



Hemchandracharya North Gujarat University PHD Exam

Exam Name : HNGU_PHD_Enviorment Science_31.01.2024_12.00 PM TO 02:00 PM

Exam Date : 2024-01-31

Exam Time : 12:00:00 PM To 02:00:00 PM

Total Marks : 100

Note : The correct answer is indicated by the green color. સાચો જવાબ લીલા રંગ દ્વારા સૂચવવામાં આવે છે.

Question List:

Section: Section-A

- What is the first stage of the research process? [1 Mark]
 - Collect and analyse the data
 - Develop and implement the research plan
 - Report the findings
 - **Define the research problem**
- Qualitative approach of research is not concerned with [1 Mark]
 - Subjective assessment of attitudes
 - Opinions and behaviour
 - Subjective assessment of attitudes, opinions and behaviour
 - **None of these**
- A Type I error can occur when the null hypothesis is [1 Mark]
 - **rejected**
 - accepted
 - Depends upon the population
 - None of these
- A hypothesis is a [1 Mark]
 - Law
 - Postulate
 - **Supposition**
 - Canon
- One of the importance of providing reference in your academic assignment is [1 Mark]
 - to show that your ideas are worthy
 - **to distinguish your ideas from others**
 - to persuade the readers
 - None of these

- **A review that only demonstrates familiarity with an area is rarely published but it often is part of an educational program is which type of review? [1 Mark]**
 - Integrative reviews
 - Theoretical reviews
 - **Self-study reviews**
 - Historical reviews

- **A research focuses on statistical analysis of numerical data collected through the use of large-scale, survey research, using methods such as questionnaire or structured interview is known as [1 Mark]**
 - Fundamental research
 - **Quantitative research**
 - Applied research
 - Qualitative research

- **Illegal use of someone's work without proper citations is known as [1 Mark]**
 - **Plagiarizing**
 - Cheating
 - Citing
 - Referencing

- **The purpose of simple linear regression analysis is to: [1 Mark]**
 - Replace points on a scatter diagram by a straight line
 - Obtain the expected value of the independent random variable for a given value of the dependent variable
 - **Obtain the expected value of the independent random variable for a given value of the dependent variable**
 - None of these

- **Which of the following is another term for a Hypothesis Test? [1 Mark]**
 - Level of significance
 - Test statistic
 - **Test of significance**
 - No tailed test

- **In a thesis, figures and tables are included in [1 Mark]**
 - Separate chapter
 - The concluding chapter
 - The text itself
 - **Appendix**

- **How do you find degrees of freedom for a chi-square goodness of fit test? [1 Mark]**
 - **One less than the sample size**
 - One less than the population
 - Half of total sample size
 - Twice the total sample size

- **Scientific writing should be [1 Mark]**
 - Clear
 - Brief
 - Concise
 - **All of these**

- **Which of the following section is NOT the part of the Research Proposal? [1 Mark]**
 - Introduction
 - **Data Analysis**
 - Literature review
 - References

- **What is the standard font size for the research paper? [1 Mark]**

- 11
- 14
- **12**
- 16

• **What is the range of possible values for the correlation coefficient? [1 Mark]**

- 0 to 1
- -1 to 0
- -10 to 10
- **-10 to 10**

• **Two major types of Descriptive research are [1 Mark]**

- Observation method and decisional method
- **Observation method and survey method**
- Survey method and theoretical method
- None of these

• **When citing a journal article, what is the format for the volume, issue, and pages number? [1 Mark]**

- **Volume No. (Issue No.) Pages No.**
- Volume No., Issue No., Pages No.
- (Volume No.) Issue No., Pages No
- Volume No., Issue No. (Pages No.)

• **What is an appropriate rule for writing three or more than three authors in research paper? [1 Mark]**

- Lead author's name, comma, etc.
- Lead author's name, comma, n.d.
- **Lead author's name, comma, et al.**
- Lead author's name, comma, ed.

• **Which punctuation is used to separate the information in a bibliography entry? [1 Mark]**

- Comma
- Exclamation point
- Quotation mark
- **Period**

• **What is the purpose of the thesis? [1 Mark]**

- To remind your reader what is your paper is about
- To hook the reader's attention
- **To state your opinion or claim and prove it**
- To use vocabulary words

• **Choose the pair that best represents a similar relationship to the one expressed in the original pair of words EXPLORE : DISCOVER [1 Mark]**

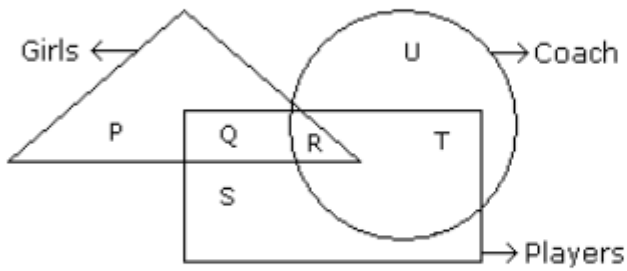
- read : skim
- **research : learn**
- write : print
- think : relate

• **Which of the following is found necessarily in milk? [1 Mark]**

- Cream
- Curd
- Water
- **Whiteness**

- image [1 Mark]

In the following figure triangle represents 'girls', square players and circle-coach. Which part of the diagram represents the girls who are player but not coach?



- a. P
- b. Q
- c. R
- d. S

- A
- **B**
- C
- D

- What is the maximum number of pieces that a pizza can be cut into by 7 knife cuts? [1 Mark]

- 21
- 42
- 14
- **29**

- A paragraph is a group of [1 Mark]

- Words arranged in logical sequence
- **Sentences arranged in a logical sequence**
- Sentences arrange in any random order
- Words arranged without logical sequence

- Dwarfish is a better word for [1 Mark]

- Huge
- **Small**
- Tall
- None of these

- If today is Monday, then after 61 days the day will be [1 Mark]

- Tuesday
- Thursday
- **Saturday**
- Friday

- Image [1 Mark]

Find the missing number

6	9	15
8	12	20
4	6	?

- a. 20
- b. 10
- c. 15
- d. 25

- A
- **B**
- C
- D

- Which of the following are examples of search engines? [1 Mark]

- Word and Excel
- Internet explorer and Firefox
- **Yahoo and Google**
- Word and PowerPoint

- What type of computer has a main purpose of serving other computers on a LAN? [1 Mark]

- Client
- **Server**
- Computer
- Microcomputer

- What does every formula in MS EXCEL to start with? [1 Mark]

- +
- -
- *
- =

- Text editors are programs that help us to [1 Mark]

- **Write & edit**
- Listen to music
- Draw a picture
- Play a game

- In MS word, Tables, shapes, images, charts, graphs, header, etc. They are included in the _____ category [1 Mark]

- Review
- Home
- **Insert**
- Page Layout

- The child responded to his mother's demands _____ throwing a tantrum. [1 Mark]

- with
- **by**
- from
- in

- Choose the correct form for Passive Voice “They make shoes in that factory” [1 Mark]

- Shoes will be made in that factory

- Shoes were made in that factory
 - **Shoes are made in that factory**
 - Shoes are make in that factory

- **Which of the following practices is an effective way to avoid plagiarism in research [1 Mark]**
 - **Appropriately citing the sources of all quotations, ideas, or data taken from others**
 - Directly copying and pasting text from an online article without citations
 - Paraphrasing text heavily from an original source without giving credit
 - Citing only direct quotations but not ideas that have been paraphrased

- **If the population variance is unknown and the sample size is small, then which test is applicable? [1 Mark]**
 - **t-test**
 - z-test
 - chi-test
 - None of these

- **Why do we randomly select our samples? [1 Mark]**
 - to increase bias
 - **to reduce bias**
 - because it's easier
 - None of these

- **Which of the following is a small portion of the population used to gather data [1 Mark]**
 - Bias
 - Systematic Sampling Method
 - **Sample**
 - Population

- **In what kind of research, the researcher has to use facts or information already available [1 Mark]**
 - **Analytical research**
 - Descriptive research
 - Applied research
 - Distinctive research

- **A Blue print of Research work is known a [1 Mark]**
 - Sampling design
 - **Research design**
 - Research hypotheses
 - Research approach

- **Title of the thesis must be the same as [1 Mark]**
 - **The title of your synopsis**
 - The title of your research paper
 - Any of previous work in the same field
 - Any of the previous work in another field

- **The random error can be assessed [1 Mark]**
 - Empirically
 - **Statistically**
 - Experimentally
 - By performing sensitivity analysis

- **The hypothesis that two groups are the same [1 Mark]**
 - Alternative hypothesis
 - Experimental hypothesis
 - Statistical hypothesis
 - **Null hypothesis**

- **In how many phases the transaction executed in the validation-based protocol? [1 Mark]**

- 1
 - 2
 - **3**
 - 4
- **If the correlation coefficient is 0, then what we can say [1 Mark]**
 - **No linear relationship**
 - Weak positive correlation
 - Perfect negative correlation
 - Linear relationship
 - **The correlation between time and speed is [1 Mark]**
 - Positive
 - **Negative**
 - Zero
 - Mixed
 - **Simple linear regression requires that the scales of measurement be expressed in either [1 Mark]**
 - Nominal or ordinal
 - Ordinal or ratio
 - **Interval or ratio**
 - Nominal or interval
 - **The z-test is applicable when sample size is greater than [1 Mark]**
 - 20
 - 10
 - 100
 - **30**

Section: Section-B

- **Which of the following is not a layer of atmosphere? [1 Mark]**
 - Troposphere
 - Mesosphere
 - Thermosphere
 - **Biosphere**
- **Ozone layer is located in which part/layer of atmosphere [1 Mark]**
 - Mesosphere
 - **Stratosphere**
 - Thermosphere
 - Troposphere
- **The “World Environment Day” is celebrated on [1 Mark]**
 - 15th June
 - **5th June**
 - 5th January
 - 15th February
- **The basic components of an ecosystem are [1 Mark]**
 - Biotic only
 - Abiotic only
 - **Biotic only and Abiotic**
 - None of these
- **Food web consists of [1 Mark]**
 - Grazing food chain
 - Parasitic food chain
 - **All interconnected food chains Indicating multiple feeding connections**
 - None of these

- **The rate of biomass per unit time is known as [1 Mark]**
 - biomagnification
 - biomes
 - saprophytes
 - **productivity**

- **Which of the following is not a method for water conservation? [1 Mark]**
 - Rain water harvesting
 - **Ground water extraction**
 - Improving irrigation efficiency
 - Avoiding water wastage

- **Sex ratio is defined as [1 Mark]**
 - **Nos. of female per 1000 male**
 - Nos. of female per 100 male
 - Nos. of male per 1000 female
 - Nos. of male per 100 female

- **Which one of the following is not a primary pollutant [1 Mark]**
 - Carbon monoxide
 - Nitrogen oxide
 - **Sulphuric acid**
 - Sulphur dioxide

- **Sunlight can be converted into electrical energy through [1 Mark]**
 - Galvanic cell
 - Carbon electrodes
 - **Photo voltaic cell**
 - Glass panel

- **Examples of fossil fuel [1 Mark]**
 - Coal
 - Petroleum
 - Natural gas
 - **All of these**

- **Bio gas plant gives [1 Mark]**
 - Bio energy
 - Manure
 - **Both power and manure**
 - None of these

- **Which of the following industries plays a major role in polluting air and increasing air pollution? [1 Mark]**
 - Brick manufacturing industries
 - Manufacture of gases industries
 - Electrical appliances and electrical goods industries
 - **All of these**

- **Who was the first scientist to coin the term SMOG and to describe the layers of SMOG? [1 Mark]**
 - Nikola Tesla
 - Stephen Hawking
 - **Dr Henry Antoine**
 - Nicolaus Copernicus

- **Which of the following is called the secondary air pollutant? [1 Mark]**
 - PANs
 - **Ozone**
 - Carbon monoxide

- Nitrogen Dioxide
- Which of the following particles is called the particulate pollutants? [1 Mark]
 - Ozone
 - Radon
 - **Fly Ash**
 - Ethylene
- Which of the following statements is true about the Air Quality Index? [1 Mark]
 - It indicates the colour of the air
 - **It predicts ozone levels in your area.**
 - It determines the intensity of sound and sound pollution.
 - It estimates air pollution mainly sulphur content in the air.
- Smoke, fumes, ash, dust, nitric oxide and sulphur dioxide are the main sources of _ [1 Mark]
 - **Primary Pollutants**
 - Secondary pollutants
 - Bio-Degradable Pollutants
 - None of these
- Which of the following agents is mainly responsible for the secondary pollutants? [1 Mark]
 - Smog and Ozone
 - Sulphur trioxide
 - Nitrogen dioxide
 - **All of these**
- Environmental or operating variability is an issue there are different situations for data normalization. [1 Mark]
 - **three**
 - four
 - five
 - two
- Suspended solids are measured by which of the following? [1 Mark]
 - Turbidity rod
 - **Gravimetric test**
 - Chromatography
 - Jackson's turbidity meter
- Remote sensing uses which of the following waves in its procedure? [1 Mark]
 - Electric field
 - Sonar waves
 - Gamma- rays
 - **Electro-magnetic waves**
- Which of the following can act as an example for air-borne platform? [1 Mark]
 - LISS-III
 - **Dakota**
 - MOS
 - LISS-II
- Which of the following options is not included in the sustainable development parameters? [1 Mark]
 - Gender inequality and diversity
 - Intergenerational and intragenerational equity
 - Growing annually
 - **None of these**
- The alternative name for landscaping is [1 Mark]
 - Decrease

- **Restoration,**
 - Topsoil removal, and
 - None of these

- **The vast holes left behind after mining are utilized for [1 Mark]**
 - wastewater storage,
 - domestic wastewater storage,
 - **waste disposal, and**
 - waste storage.

- **Any contaminated components that seep into the soil, filtration, and are transferred into the underground reservoir are referred to as [1 Mark]**
 - Water Pollution
 - Noise Pollution
 - **Land Contamination**
 - Air pollution.

- **Based on planning commission of India, India has been divided into how many climatic zones? [1 Mark]**
 - 9
 - 12
 - **15**
 - 18

- **How many agro-climatic zones are in the state of Gujarat? [1 Mark]**
 - **8**
 - 9
 - 10
 - 11

- **Which of the following is done on an individual level? [1 Mark]**
 - Burning
 - Disposal
 - Recycling
 - **Source reduction**

- **Which of the following wastes is called the Municipal Solid Waste (MSW)? [1 Mark]**
 - Food wastes
 - Wood pieces
 - Plastic cans
 - **All of these**

- **When the organic matter present in the sanitary landfill decomposes, it generates [1 Mark]**
 - **Methane**
 - Nitrogen
 - Hydrogen
 - All of these

- **The disposable wastes contain [1 Mark]**
 - Solids
 - Slurries
 - Liquids
 - **All of these**

- **Find the correct statement [1 Mark]**
 - The waste from one process becomes the input for another process
 - All the processes related to consumption and production produce some kind of waste
 - There is no real waste in nature
 - **All of these**

- Which of the following methods is better for the solid waste problem? [1 Mark]
 - **Recycling**
 - Landfilling
 - Both
 - None of these

- Which of the following statements is incorrect for plastic wastes? [1 Mark]
 - **It is used to make compost**
 - It lasts for a longer period of time
 - Toxic fumes are produced when burnt
 - All of these

- Which of the following can be recycled many times? [1 Mark]
 - Wood
 - Plastic
 - **Aluminium**
 - Organic materials

- Which of the following gas is produced from landfill wastes? [1 Mark]
 - **Biogas**
 - Natural gas
 - Liquefied petroleum gas
 - All of these

- Which of the following statements is true about zero waste management? [1 Mark]
 - a) Separate collection of each kind of waste
 - a) Segregation of garbage at the source
 - a) Community involvement
 - **All of these**

- What is the protection and conservation of species in their natural habitat called? [1 Mark]
 - **In-situ conservation**
 - Ex-situ conservation
 - Off-site conservation
 - No conservation

- In which approach do we protect and conserve the whole ecosystem to protect the endangered species? [1 Mark]
 - Ex-situ conservation
 - Off-site conservation
 - No conservation
 - **In-situ conservation**

- How many total biodiversity hotspots are present throughout the world? [1 Mark]
 - 20
 - 80
 - 55
 - **34**

- What is the number of national parks India consisting of? [1 Mark]
 - 19
 - **90**
 - 29
 - 120

- Where is the Coriolis Effect strongest? [1 Mark]
 - **Poles**
 - Equator
 - Tropic
 - None of these

- **Volcanoes are generally found where [1 Mark]**
 - Intraplates pull apart or are coming together
 - **Tectonic plates pull apart or are coming together**
 - Earth's crust pull apart or are coming together
 - None of these pull apart or are coming together

- **High intensity and long duration of rainfall in Tripura causes --- [1 Mark]**
 - Earthquakes
 - **Floods**
 - Landslides
 - Cyclone

- **High vulnerability and high hazard are associated with [1 Mark]**
 - Low disaster risk
 - medium disaster risk
 - **high disaster risk**
 - None of these

- **Which of the following causes mutations at a very high rate? [1 Mark]**
 - Automobiles
 - Compost
 - Fertilizers
 - **Radiation**

- **In India, Cyclone is tracked through which satellite? [1 Mark]**
 - **INSAT**
 - IRS
 - Ocean SAT
 - None of these

- **The common factors of wildfire hazards are: [1 Mark]**
 - Lightening
 - Volcanic eruption
 - El-nino
 - **All of these**