

Roll No:

Application No:

Name:

Exam Date: **06-Oct-2020**

Exam Time: **15:00-18:00**

Examination: **1. Course Code - Ph.D.**

**2. Field of Study - Studies in Science Policy (SSPH)**

### SECTION 1 - SECTION 1

#### Question No.1 (Question Id - 24)

Given below are two statements :

##### Statement I :

Ordinal Variables are generally exhaustive and mutually exclusive and their values can be ranked.

##### Statement II :

Ratio variables are interval variables that have a true Zero Value.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ **Both Statement I and Statement II are correct. (Correct Answer)**  
 (B) ☐ Both **Statement I** and **Statement II** are incorrect.  
 (C) ☐ **Statement I** is correct but **Statement II** is incorrect.  
 (D) ☐ **Statement I** is incorrect but **Statement II** is correct.

#### Question No.2 (Question Id - 51)

Which of the following is a case of technology transfer ?

- A. The flow of information from bank to bank-customer on how to use web based application or mobile app for making payment.  
 B. Transfer of knowhow from an Indian University professor to a Ugandan Company on how to operate and manage the Photovoltaic (PV) Power Plant.  
 C. Transfer of knowhow about the dance practices and yogic postures from Indian Trainers to European trainees.  
 D. Gaining access to another party's technical information, software and designs.

Choose the **correct** answer from the options given below :

- (A) ☐ A, B, C and D  
 (B) ☐ B, C and D only  
 (C) ☒ **A, B and D only (Correct Answer)**  
 (D) ☐ A, B and C only

#### Question No.3 (Question Id - 71)

Technological determinism is synonymous to :

- (A) ☐ Social determinism of technology  
 (B) ☐ Behavioural determinism of technology  
 (C) ☐ Actor Network Theory  
 (D) ☒ **None of the above (Correct Answer)**

**Question No.4 (Question Id - 6)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

'Monopoly is the natural breeding ground for innovation' - J. Schumpeter.

**Reason R :**

Monopoly earns supernormal profits.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both A and R are correct and R is the correct explanation of A. (Correct Answer)**
- (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.5 (Question Id - 53)**

Match the subjects in **List - I** with their details in **List - II**.

List - I	List - II
A. Varahamihira	I. Rasaratnakar
B. Kanad	II. Idea of Atom
C. Nagarjuna	III. Yogasutra
D. Patanjali	IV. Brihat Samhita

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV
- (B) ☐ A - II, B - I, C - IV, D - III
- (C) ☐ A - III, B - I, C - II, D - IV
- (D) ☐ **A - IV, B - II, C - I, D - III (Correct Answer)**

**Question No.6 (Question Id - 69)**

India's first indigenous planning initiatives began in the year :

- (A) ☐ 1942
- (B) ☐ **1938 (Correct Answer)**
- (C) ☐ 1949
- (D) ☐ 1950

**Question No.7 (Question Id - 15)**

Given below are two statements :

**Statement I :**

Discovery comes with awareness of 'anomalies' in the prevailing theory.

**Statement II :**

Anomalies evoke crises and push for extraordinary science, search for new paradigm.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both Statement I and Statement II are correct. (Correct Answer)**  
(B) ☐ Both **Statement I** and **Statement II** are incorrect.  
(C) ☐ **Statement I** is correct but **Statement II** is incorrect.  
(D) ☐ **Statement I** is incorrect but **Statement II** is correct.

**Question No.8 (Question Id - 41)**

The stage of "Normal Science" refers to :

- A. Research firmly based upon one or more past scientific achievements  
B. Research based on a "paradigm"  
C. Puzzle solving  
D. Questioning the existing 'Paradigm'

Choose the **correct** answer from the options given below :

- (A) ☐ A and B only  
(B) ☐ **A, B and C only (Correct Answer)**  
(C) ☐ B, C and D only  
(D) ☐ D only

**Question No.9 (Question Id - 54)**

As per the Indian patent Act following inventions are patentable in India.

- A. An Invention contrary to public order or morality or which causes serious prejudice to human or the environment.  
B. An invention which is frivolous to well established natural laws.  
C. Invention related to Atomic Energy.  
D. The new variety of wheat.

Choose the **correct** answer from the options given below :

- (A) ☐ A, B, C and D  
(B) ☐ A, B and C only  
(C) ☐ C and D only  
(D) ☐ **None of the above (Correct Answer)**

**Question No.10 (Question Id - 66)**

Who coined the term 'artificial intelligence' ?

- (A) ☐ John Weber  
(B) ☐ **John McCarthy (Correct Answer)**  
(C) ☐ Charles Babbage  
(D) ☐ Robert Hook

**Question No.11 (Question Id - 65)**

What is Mission Shakti ?

- (A) ☐ India's mission to test nuclear weapon.  
(B) ☐ India's mission to launch powerful satellite.  
(C) ☐ **India's first anti-satellite missile test. (Correct Answer)**  
(D) ☐ India's Mission to become a technological superpower by the year 2050.

**Question No.12 (Question Id - 47)**

Kindly arrange the sequence of introduction of the following in ascending chronological order :

- A. Technology Policy Statement
- B. Scientific Policy Resolution
- C. Science and technology policy
- D. Science, Technology and Innovation Policy

Choose the **correct** answer from the options given below :

- (A) ☐ A > C > D > B
- (B) ☐ A > B > D > C
- (C) ☐ **B > A > C > D (Correct Answer)**
- (D) ☐ A > B > C > D

**Question No.13 (Question Id - 34)**

Match the concepts in **List - I** with the scholars in **List - II**.

List - I	List - II
A. National System of Innovation	I. Henry Chesbrough
B. Major innovation	II. Jaideep Prabhu
C. Open innovation	III. Joseph Schumpeter
D. Frugal innovation	IV. B.A. Lundvall

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV
- (B) ☐ A - II, B - IV, C - III, D - I
- (C) ☐ **A - IV, B - III, C - I, D - II (Correct Answer)**
- (D) ☐ A - IV, B - III, C - II, D - I

**Question No.14 (Question Id - 59)**

'Over-engineering' in technology management may be used to refer to :

- (A) ☐ Products or technological systems which are rigid to alterations.
- (B) ☐ Products and technological systems which are difficult to adapt to changing demand or resource conditions.
- (C) ☐ Products or technological systems which have more features than necessary in a given context.
- (D) ☐ **All of the above. (Correct Answer)**

**Question No.15 (Question Id - 9)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

In standard neoclassical economic theory of technical change, a firm is assumed to adopt a new technology change whenever there is a change in factor prices.

**Reason R :**

In neoclassical economic theory firms can have in their possession infinite number of alternative technological combinations.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both A and R are correct and R is the correct explanation of A. (Correct Answer)**
- (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.16 (Question Id - 12)**

Given below are two statements :

**Statement I :**

India spends around 0.8% of Gross Domestic Products in R & D.

**Statement II :**

India's spending on R & D as a proportion of Gross Domestic Products has increased steadily since the year 2000.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **Statement I** and **Statement II** are true.
- (B) ☐ Both **Statement I** and **Statement II** are false.
- (C) ☐ **Statement I is correct but Statement II is false. (Correct Answer)**
- (D) ☐ **Statement I** is incorrect but **Statement II** is true.

**Question No.17 (Question Id - 8)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

7/8<sup>th</sup> of US economy's growth in the first 50 years of the twentieth century came from technological progress.

**Reason R :**

Technological progress is measured by total factor productivity growth.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- (B) ☐ **Both A and R are correct but R is NOT the correct explanation of A. (Correct Answer)**
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.18 (Question Id - 73)**

National Science Day in India is celebrated on 28<sup>th</sup> February each year to mark :

- (A) ☐ The birthday of APC Ray

- (B) ☐ The birthday of CV Raman  
 (C) ☒ **The date of discovery of Raman Effect (Correct Answer)**  
 (D) ☐ The date of CV Raman winning the Nobel Prize

**Question No.19 (Question Id - 35)**

Match the scholar in **List - I** with their subject in **List - II**.

List - I	List - II
A. Meghnad Saha	I. Statistics
B. P.C. Mahalanobis	II. Paleobotany
C. S.S. Bhatnagar	III. Astrophysics
D. Birbal Sahni	IV. Physical Chemistry

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV  
 (B) ☐ A - II, B - I, C - IV, D - III  
 (C) ☒ **A - III, B - I, C - IV, D - II (Correct Answer)**  
 (D) ☐ A - II, B - I, C - III, D - IV

**Question No.20 (Question Id - 13)**

Given below are two statements :

**Statement I :**

Grassroots Innovations in India are supported by National Innovation Foundation.

**Statement II :**

National Innovation Foundation in India is a wing of the Department of Biotechnology.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **Statement I** and **Statement II** are true.  
 (B) ☐ Both **Statement I** and **Statement II** are false.  
 (C) ☒ **Statement I is correct but Statement II is false. (Correct Answer)**  
 (D) ☐ **Statement I** is incorrect but **Statement II** is true.

**Question No.21 (Question Id - 31)**

Which among the following is/are sampling techniques based on probability theory ?

- A. Simple random sampling  
 B. Stratified random sampling  
 C. Purposive sampling  
 D. Snowball sampling

Choose the **correct** answer from the options given below :

- (A) ☐ A, C and D  
 (B) ☒ **A and B (Correct Answer)**  
 (C) ☐ C and D  
 (D) ☐ B, C and D

**Question No.22 (Question Id - 75)**

Vyom-Mitra is :

- (A) ☐ An indigenously developed Robot made to replace airhostesses.
- (B) ☐ **An indigenously developed Robot made to go with India's Mission Gaganyaan. (Correct Answer)**
- (C) ☐ It's new terminology used for airhostesses.
- (D) ☐ None of the above.

**Question No.23 (Question Id - 22)**

Given below are two statements :

**Statement I :**

A family is a set of individuals related to each other by blood, marriage, or adoption, or, in rare instances, by another form of social ascription.

**Statement II :**

Extended family is a group consisting of one or both parents and dependent offspring.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both Statement I and **Statement II** are correct.
- (B) ☐ Both **Statement I** and **Statement II** are incorrect.
- (C) ☐ **Statement I is correct but Statement II is incorrect. (Correct Answer)**
- (D) ☐ **Statement I** is incorrect but **Statement II** is correct.

**Question No.24 (Question Id - 58)**

Arrange development of Patent Act in India Chronologically.

- A. The Patent and Design Act
- B. Protection of Invention Act
- C. The Invention and design Act
- D. Indian Patent Act
- E. The Indian Patent and Design Act

Choose the **correct** answer from the options given below :

- (A) ☐ **B, A, C, E, D (Correct Answer)**
- (B) ☐ E, A, B, C, D
- (C) ☐ D, C, B, A, E
- (D) ☐ A, B, C, D, E

**Question No.25 (Question Id - 49)**

Match the Astronomical Instrument in **List - I** with their functions in *List - II*.

<b>List - I</b>	<b>List - II</b>
A. Samarat Yantra	I. To measure the Altitude angle
B. Ram Yantra	II. Equatorial Sun dial
C. Jai Prakash Yantra	III. To ascertain the position of Sun and other Celestial bodies
D. Misra Yantra	IV. A combination of four scientific Gadgets

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV
- (B) ☒ **A - II, B - I, C - III, D - IV (Correct Answer)**
- (C) ☐ A - II, B - IV, C - III, D - I
- (D) ☐ A - III, B - II, C - I, D - IV

**Question No.26 (Question Id - 19)**

Given below are two statements :

**Statement I :**

Science and Technology Policy brought by India to enable the creation of a robust Indian National Innovation System.

**Statement II :**

Innovation was not considered as a critical component in the nomenclature of policy on Science, Technology and innovation before the arrival of Science, Technology and Innovation Policy of India, as it was not comprehensively considered by policy makers.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ **Both Statement I and Statement II are correct. (Correct Answer)**
- (B) ☐ Both **Statement I** and **Statement II** are incorrect.
- (C) ☐ **Statement I** is correct but **Statement II** is incorrect.
- (D) ☐ **Statement I** is incorrect but **Statement II** is correct.

**Question No.27 (Question Id - 1)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Old Paradigm is replaced by New Paradigm during Scientific Revolution.

**Reason R :**

Accumulation of anomalies makes the existing paradigm redundant.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ **Both A and R are correct and R is the correct explanation of A. (Correct Answer)**
- (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.28 (Question Id - 36)**

Match the concepts in **List - I** with the scholars in **List - II**.

List - I	List - II
A. Tacit Knowledge	I. Karl Polanyi
B. Social embeddedness	II. Michael Polanyi
C. Common Pool Resources	III. Garret Hardin
D. Tragedy of Commons	IV. Elinor Ostrom

Choose the **correct** answer from the options given below :



- (A) ☐ A - I, B - II, C - III, D - IV  
(B) ☐ A - II, B - III, C - I, D - IV  
(C) ☒ **A - II, B - I, C - IV, D - III (Correct Answer)**  
(D) ☐ A - III, B - IV, C - II, D - I

**Question No.29 (Question Id - 30)**

Arrange the Variables in increasing order of Measurement.

- A. Nominal Variable  
B. Ordinal Variable  
C. Ratio Variable  
D. Interval Variable

Choose the **correct** answer from the options given below :

- (A) ☐ A, B, C, D  
(B) ☐ B, A, D, C  
(C) ☐ C, B, A, D  
(D) ☒ **A, B, D, C (Correct Answer)**

**Question No.30 (Question Id - 46)**

Following statements were the part of the Science and Technology Policy brought by Department of Science and Technology, Government of India.

- A. The policy did not emphasize on enhancement of investment on Research and Development (R & D) for Self-Reliance.  
B. The policy had thrust for greater investment for creation of National Innovation Systems.  
C. The building of the National Innovation Systems aimed at promotions of emerging technologies.  
D. It was meant to guide the integration of socio-economic sector programs with national R & D systems.

Choose the **correct** answer from the options given below :

- (A) ☒ **All are correct (Correct Answer)**  
(B) ☐ A, B and C only  
(C) ☐ B, C and D only  
(D) ☐ C and D only

**Question No.31 (Question Id - 57)**

'The whole of science is nothing more than a refinement of everyday thinking' was observed by :

- A. Robert K. Merton  
B. Albert Einstein  
C. Thomas Kuhn  
D. Karl Popper

Choose the **correct** answer from the options given below :

- (A) ☐ A only  
(B) ☒ B only (Correct Answer)  
(C) ☐ C only  
(D) ☐ D only

**Question No.32 (Question Id - 42)**

Arrange the Process of randomized experiment.

- A. Formulate a hypothesis  
B. Measurement of dependent variables in one or both group  
C. Introduce the treatment or intervention  
D. Measurement of changes in dependent variables

Choose the **correct** answer from the options given below :

- (A) ☒ A, B, C, D (Correct Answer)  
(B) ☐ A, C, B, D  
(C) ☐ D, B, C, A  
(D) ☐ B, C, A, D

**Question No.33 (Question Id - 27)**

Ethnographic method is based on following assumptions.

- A. Truth can be discovered by applying the method of the natural science to the study of social world.  
B. Knowledge of social phenomena can be gained only by direct experience.  
C. It relied on use of various methods for validating an evidence.  
D. It assumes that people do not respond to a fixed reality.

Choose the **correct** answer from the options given below :

- (A) ☐ A only  
(B) ☐ A, B and C only  
(C) ☒ B, C and D only (Correct Answer)  
(D) ☐ C, D and A only

**Question No.34 (Question Id - 3)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Probability sampling is an unbiased sampling technique.

**Reason R :**

In probability sampling each unit/individual has equal chance of being selected from the population for the sample.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ Both A and R are correct and R is the correct explanation of A. (Correct

**Answer)**

- (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.  
(C) ☐ **A** is correct but **R** is not correct.  
(D) ☐ **A** is not correct but **R** is correct.

**Question No.35 (Question Id - 26)**

Paul Feyerabend's Method of inquiry is based on :

- A. Confirmation of a hypothesis  
B. Falsification of a Hypothesis  
C. Collecting evidence for a hypothesis  
D. Searching for alternative hypothesis

Choose the **correct** answer from the options given below :

- (A) ☐ A and B only  
(B) ☐ B and C only  
(C) ☐ C only  
(D) ☐ **D only (Correct Answer)**

**Question No.36 (Question Id - 52)**

Technology can be define or described as :

- A. A theoretical and practical knowledge that can be used to develop products and services.  
B. The study of nature and development of new Science theory.  
C. An application of science.  
D. Scientific knowledge and knowhow embedded in Men or Women who work in a factory which makes cars.

Choose the **correct** answer from the options given below :

- (A) ☐ A, B, C and D  
(B) ☐ A, B and C only  
(C) ☐ B, C and D only  
(D) ☐ **A and C only (Correct Answer)**

**Question No.37 (Question Id - 44)**

What is infodemics ?

- A. Circulation of misinformation about pandemic.  
B. Massive flow of unverified information about pandemic.  
C. It is a stress related diseases due to over consumption of information.  
D. Giving information to create awareness about pandemic.

Kindly select the **correct** one :

- (A) ☐ A, B and C only  
(B) ☐ B, C and D only  
(C) ☐ A and D only

(D) ☐ **A and B only (Correct Answer)**

**Question No.38 (Question Id - 23)**

Given below are two statements :

**Statement I :**

Public health expenditure as a percentage of GDP has been increasing since 2015-16 but it has remained within a narrow band of 1.02 - 1.28 percent of GDP in 2019.

**Statement II :**

The new National Health Programme 2017 is set in the context of Sustainable Development Goals (SDG) and the central outlay on health was envisaged to increase to ₹ 1 lakh crore by 2019-20.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both Statement I and Statement II are true. (Correct Answer)**  
(B) ☐ Both **Statement I** and **Statement II** are false.  
(C) ☐ **Statement I** is correct but **Statement II** is false.  
(D) ☐ **Statement I** is incorrect but **Statement II** is true.

**Question No.39 (Question Id - 50)**

Match **List - I** with **List - II**.

<b>List - I</b>	<b>List - II</b>
A. Indian Institute of Remote Sensing	I. Trombay
B. Master Control Facility	II. Ahmedabad
C. Space Applications Centre (SAC)	III. Dehradun
D. Bhabha Atomic Research Centre (BARC)	IV. Hassan

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV  
(B) ☐ A - III, B - II, C - IV, D - I  
(C) ☐ A - II, B - III, C - I, D - IV  
(D) ☐ **A - III, B - IV, C - II, D - I (Correct Answer)**

**Question No.40 (Question Id - 14)**

Given below are two statements :

**Statement I :**

Since the year 2005 all countries have a uniform Intellectual Property Rights Law, which is called TRIPS.

**Statement II :**

Historically, today's advanced industrialized countries developed their innovation capacities through maneuvering their intellectual property rights systems to the needs of development.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **Statement I** and **Statement II** are true.  
(B) ☐ Both **Statement I** and **Statement II** are false.

(C) ☐ **Statement I** is correct but **Statement II** is false.

(D) ☐ **Statement I is incorrect but Statement II is true. (Correct Answer)**

**Question No.41 (Question Id - 68)**

Which are the tests for reliability ?

A. Opinion reliability

B. Content validity

C. Construct validity

D. Criteria validity

Choose the **correct** answer from the options given below :

(A) ☐ A, B and C only

(B) ☐ **B, C and D only (Correct Answer)**

(C) ☐ A, B and D only

(D) ☐ A, C and D only

**Question No.42 (Question Id - 48)**

Match **List - I** with **List - II**.

List - I	List - II
A. 1 <sup>st</sup> Industrial Revolution	I. Cyber-physical production systems and smart factories
B. 2 <sup>nd</sup> Industrial Revolution	II. Steam power and mechanization of production
C. 3 <sup>rd</sup> Industrial Revolution	III. Electricity and assembly line production
D. 4 <sup>th</sup> Industrial Revolution	IV. Partial automation using memory-programmable controls and computers

Choose the **correct** answer from the options given below :

(A) ☐ A - I, B - II, C - III, D - IV

(B) ☐ **A - II, B - III, C - IV, D - I (Correct Answer)**

(C) ☐ A - II, B - III, C - I, D - IV

(D) ☐ A - III, B - IV, C - II, D - I

**Question No.43 (Question Id - 18)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

The green revolution had resulted in fast growth of agricultural sector and yield of wheat and rice in Punjab, Haryana and UP.

**Reason R :**

The green revolution in India deployed modern methods of cultivation and High Yield varieties of seeds for Wheat and Rice.

In the light of the above statements, choose the **correct** answer from the options given below :

(A) ☐ **Both A and R are true and R is the correct explanation of A. (Correct**

**Answer)**

- (B) ☐ Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.  
(C) ☐ **A** is true but **R** is false.  
(D) ☐ **A** is false but **R** is true.

**Question No.44 (Question Id - 39)**

Kindly arrange the following books in ascending chronological order of their publication years.

- A. The theory of Economic Development  
B. The Wealth of Nations  
C. Stealth of Nations  
D. The Great Transformation

Choose the **correct** answer from the options given below :

- (A) ☐ D > B > A > C  
(B) ☐ A > B > C > D  
(C) ☐ B > D > C > A  
(D) ☐ **B < A < D < C (Correct Answer)**

**Question No.45 (Question Id - 4)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

It may be too risky for banks to give loans to small businesses in the informal economy.

**Reason R :**

If a bank gives loans to the women on the roadside, the bank is encouraging her to save, and not to invest the loaned funds.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **A** and **R** are correct and **R** is the correct explanation of **A**.  
(B) ☐ **Both A and R are correct but R is NOT the correct explanation of A. (Correct Answer)**  
(C) ☐ **A** is correct but **R** is not correct.  
(D) ☐ **A** is not correct but **R** is correct.

**Question No.46 (Question Id - 37)**

Match the subjects in **List - I** with their details in **List - II**.

List - I	List - II
A. Charak	I. Ayurvedic Medicine
B. Shushruta	II. Surgery
C. Patanjali	III. Mahabhasya
D. Aryabhatta	IV. Aryabhattia

Choose the **correct** answer from the options given below :

- (A) ☐ **A - I, B - II, C - III, D - IV (Correct Answer)**  
(B) ☐ A - II, B - I, C - IV, D - III

- (C) ☐ A - III, B - I, C - II, D - IV  
 (D) ☐ A - II, B - I, C - III, D - IV

**Question No.47 (Question Id - 7)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

An industry under perfect competition will witness more adoption of new technologies than a monopoly, when intellectual property rights is secured.

**Reason R :**

Competition provides incentives to adopt new technology when intellectual property rights is secured.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both A and R are correct and R is the correct explanation of A. (Correct Answer)**  
 (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.  
 (C) ☐ **A** is correct but **R** is not correct.  
 (D) ☐ **A** is not correct but **R** is correct.

**Question No.48 (Question Id - 38)**

Match the subjects in **List - I** with their details in **List - II**.

List - I	List - II
A. Scientometrics	I. Quantitative analysis of economic data
B. Econometrics	II. Quantitative analysis of online content
C. Altmetrics	III. Quantitative analysis of scientific papers
D. TRIZ-metrics	IV. Quantitative foresight analysis

Choose the **correct** answer from the options given below :

- (A) ☐ A - I, B - II, C - III, D - IV  
 (B) ☐ A - II, B - III, C - IV, D - I  
 (C) ☐ **A - III, B - I, C - II, D - IV (Correct Answer)**  
 (D) ☐ A - II, B - I, C - III, D - IV

**Question No.49 (Question Id - 56)**

Researches aiming at finding a solution for an immediate problem facing a society or industrial/business organization is known as :

- A. Fundamental Research  
 B. Applied Research  
 C. Descriptive Research  
 D. Analytical Research

Choose the **correct** answer from the options given below :

- (A) ☐ A only  
 (B) ☐ **B only (Correct Answer)**  
 (C) ☐ C only

(D) ☐ D only

**Question No.50 (Question Id - 32)**

Which is not a descriptive statistic ?

- (A) ☐ Mean  
(B) ☐ Mode  
(C) ☐ **Least Square Estimate (Correct Answer)**  
(D) ☐ Correlation

**Question No.51 (Question Id - 72)**

Covaxin is the name of the :

- (A) ☐ Vaccine being developed for COVID-19 by the scientists in the UK.  
(B) ☐ **Vaccine being developed for COVID-19 by Indian scientists. (Correct Answer)**  
(C) ☐ Vaccine for SARS-COV-1.  
(D) ☐ Pneumonia vaccine being repurposed for COVID-19.

**Question No.52 (Question Id - 45)**

Government of India brought out Science, Technology and Innovation (STI) Policy because :

- A. Science and Technology Policy could not bring desired results from building of National Systems of Innovation in India.  
B. Government wanted to take socio-economic, environmental and technological realities into account to its approach toward the emerging innovations.  
C. It wanted to bring in a clarity in the understanding of stakeholders of STI policy on conceptual and practical aspects of Innovation in India.  
D. It wanted to be completely self-reliant in all types of innovations for the society.

Choose the **correct** answer from the options given below :

- (A) ☐ A, B and D only  
(B) ☐ **A, B and C only (Correct Answer)**  
(C) ☐ B, C and D only  
(D) ☐ A, C and D only

**Question No.53 (Question Id - 16)**

Given below are two statements :

**Statement I :**

The International Convention for the Protection of Industrial Property was signed to protect the principle of National Treatment wherein all residents of the all contracting member states get same protection in each member country.

**Statement II :**

This was signed in Paris, therefore, it was named as Paris Convention. It was aimed at granting the protection of Patent, Trademark and Industrial Design.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ **Both Statement I and Statement II are correct. (Correct Answer)**  
(B) ☐ Both **Statement I** and **Statement II** are incorrect.



- (C) ☐ **Statement I** is correct but **Statement II** is incorrect.  
(D) ☐ **Statement I** is incorrect but **Statement II** is correct.

**Question No.54 (Question Id - 63)**

COVID-19 is named so,

- (A) ☐ **Because its outbreak occurred in the year 2019. (Correct Answer)**  
(B) ☐ Because it is the 19<sup>th</sup> strain of the COVID group of viruses.  
(C) ☐ In China astrology, number 19 stands for calamity and disaster.  
(D) ☐ None of the above.

**Question No.55 (Question Id - 17)**

Given below are two statements :

**Statement I :**

The drafting and making of the Science, Technology and Innovation Policy of India is the mandate of two departments, viz Depart of Science and Technology and Department of Biotechnology.

**Statement II :**

The Policy unit of Ministry of Science and Technology, Government of India takes lead in the process of policy drafting and finalization on Science, Technology and Innovation in India.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **Statement I** and **Statement II** are correct.  
(B) ☐ Both **Statement I** and **Statement II** are incorrect.  
(C) ☐ **Statement I** is correct but **Statement II** is incorrect.  
(D) ☐ **Statement I is incorrect but Statement II is correct. (Correct Answer)**

**Question No.56 (Question Id - 21)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Innovations are extremely significant for the individual and society to understand the history of human culture and its inventions and discoveries.

**Reason R :**

Human cultural development builds on the amazing technological, scientific, educational and moral achievements of the human mind.

In the light of the above statements, choose the **correct** answer from the options given below :

- (A) ☐ **Both A and R are true and R is the correct explanation of A. (Correct Answer)**  
(B) ☐ Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.  
(C) ☐ **A** is true but **R** is false.  
(D) ☐ **A** is false but **R** is true.

**Question No.57 (Question Id - 43)**

Which are the symptoms of Covid-19 ?

- A. Fever
- B. Dry Cough
- C. Loss of smell and taste
- D. Diarrhea

Kindly select the **correct** one :

- (A) ☐ A, B and D only
- (B) ☐ B, C and D only
- (C) ☐ **A, B, C and D (Correct Answer)**
- (D) ☐ A, D and C only

**Question No.58 (Question Id - 28)**

Which is/are true about Empirical Thinkers ?

- A. Empiricists believe that true knowledge can be obtained only through sensory perception.
- B. Empiricists believe that human beings are born with empty boxes for mind.
- C. David Hume was an empiricist.
- D. Empiricists emphasize on logical deduction to arrive at true knowledge.

Choose the **correct** answer from the options given below :

- (A) ☐ A, B and D
- (B) ☐ B, C and D
- (C) ☐ A, D and C
- (D) ☐ **A, B and C (Correct Answer)**

**Question No.59 (Question Id - 70)**

Theory of planned obsolescence refers to :

- (A) ☐ **Obsolescence of technology (Correct Answer)**
- (B) ☐ Obsolescence of civilization
- (C) ☐ Obsolescence of ideology
- (D) ☐ All of the above

**Question No.60 (Question Id - 5)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Patents may provide incentives to innovate.

**Reason R :**

Patents compel innovators to disclose their innovations.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- ☐

(B) ☒ Both A and R are correct but R is NOT the correct explanation of A. (Correct Answer)

(C) ☐ A is correct but R is not correct.

(D) ☐ A is not correct but R is correct.

**Question No.61 (Question Id - 64)**

The controversial drug Hydroxychloroquine is conventionally used for the treatment of :

(A) ☐ Cancer

(B) ☐ Bacterial infection

(C) ☒ Malaria (Correct Answer)

(D) ☐ Heart Attack

**Question No.62 (Question Id - 29)**

Sample size depends on :

A. The Heterogeneity of the population

B. The number of independent variables chosen for the study

C. The number of dependent variables chosen for the study

D. How precise you want your sample statistics/parameter estimation to be

Choose the **correct** answer from the options given below :

(A) ☒ A, B and D (Correct Answer)

(B) ☐ B, C and D

(C) ☐ A, B and C

(D) ☐ A, C and D

**Question No.63 (Question Id - 2)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Science is a Public Knowledge.

**Reason R :**

Scientific truth is nothing but an agreement reached by scientists at a particular time.

In the light of the above statements, choose the **correct** answer from the options given below :

(A) ☒ Both A and R are true and R is the correct explanation of A. (Correct Answer)

(B) ☐ Both A and R are true but R is NOT the correct explanation of A.

(C) ☐ A is true but R is false.

(D) ☐ A is false but R is true.

**Question No.64 (Question Id - 67)**

Match **List - I** with **List - II**.

List - I	List - II
A. Against Method	I. Karl R. Popper
B. The Structure of Scientific Revolutions	II. M. Foucault

C. The Logic of Scientific Discovery	III. Thomas S. Kuhn
D. The Archeology of Knowledge	IV. Paul Feyerabend

Choose the **correct** answer from the options given below :

- (A) ☐ A - IV, B - I, C - III, D - II  
 (B) ☐ A - II, B - III, C - I, D - IV  
 (C) ☐ A - I, B - II, C - III, D - IV  
 (D) ☒ **A - IV, B - III, C - I, D - II (Correct Answer)**

**Question No.65 (Question Id - 25)**

Given below are two statements :

**Statement I :**

Probability sampling techniques are used to collect data related to individuals.

**Statement II :**

Non probability sampling is used to collect cultural specific data from the experts.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ **Both Statement I and Statement II are correct. (Correct Answer)**  
 (B) ☐ Both **Statement I** and **Statement II** are incorrect.  
 (C) ☐ **Statement I** is correct but **Statement II** is incorrect.  
 (D) ☐ **Statement I** is incorrect but **Statement II** is correct.

**Question No.66 (Question Id - 62)**

Scientific Temper was incorporated into the Constitution in the year :

- (A) ☐ 1974  
 (B) ☐ 1975  
 (C) ☒ **1976 (Correct Answer)**  
 (D) ☐ 1977

**Question No.67 (Question Id - 55)**

The author of the book, "*The Fourth Industrial Revolution*" is :

- A. Franco Malerba  
 B. Klaus Schwab  
 C. Henry Cheshbrough  
 D. B.A. Lundvall

Choose the **correct** answer from the options given below :

- (A) ☐ A  
 (B) ☒ **B (Correct Answer)**  
 (C) ☐ C  
 (D) ☐ D

**Question No.68 (Question Id - 61)**

Gendered Technology refers to :

- (A) ☐

Designing a technology keeping in mind the requirement of a specific gender.

(Correct Answer)

- (B) ☐ Designing a technology which is gender neutral.
- (C) ☐ Designing a technology which is gender discriminatory.
- (D) ☐ None of the above.

**Question No.69 (Question Id - 40)**

Kindly arrange the following countries in terms of their ranking in Global Innovation Indicator 2018 in ascending order (Rank 1=lowest).

- A. China
- B. United States of America
- C. India
- D. Russia

Choose the **correct** answer from the options given below :

- (A) ☐  $D < B < A < C$
- (B) ☐  $A < B < C < D$
- (C) ☐  **$B < A < D < C$  (Correct Answer)**
- (D) ☐  $A < C < B < D$

**Question No.70 (Question Id - 11)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Coca Cola entered into an agreement with Golden Agro Products to use the trademark 'Maaza' in India.

**Reason R :**

Coca Cola came to know that Bisleri is marketing products under the brand name 'Maaza' in Turkey.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- (B) ☐ **Both A and R are correct but R is NOT the correct explanation of A. (Correct Answer)**
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.71 (Question Id - 10)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Division of labour is limited by the costs of coordinating multiple specializations.

**Reason R :**

Division of labour enhances the canvas of specialization.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☐ Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- (B) ☒ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.  
(Correct Answer)
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.72 (Question Id - 20)**

Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

**Assertion A :**

Sectoral Innovation Systems (SIS) are based on the assumption that different sectors or industries operate under different technological regimes.

**Reason R :**

Regimes are characterized by particular combinations of opportunity and appropriable conditions, degrees of cumulativeness of technological knowledge, and characteristics of the relevant knowledge base.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (A) ☒ Both **A** and **R** are correct and **R** is the correct explanation of **A**. (Correct Answer)
- (B) ☐ Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.
- (C) ☐ **A** is correct but **R** is not correct.
- (D) ☐ **A** is not correct but **R** is correct.

**Question No.73 (Question Id - 74)**

Grassroots innovations refers to :

- (A) ☐ Innovations for the marginal social groups
- (B) ☐ Innovations by the people on the margin of the society
- (C) ☒ Both of the above (Correct Answer)
- (D) ☐ None of the above

**Question No.74 (Question Id - 60)**

Which Indian Astronomer gave a scientific explanation for solar and lunar eclipse and clarified that eclipses were not because of Rahu or Ketu or some other demons.

- (A) ☐ Brahmagupta
- (B) ☒ Aryabhatta (Correct Answer)
- (C) ☐ Bhaskaracharya
- (D) ☐ Mahaviracharya

**Question No.75 (Question Id - 33)**

Which among the following is/are correct ?

- A. India declared the decade of 2010-2020 as the 'Decade of make in India'.
- B. India declared the decade of 2010-2020 as 'Decade of Healthy India'.

C. India declared the decade of 2010-2020 as 'Decade of Clean India'.

D. India declared the decade of 2010-2020 as 'Decade of innovation'.

Choose the **correct** answer from the options given below :

(A) ☐ A only

(B) ☐ B and D only

(C) ☒ **D only (Correct Answer)**

(D) ☐ A and C only

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