

13 fY%aKsh

GRADE 13

E

meh 02

02 Hour

I

**fojk jdr mÍCIKh - 2019**

**Second Term Examination - 2019**

;¾l Ydia;%h yd úoHd;aul l%uh - »

**LOGIC & SCIENTIFIC METHOD – I**

24

 **Answer all questions.**

01. Which of the following discipline that holds the close connection with Logic.

i. Pure Mathematics ii. Physics iii. Law

iv. Computer Science v. Psychology.

02. According to science, select the false statement out of the answers.

i. Roll of the scientists

ii. The knowledge which can be falsified by experiment.

iii. Knowledge that developed through scientific method.

iv. Scholarstic tradition which had a rapid development during 15th century in Europe.

v. Knowledge for ever.

03. Which of the following presents an asymmetric relation?

i. B is A’s brother ii. B is A’s class iii. A is equal to B

iv. B is A’s fatherv. A is located south of B.

04. Which of the following is an example for Ideal Experiment?

i. Galileo observed the surface of the moon through telescope.

ii. Louis Pasture observed Rabees antidot through experiment by controlling two groups

of dogs.

iii. William Harvy did experiments by controlling the reptile one by one and observed the

heart beats of them.

iv. Kristein Bernard transplanting a vein for a heart disease.

v. Isaac Newton conduct experiment of bending colours of light through Prism.

05. There is a social science that has an ability to predict through statistical method and

mathematics it can be considered as science with compare to other social science it is,

i. Archaelogy ii. Social Science iii. Anthropology

iv. Political Sciencev. Economics

06. The basis for spring balance is,

i. The law of gravitation. ii. Charle’s law iii. Metal expansion

iv. Hooke’s lawv. Gallileo’s law

07. “The fire has the capacity to burn anything at anytime” this statement is relevant with,

i. Law of contradiction. ii. Law of identity.

iii. Law of excluded middle. iv. Law of double negation.

v. Law of sufficient reason.

08. The pioneer who initiated the school of structuralism,

i. William James ii. Wilhelm Wundt iii. Jone Doovy

iv. J. B. Wotson v. Edward Thorndike

09. Select the false statement from the following.

i. Deductive method is also contain with inductive trades.

ii. If prediction is made false by the scientist the hypothesis is also considered false. This

is deductive falsification methodology.

iii. Just because the prediction is falsified if doesn’t mean that hypothesis is false was a

short come in Popper’s demarcation principle.

iv. “Trying to falsifying hypothesis is a scientist work” he thought Popper had.

v. Since the prediction about Uranus orbit was falsified. The hypothesis of gravitation

was assimilated as false and was rejected.

10. “Any child does not lie.” The distribution term relevant to this statement is,

i. Undistributed, Distributed ii. Distributed, Distributed

iii. Distributed, Undistributed iv. Undistributed, Undistributed

v. Distribution term is unpredictable.

11. Which of the following is a well-formed formulae?

i. ii.

iii. iv.

v.

12. Select the statement which is logically equalent to

i. ii. iii.

iv. v.

13. The one who explains the hypothesis that life originats in a wet condition and also life originats

in a dry condition,

i. Aristotle ii. Emil Rox iii. Lauis Pasture

iv. Fransisco Redy v. William Havey

14. The propootional correlation of Air is between,

i. Presure and volume ii. Volume and temperature

iii. Presure and temperature iv. Volume and atomic number

v. Presure and atomic number

15. What is the correct Venn fiagram that represents the following symbolic statement?

*x*

A

B

*x*

A

B

i. ii.

iii. iv.

*x*

A

B

***x***

A

B

v.

*x*

A

B

16. What is the false statement in distribution of terms in proposition?

i. Predicate in negative propostions cannot be undistributed.

ii. Predicate in affirmative propositions cannot be distributed.

iii. Predicate in particular propositions is always distributed.

iv. The subject in general propositions is undistributed.

v. The subject in particular propositions is undistributed.

17. What is the false statement according to eduction?

i. The contraposition of ‘E’ proposition is I.

ii. The inversion of ‘A’ proposition is O.

iii. The obverted conversion of ‘I’ proposition is also I.

iv. The obverted contraposition of ‘O’ proposition is also O

v. The obverted inversion of ‘E’ is O.

18. Which of the following laws is based more on indirect test than on direct test?

i. Boyle’s law

ii. Newton’s first law at motion.

iii. Hooke’s law

iv. Law of conservation at mass in a chemical reaction.

v. Charl’s law.

19. The contradiction of “some examinations are not tough” is,

i. Some examinations are tough. ii. All examinations are tough.

iii. All examinations are not tough. iv. No examinations are tough.

v. Some examinations are not non tough.

20. When the nucleius of this symbolic formula is false, what are the truth values of P,Q,R in order.

i. T, T, T ii. T, T, F iii. F, T, F

iv. T, F, T v. F, F, T

21. Select the correct formulae which are eqequal to each other amoung following answers.

i. ii.

iii. iv.

v.

22. Which of the following is not a fact related to a “simplicity of hypothesis.”

i. The combination of facts at a hypothesis.

ii. Less veriable

iii. Ability to present more information.

iv. Ability to be companed with more scientific laws.

v. Similer to the general language.

23. The truth tree of is,

i. ii. iii.

iv. v.

24. The correct answer when argument when arranged according to the 1st enthemem, 2nd

enthemem and 3rd enthemem is,

A - all tigers are innocent because all animals are living in forest are innocent.

B - Since all tigers living in the forest all tigers are innocent.

C - Since all animals who live in the forest is innocent tiger lives there.

i. (a, c, b) ii. (b, a, c) iii. (c, b, a)

iv. (b, c, a)v. (a, c, b)

25. Which of the following is a well formed formula?

i. ii.

iii. iv.

v.

26. To which type of experiment method does the experiment done by Magrete mid and

Malinawski in Trobian Island belongs to?

i. Experiment method ii. Associate reaserch method

iii. Ideal experiment iv. Direct experiment

v. Crucial test.

27. If “no men are mortal” is considered as a first proposition then “Some non-men are mortal”

can be considered as,

i. Valid conversion ii. Valid obversion

iii. Valid Inversion iv. Valid centrapositive

v. Valid obverted centrapositive

28. What does it meant by “prediction in scientific method?”

i. Future tense

ii. Prediction is an implication which can be logicaly derived through hypothesis

iii. A statement about present event.

iv. A statement that taks note of the observational data.

v. Prediction is something related to hypothesis

29. What is the most suitable thing to derive a prediction from hypothesis?

i. Propositional calculas ii. Experiment method

iii. Mathematical calculas iv. Primary facts

v. Anxialry Hypothesis

30. Which of the following is not an activity of scientific hypothesis.

i. Expressing the charactaristics of a phenomina through regularity.

ii. Used to solve a problem in science.

iii. Directing to research.

iv. Providing deductive predictions.

v. Explain laws.

31. The bacteriologist who won the Nobel Prize for identifying Bacillus which causes Anthrax?

i. Ronald Ross ii. Flemming iii. Patriek Mason

iv. Robert Cook v. Lauis Pasture

32. An implicative sentence is falsified when,

i. Both the antecedent and the consequent are false.

ii. Only the consequent is false.

iii. Only the antecedent is false.

iv. When it is impossible to determine the value of the antecedent and the consequent.

v. Both the antecedent and the concequent are true.

33. The contradiction of the symbolic statement is,

i. ii. iii.

iv. v.

34. If a problematic condition arises even when the answer is given as ‘yes’ or ‘No’ with regard

to any statement that can be consided as,

i. Fallacy of antecedent. (mQ¾jdx.dNdih)

ii. Fallacy of consequent. (wmrdx.dNdih)

iii. Paradox.

iv. Fallacy of ignorance.

v. Fallacy of four terms.

35. Though fleming discovered the antidote medicine (Pencilin), it was produced from a condition

of a substance by,

i. Proff flor and his group ii. Ronald Rose

iii. Patric Mason iv. Edvard Jenar

v. The group of Gestalt Psychologist.

36. Who was the scientist that conducted experiments about the stages of child development?

i. Sigmund Freud ii. Moris Williams

iii. Alexander Fleming iv. Karl Marx

v. Jean Piaget

37. Phlogiston theory becomes a scientific theory because,

i. Due to the fact that when burning phlogiston is not emited.

ii. Predictions become true.

iii. It was related into Lawosher’s experiment.

iv. The weight is lesser after it is burnt than before.

v. This cannot be empirically falsified.

38. The scientific methodology that is based on the the theme. “There is no particular way to find

out scientific hypothesis is,

i. Deductive verification.

ii. Inductivism

iii. Relativism

iv. Research methodology of Immri Lakatos.

v. Deductive falsification method.

39. Deriving a proposition which has the contradiction of the predicate of the 1st proposition as

its subject is known as,

i. Obversion ii. Convertion iii. Contraposition

iv. Inversion v. Eduction

40. What is the experiment method conducted to identify the symptoms of a patient by considering

their past reports and activities.

i. Introspection ii. Cuse Study iii. Ideal experiment

iv. Interview method v. Field research

41. Who was the pioneer who put forward the idea of behaviorism?

i. Sigmund Freud ii. Carl Jung iii. J. B. Watson

iv. Pavlov. W. Dement.

42. What is the test conducted to find the most accurate hypothesis, when there are several

hypothesis regarding the same field of study.

i. Investigation test ii. Indirect test iii. Direct test

iv. Crucila testv. Experiment

43. Which one is the correct statement of the following?

i. In given proposition when the subject and the predicate are exchange it is known as

obversion.

ii. It is a rule of conversion that the undistributed term in premises should be undistributed

in the conclusion as well.

iii. Particuler proposition I and O can be inverted.

iv. Contrary being of the top of the squre of apposition indicate that they are not ordinary.

v. I proposition can be contrapositive.

44. “All historions are truthful. No ruler is a historian therefore no ruler is truthful.” The fallcy

occurred is,

i. Fallacy of two terms.

ii. Fallacy of undisterbuted

iii. Fallacy of illicit minor and illicit major.

iv. If at least one premise is negative the conclusion must be negative.

v. At least one proposition being affirmative.

45. The structure of a syllogism is,

i. Miner premise, major premise and conclusion

ii. Major premise, minor premise and conclusion

iii. Order deffers according to the syllogism.

iv. If at least are premise is negative the conclusion.

v. At least one proposition being affirmative.

46. Scientific laws are not independent. It always falsifies a theory. Kepler’s Law and Gallileo’s

Laws falls under.

i. Gravitational theory. ii. Heliocentric theory

iii. Geocentric theory iv. Theory of relativity

v. Phlogiston theory

47. The rule that apply for the validity of mixed disjunctive syllogism.

i. Modus Ponens ii. Modus Tollons

iii. Modus Tollendo Ponens iv. Modus Ponens Tollendo

v. Simplification.

48. “If you study well then you will get through the exam. If you pass the exam you will enter the

university. Therefore if you enter the university you will study” to which category does this

syllogism belong to?

i. Pure hypothetical ii. Pure categorical iii. Dilemma

iv. Mixed disjunctive v. Pure disjunctive

49. The ability to derive more facts from lesser number of variables.

i. Commanality ii. Empirical

iii. Self-contradictory iv. Simplicity

v. Pure disjunctive

50. Deriving conclusions based on causality provides the ability to logically derive conclusions

without conducting experiments. This can be recognized as,

i. Crucial test ii. Case study iii. Mathematical experiment

iv. Emperical test v. Experiment.