Model QuestionPaper 2021-22

Class- XII

Sub - Logic

Time – 3 hours 15 minutes   MM– 100

Note:Early 15 minutes for students to read the question paper.

Instructions: All questions are compulsory. Each carries equal marks.

1. Explain the nature of Proposition.   10

    OR

    Transform the following sentences in logical forms: 3+3+4 =10

    (i)   All the students are not present in the classroom.

    (ii) Only rare people can escape from temptation.

    (iii) Only citizens are voters.

2. Distinguish between immediate and mediate inferences with example. Can immediate inference be called pure inference?   6+4=10

    OR

    What are the different kinds of deductive inference? Is it not immediate inference? Evaluate it critically.   5+5=10

3. Explain the nature of syllogism and explain briefly of its kinds.   5+5=10

    Or

    Write the mood of following arguments: 3+3+4 =10

    (i)   All the scientists are mathematicians.

          All scientists are logicians.

          Therefore all logicians are mathematicians.

(ii) None but the virtuous are happy.

He is not happy.

Therefore he can not be virtuous.

(iii) All whales are big fishes.

All whales are big aquatics.

Therefore all big aquatics are big fishes.

4. What is mixed syllogism? Explain its various kinds with examples. 6+4=10

<div align="center">OR</div>

Explain the fallacies if any in the following arguments: 5+5=10

(i) If it rains, the road gets wet.

The road is wet.

Therefore it has rained.

(ii) If it rains, the road gets wet.

It has not rained.

Therefore the road will not get wet.

5. Explain and describe the fallacies which arise due to the violation of the rules of validity of syllogism. 10

<div align="center">OR</div>

Explain the fallacies if any in the following arguments: 3+3+4 =10

(i) No artificial colour is nutritious food.

All artificial coloursare the substances of coal tar.

Therefore no substances produced from coal tar is nutritious food.

(ii) All the residents of London drink tea and all the tea drinkers like it. Therefore we can derive a conclusion that all the residents of London like it.

(iii) All the supporters of public friendly government are Democrats. Therefore all the supporters of public friendly government are opponents of Republic Party because all Democrats are opponents of Republican Party.

6. What is hypothesis? What is its importance in scientific induction? What are the features of the good hypothesis? 6+4=10

OR

Distinguish between fact and hypothesis. Critically analyze the conditions of pure hypothesis. 5+5=10

7. Differentiate between popular and scientific explanations and describe different kinds of scientific explanation with examples. 6+4=10

OR

What do you mean by law? Distinguish among hypothesis, fact, law and theory. 4+6=10

8. What do you mean by classification? Give a detail description of rules of classification and its validity. 6+4=10

OR

Throw light on the characteristics of classification. Define and explain the classification and active classification. 5+5=10

9. Examine the following arguments and indicate the fallacies if any in them: 3+3+4 =10

(i) Night comes after day. Therefore day is the cause of night.

(ii) This year some new planets have been seen in the sky. Therefore Monarch's privileges came to an end.

(iii) This year the number of students has increased in colleges. It seems that educated are not worthless now.

<div align="center">OR</div>

Write a short note on -

(i) Classification fallacy.

(ii) Definition fallacy.

10. Explain Mill's method of agreement with example. Describe its chief demerits.   10

<div align="center">OR</div>

Give a detailed description of concomitant variation. Throw light on its importance.   10

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