear
- D. Intergenerational

13. "Body language" is an example of which type of communication?

- A. Auditory
- B. Olfactory
- C. Tactile
- D. Visual

14. A badge that records exposure to radiation that is worn when taking x-rays is called:

- A. Filtration
- B. Lead shield
- C. Dosimeter
- D. Grid

15. Which of the following originated as Greek-Perso – Arabic system of medicine?

- A. Ayurveda
- B. Unani
- C. Siddha
- D. Homeopathy

16. For Qualitative Research, the data is in the form of:

- A. Numbers
- B. Words
- C. Integers
- D. Fractions

**17. Which of the following is not a member of United Nations?**

- A. ILO
- B. WHO
- C. IMF
- D. MSF

**18. The headquarters of World Health Organization (WHO) is in:**

- A. Rome, Italy
- B. Hague, Nederland
- C. Paris, France
- D. Geneva, Switzerland

**19. The primary granting agency through which the United States government conducts and supports biomedical research is the \_\_\_\_\_.**

- A. National Science Foundation (NSF)
- B. National Institutes of Health (NIH)
- C. United States Dept. of Agriculture (USDA)
- D. National Institutes of Aging (NIA)

**20. "Anthropology" is a study of:**

- A. Primates
- B. Humankind
- C. Arthropods
- D. None of the Above

**21. Understanding and identifying with a person's situation and feelings is known as:**

- A. Pitying
- B. Grieving
- C. Empathy
- D. Sympathy

**22. A titer refers to the concentration of \_\_\_\_\_.**

- A. an antigen in a vaccine
- B. an antibody in a vaccine
- C. an antibody in a blood sample
- D. an antigen needed to stimulate antibody response

**23. A hypothesis is \_\_\_\_\_.**

- A. a review of the current literature on a scientific subject
- B. a concise step-by-step schedule of experimental work to be performed
- C. a description of the methods to be used for data assessment
- D. a theory to explain the scientific question or problem

**24. Which method or euthanasia requires the use of a guillotine?**

- A. cervical dislocation
- B. decapitation
- C. Electrocution
- D. CO2 overdose

**25. The construct of Gender is:**

- A. Biological
- B. Sociological
- C. Physical
- D. Supernatural

**26. Standard deviation is the deviation of an individual value from the:**

- A. Median
- B. Mode
- C. Range
- D. Mean

**27. The best word that describes the following sentence: 'sample taken from a population should be'**

- A. Representative
- B. Best in quality
- C. Precise
- D. Confident

**28. "Behavior" includes:**

- A. An organism's muscular or glandular response to stimulation that is observed
- B. The way that an organism responds to stimulation.
- C. The unique or predictable reaction of a "thing" to specific conditions.
- D. All of the above

**29. A "soprano":**

- A. Swims
- B. Sleeps
- C. Sings
- D. Dreams

**30. "Faux Pas" is a:**

- A. Tool
- B. Mistake
- C. Address
- D. Title

**31. Which of the following determinants of health is a 'downstream' determinant?**

- A. Housing
- B. Employment conditions
- C. Age
- D. Education

**32. Which of the following is NOT a characteristic of public health?**

- A. Prevention of disease in the community and environment
- B. Ensuring complete removal of all health care related errors
- C. Creation of a healthy community and reducing environmental hazards
- D. Linking people with proper health care providers

**33. When a contagious disease suddenly increases in incidence it is said to be:**

- A. Pandemic
- B. Epidemic
- C. Endemic
- D. Sporadic

**34. Strict vegetarian diet results in the deficiency of:**

- A. Vitamin B1
- B. Biotin
- C. Vitamin B12
- D. Vitamin D

**35. Which one of the following is the grass root level worker in the Integrated Child Development Services (ICDS) Scheme?**

- A. Midwife
- B. Anganawadi worker
- C. Lady Health worker
- D. Child development project officer

**36. Health education is to teach about:**

- A. Symptoms of a disease
- B. Management of an illness
- C. Prognosis of a disease
- D. Health practice, life styles and to adopt environmental changes

**37. Iron deficiency anemia is seen in:**

- A. Tape worm infestation
- B. Round worm infestation
- C. Giardiasis
- D. Hook worm infestation

**38. The current WHO Director General is:**

- A. Soumya Swaminathan
- B. Margaret Chan
- C. Ban Ki Moon
- D. Tedros Adhanom Ghebreyesus

**39. The Nobel Prize in Physiology or Medicine 2018 was awarded jointly to:**

- A. James P. Allison & Tasuku Honjo
- B. Arthur Askin, Donna Strickland & Gerard Mourou
- C. Paul Romer & William Nordhaus
- D. Denis Mukwege & Nadia Murad

**40. The mission "National Health Protection Scheme" in India is also called:**

- A. Niti Aayog
- B. MNREGA
- C. Ayushman Bharat
- D. Chiranjeevi Yojana

## PART B – PUBLIC HEALTH)

41. The Indian factories Act prohibits the employment of children below the age of:
- A. 10
  - B. 14
  - C. 16
  - D. 18
42. DDT (Dichlorodiphenyltrichloroethane) acts by:
- A. Contact poison
  - B. Repellent
  - C. Stomach poison
  - D. All of them
43. Aedes Egypti mosquito is responsible for:
- A. Malaria
  - B. Kala azar
  - C. HIV
  - D. Dengue fever
44. A drinking water well must be \_\_\_\_\_ feet away from a source of contamination:
- A. 25
  - B. 50
  - C. 75
  - D. 100
45. Strength of sewage is expressed in terms of \_\_\_\_\_
- A. Biological Oxygen Demand (BOD)
  - B. Chemical Oxygen Demand (COD)
  - C. Suspended solids
  - D. E. Coli count
46. The following are the best indicators of the level of air pollution except:
- A. Sulphur dioxide
  - B. Smoke index
  - C. Carbon monoxide
  - D. Suspended particles
47. All the following are common diseases transmitted by mosquitoes, except:
- A. Filaria
  - B. Diptheria
  - C. Japanese encephalitis
  - D. Chikunganya

**48. Which of the following is not a water-soluble vitamin?**

- A. Vitamin B
- B. Vitamin C
- C. Vitamin E
- D. None

**49. Human body requires the following macronutrients:**

- A. Calcium, Phosphorus, Vitamin D
- B. Carbohydrates, Proteins, Fats
- C. Potassium, Chloride, Sodium
- D. Oxygen, water, sunlight

**50. Safe limit of fluoride in drinking water is:**

- A. 0.2 - 1.6 mg/litre
- B. 0.6 - 0.9 mg/litre
- C. 0.5 - 0.8 mg/litre
- D. 0.9 - 1.8 mg/litre

**51. Anaemia is mainly due to deficiency of**

- A. Ca
- B. Fe
- C. Na
- D. Mg

**52. E-coli index of potable water should not exceed:**

- A. 11
- B. 18.1
- C. 10
- D. 8

**53. What is stunting?**

- A. Low weight-for-age
- B. Low height-for-age
- C. Low weight-for-height
- D. Weight-for-height

**54. Nalgonda technique is used for:**

- A. Parboiling of rice
- B. De-fluoridation of water
- C. Composting of solid waste
- D. Disinfection of water sources

**55. Anaemia is mainly due to deficiency of :**

- A. Ca
- B. Fe
- C. Na
- D. Mg



**56. Kwashiorkor and beri-beri are:**

- A. Communicable diseases
- B. Infectious diseases
- C. Deficiency diseases
- D. None of the above

**57. Occupational exposure to dust causes:**

- A. Tuberculosis
- B. Pneumonia
- C. Salmonella
- D. Pneumoconioses

**58. Insulin deficiency causes:**

- A. Diabetes insipidus
- B. Goitre
- C. Diabetes mellitus
- D. All of the above

**59. The energy that proteins provide per gram is:**

- A. 4 kcal
- B. 6 kcal
- C. 7 kcal
- D. 9 kcal

**60. We need \_\_\_\_ grams of dietary fibre per day:**

- A. 5-15
- B. 15-20
- C. 30-40
- D. 45-50

(PTO)

61. Before initiating a research study, the Principal Investigator must ensure that various approvals are obtained. Which of the following approvals is absolutely mandatory?
- A. Scientific committee approval
  - B. Ethics committee approval
  - C. Technical committee approval
  - D. Regulatory authority approval
62. Which of the following is not a type of study design?
- A. Qualitative study
  - B. Observational study
  - C. Retrospective study
  - D. Pilot study
63. Which of the following is stated mainly for statistical purpose?
- A. Research question
  - B. Objectives
  - C. Research hypothesis
  - D. All of the above
64. The process of identifying, within a large document collection, a subset of documents whose content is most relevant to user's need is called as:
- A. Information retrieval
  - B. Information management
  - C. Systematic Review
  - D. Meta-analysis
65. The ability to apply principles of analysis to identify those studies which are unbiased and is called as:
- A. Critical appraisal
  - B. Information seeking
  - C. Information management
  - D. Systematic Review
66. In the National Library of Medicine (NLM), MeSH means:
- A. Medical Services Heading
  - B. Medical Subject Heading
  - C. Medical Subject Helpline
  - D. Medical Services Helpline
67. While measuring the frequency of a chronic disease in a community in terms of Incidence per 1000 persons per year, and point prevalence per 1000 persons, what is the expected pattern of incidence and prevalence?
- A. Low prevalence, high incidence
  - B. High prevalence, low incidence
  - C. Both prevalence and incidence will be similar
  - D. None of the above statements are true
68. Which of the following is wrong about descriptive study designs?
- A. Describe the study outcome for 1 group
  - B. Compare the study outcomes for 2 group
  - C. Calculate the incidence for surveillance data
  - D. Calculate prevalence for cross-sectional study

**69. Relative risk of more than 1 indicates:**

- A. Incidence in unexposed is higher than exposed
- B. Incidence in exposed and unexposed are same
- C. Incidence in exposed is higher than unexposed
- D. Incidence is significant

**70. Which phase of a clinical trial is referred to as post-marketing surveillance?**

- A. Phase 1
- B. Phase 2
- C. Phase 3
- D. Phase 4

**71. Better recall of exposure among the cases in a case-control study can result in:**

- A. Information bias
- B. Confounding
- C. Investigator bias
- D. Selection bias

**72. The qualitative data analysis method which uses theoretical framework as the basis for analysis:**

- A. Content analysis
- B. Grounded theory
- C. Schema Analysis
- D. Hermeneutics

**73. In a study, participants are asked to indicate the type of pet they have at home (ex: dog, cat, Rabbit) from a given list. This type of variable is classified as:**

- A. Ordinal
- B. Nominal
- C. Continuous
- D. Discrete

**74. Statistical power (Power of the study) is defined as the probability of:**

- A. Accepting a null hypothesis when it is false
- B. Rejecting a null hypothesis when it is true
- C. Rejecting a null hypothesis when it is false
- D. Failing to reject a null hypothesis when it is false

**75. In the middle of a clinical trial, one participant decides to withdraw from the trial. But, the investigator pressurizes the participant to continue in the study till it completes. Which of the following ethical principles does the investigator violate?**

- A. Justice
- B. Autonomy
- C. Beneficence
- D. Non-Maleficence

**76. In constructing an "epidemic curve" the ordinate (vertical axis) displays a measure of:**

- A. Time
- B. Magnitude of outcome
- C. Gender
- D. Sexual activities

**77. Coefficient of variation is based on:**

- A. Mean and median
- B. Mean and mode
- C. Median and Standard deviation
- D. Mean and Standard deviation

**78. .... is a non-parametric statistical test.**

- A. Student's t-test
- B. Chi-square test
- C. F-test
- D. Paired t test

**79. Age adjusted rates are used to:**

- A. Make corrections in the incidence rates for errors in the statement of age
- B. Make corrections in the incidence rates for missing age information
- C. Make comparisons of deaths in persons belonging to the same age group
- D. Eliminate effects of differences in the age distributions of populations while comparing incidence rates.

**80. A confounding variable has the following characteristic:**

- A. It is associated with exposure only
- B. It is a hidden variable
- C. It is associated with outcome only
- D. It is associated with outcome as well as exposure independently

## PART C - NURSING

41. **While monitoring serum electrolyte levels of a client who is taking digoxin (Lanoxin). Which of the following electrolyte imbalances is common cause of digoxin toxicity?**  
A. Hypocalcemia.  
B. Hyponatremia.  
C. Hypomagnesemia.  
D. Hypokalemia.
42. **When providing emergency treatment for an open skin wound, you should use which substance to clean the wound?**  
A. warm tap water  
B. sterile isotonic solution  
C. half-strength hydrogen peroxide  
D. alcohol swabs
43. **Which finding indicates adequate fluid volume in a client with hypovolemic shock?**  
A. Urinary output of at least 0.5 ml/kg/hr  
B. urine pH greater than 7.5  
C. urine specific gravity of 1.090  
D. negative urine glucose
44. **What supplemental medication is most frequently ordered in conjunction with furosemide (Lasix)?**  
A. Chloride  
B. Digoxin  
C. Potassium  
D. Sodium
45. **The position of patient during immediate postoperative period of tonsillectomy surgery is:**  
A. Sim's position  
B. Prone position  
C. Lateral position  
D. Rose position
46. **The study of distribution and determinants of the disease is called:**  
A. Epidemiology  
B. Entomology  
C. Pathology  
D. Community
47. **The scientific method of study of human population is**  
A. Anthropology  
B. Demography  
C. Ecology  
D. Sociology



48. **Positive Homan's sign is interpreted as**  
A. Deep venous thrombosis  
B. Pulmonary embolism  
C. Pneumothorax  
D. Stroke
49. **The system of storage and transport of vaccine at low temperature is called**  
A. Cold chain system  
B. Vaccine chain system  
C. Vaccine carrier  
D. Ice lined refrigerator
50. **The saturation level of oxygen in the blood can be assessed by using**  
A. Spirometer  
B. Pulse oximetry  
C. Tonometer  
D. Cardiac monitor
51. **Increase in the size of the muscle of the arm in a weight lifter is an example of**  
A. Hyperplasia  
B. Hypertrophy  
C. Metaplasia  
D. Dysplasia
52. **The volume of air that moves in and out of lungs with each respiration is:**  
A. Tidal volume  
B. Minute volume  
C. Lung capacity  
D. Lung reserve
53. **Core body temperature is**  
A. Skin temperature  
B. Axilla temperature  
C. Rectal temperature  
D. Oral temperature
54. **In which position, do you keep a patient with breathing difficulty**  
A. Sim's position  
B. Prone position  
C. Supine position  
D. Fowler's position
55. **Uterus turned inside out is called**  
A. Acute inversion of the uterus  
B. Cervical dystocia  
C. Rupture uterus  
D. Prolapse uterus

56. **Morbidity means:**
- A. Illness
  - B. Death
  - C. Health
  - D. Fatality
57. **According to Erikson "a sense of industry develops during"**
- A. Infancy
  - B. Toddler period
  - C. Preschool age
  - D. School age
58. **The type of necrosis seen in tuberculosis is**
- A. Coagulative necrosis
  - B. Liquefactive necrosis
  - C. Caseous necrosis
  - D. Gangrenous necrosis
59. **As a psychiatric nurse, you would assess the patient's cognitive status with help of**
- A. Mini mental status examination
  - B. Rating tool
  - C. Process recording
  - D. Advanced technology
60. **Which of the following is a social motive?**
- A. Hunger
  - B. Thirst
  - C. Pain avoidance
  - D. Achievement
61. **In DOTS strategy 'D' & 'O' stand for which of the following:**
- A. Drug out
  - B. Directly observed
  - C. Daily observed
  - D. Daily order
62. **Which scientific method focuses on testing hypotheses developed from theories?**
- A. Deductive method
  - B. Inductive method
  - C. Hypothesis method
  - D. Pattern method
63. **Which of the following is necessary in obtaining informed consent?**
- A. A description of the statistical analyses that will be carried out
  - B. A description of the purpose of the research study
  - C. A description of the reliability and validity of test instruments
  - D. A list of publications that the researcher has had in the last ten years
64. **IRB is an acronym for which of the following?**
- A. Internal Review Board
  - B. Institutional Rating Board
  - C. Institutional Review Board
  - D. Internal Request Board



65. If data collection is done in several periods, the research is said to be:
- A. Cross-sectional
  - B. Longitudinal
  - C. Basic
  - D. Field
66. The sum of curricular and co-curricular activities is:
- A. Aim
  - B. Curriculum
  - C. Pedagogy
  - D. Summative evaluation
67. The literal meaning of philosophy is?
- A. Love of knowledge
  - B. Love of truth
  - C. Love of values
  - D. Love of wisdom
68. Epistemology deals with:
- A. Knowledge
  - B. Reality
  - C. Values
  - D. Culture
69. Which of the following refers to inferring about the whole population based on the observations made on a small part?
- A. Deductive inference
  - B. Inductive inference
  - C. Pseudo-inference
  - D. Objective inference
70. Which of the following type of non-probability sampling described as a deliberate selection of individuals by the researcher based on predefined criteria?
- A. Accidental sampling
  - B. Convenience sampling
  - C. Purposive sampling
  - D. Quota sampling
71. Josphin emphasizes to the team that they need to put their efforts together towards the attainment of the goals of the program. Which of the following principles refers to this?
- A. Span of control
  - B. Unity of direction
  - C. Unity of command
  - D. Command responsibility
72. Which of the following generally cannot be done in qualitative studies conducted in the field?
- A. Getting informed consent
  - B. Keeping participants from physical harm
  - C. Maintaining consent forms
  - D. Having full anonymity rather than just confidentiality



73. According to Crow and Crow the purpose of formal education is to?
- A. make students more intelligent
  - B. make students active and constructive members of society
  - C. form definite opinions in the mind of students
  - D. create good name for the nation
74. Which of the following refers to the flow of information among persons at different levels, who have no direct reporting relationships?
- A. Horizontal communication
  - B. Diagonal communication
  - C. Upward communication
  - D. Downward communication
75. Which of the following is described as taking a sample from the population by means of a procedure that provides every constituent a chance to be involved as a sample?
- A. Non-probability sampling
  - B. Probability sampling
  - C. Lottery method
  - D. High-density sampling
76. To evaluate a patient for hypoxia, which laboratory test is most likely advised?
- A. Red blood cell count
  - B. Sputum culture
  - C. Total haemoglobin
  - D. Arterial blood gas (ABG) analysis
77. Priorities of Planning in Nursing Process is done by:
- A. Information processing model
  - B. Interpersonal theory
  - C. Stages of illness model
  - D. Maslow's hierarchy of human needs
78. This is the overall plan of rotation of all students in a particular educational institution.
- A. Course plan
  - B. Clinical rotation plan
  - C. Curriculum plan
  - D. Master rotation plan
79. Silence is a communication technique used during an interview to:
- A. Show respect
  - B. Change the topic
  - C. Encourage the patient to continue talking
  - D. Clarify information
80. Which of the following is not a type of validity?
- A. Content validity
  - B. Face validity
  - C. Time validity
  - D. Predictive validity