UNIVERSITI SAINS MALAYSIA

First Semester Examination
Academic Session 2006/2007

October/November 2006

HPW 102 – CRITICAL THINKING

Duration: 2 hours

Please ensure that this set of questions has **SEVENTEEN** printed pages before you begin.

Instructions:

1.   Attempt **ALL** questions in **Section A** and **Section B**.

2.   For questions in Section A you are reminded to:

   I.   shade your answers in the OMR form provided specifically for multiple-choice questions.
   II.   use only **2B Pencil**.
   III.   shade completely your selected answer. See example below.
   IV.   completely erase your original shading if you wish to alter your answer.

A		C	D	E
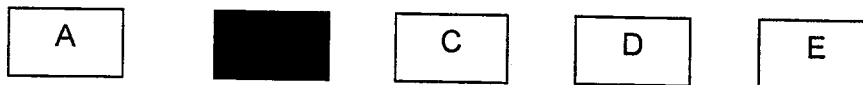
3.   **Please ensure that you have written and shaded your index number on the OMR sheet correctly before you hand it in to the invigilator. Any mistake in your index number will result in you getting '0' (nil) for your Section A.**
   This '0' [for Section A] will be retained despite appeals for a re-grading of your paper.

4.   **You are not allowed to take out with you this set of question paper. Your question paper will be collected at the end of the examination period.**

SECTION A:

TO ANSWER QUESTIONS 1 TO 28, PLEASE REFER TO THE FOLLOWING STATEMENTS:

I.   There is no virus that is not also a microbe.

II.   Only microbes are viruses.

III. All viruses are microbes.

IV.   There is no virus which is also a microbe.

V.   There is no microbe which is also a virus.

VI.   Some viruses are microbes.

VII. Some microbes are viruses.

1.   Which proposition(s) is necessarily TRUE if statement I is TRUE?

    A.   I, III, VI and VII.

    B.   II and III.

    C.   VI and VII.

    D.   IV and V.

    E.   There is no proposition that is necessarily true.

2.   Which proposition(s) is necessarily FALSE if statement I is TRUE?

    A.   IV and V.

    B.   IV only.

    C.   V only.

    D.   IV, V, VI and VII.

    E.   There is no proposition that is necessarily false.

3. Which proposition(s) is necessarily TRUE if statement III is TRUE?

    A. I, II, VI and VII.

    B. I and II.

    C. VI and VII.

    D. IV and V.

    E. There is no proposition which is necessarily true.

4. Which proposition(s) is necessarily FALSE if statement III is TRUE?

    A. IV and V.

    B. IV only.

    C. V only.

    D. IV, V, VI and VII.

    E. There is no proposition that is necessarily false.

5. Which proposition(s) is necessarily TRUE if statement II is TRUE?

    A. I, III, VI and VII.

    B. I and III.

    C. VI and VII.

    D. IV and V.

    E. There is no proposition that is necessarily true.

6. Which proposition(s) is necessarily FALSE if statement II is TRUE?

    A. IV and V.

    B. IV only.

    C. V only.

    D. I, III, VI and VII.

    E. There is no proposition that is necessarily false.

7. Which proposition(s) is CONTRARY to statement I?

    A. IV and V.

    B. IV only.

    C. V only.

    D. VI and VII.

    E. No proposition is contrary to statement I.

8. Which proposition(s) is a CONTRADICTION of (or is a contradictory of) statement I?

    A. II and III.

    B. IV and V.

    C. VI and VII.

    D. VI only.

    E. No proposition is a contradiction of statement I.

9. Which proposition(s) has the SAME MEANING as statement I?

    A. II and III.

    B. III only.

    C. VI and VII.

    D. II, III, VI and VII.

    E. No proposition has the same meaning as I.

10. Which proposition(s) is IMPLIED by statement I?

    A. II, III, VI and VII.

    B. II and III.

    C. VI and VII.

    D. Only II.

    E. There is no proposition that is implied by I.

11. Which proposition(s) is SUBCONTRARY to statement I?

    A.   VI and VII.

    B.   II, III, VI and VII.

    C.   Only VI.

    D.   Only VII.

    E.   No proposition is a subcontrary of I.

12. Which proposition(s) is necessarily TRUE if statement VII is FALSE?

    A.   IV and V.

    B.   Only IV.

    C.   Only V.

    D.   I, II, III and VI.

    E.   There is no proposition that is necessarily true.

13. Which proposition(s) is necessarily FALSE if statement VII is FALSE?

    A.   I, II, III and VI.

    B.   Only VI.

    C.   I, II and III.

    D.   IV and V.

    E.   There is no proposition that is necessarily false.

14. Which proposition(s) is necessarily TRUE if statement VI is FALSE?

    A.   I, II, III and VII.

    B.   I, II and III.

    C.   IV and V.

    D.   Only VII.

    E.   There is no proposition that is necessarily true.

15. Which proposition(s) is necessarily FALSE if statement VI is FALSE?

   A. I, II, III, and VII.

   B. I, II and III.

   C. Only VII.

   D. IV and V.

   E. There is no proposition that is necessarily false.

16. Which proposition(s) has THE SAME MEANING as statement VI?

   A. Only VII.

   B. IV, V and VII.

   C. IV and V.

   D. I, II and III.

   E. No proposition has the same meaning as VI.

17. Which proposition(s) is IMPLIED by statement VI?

   A. Only VII.

   B. IV, V and VII.

   C. IV and V.

   D. I, II and III.

   E. No proposition is implied by VI.

18. Which proposition is CONTRARY to statement II?

   A. IV and V.

   B. Only IV.

   C. Only V.

   D. VI and VII.

   E. No proposition is contrary to II.

19. Which proposition is a SUBCONTRARY of statement II?

   A.   VI and VII.

   B.   Only VI.

   C.   Only VII.

   D.   I and III.

   E.   There is no proposition which is a subcontrary of II.

20. Which proposition is necessarily TRUE if statement IV is TRUE?

   A.   Only V.

   B.   V, VI and VII.

   C.   VI and VII.

   D.   Only VII.

   E.   There is no proposition that is necessarily true.

21. Which proposition is necessarily FALSE if statement IV is TRUE?

   A.   I, II, III, VI and VII.

   B.   I, II and III.

   C.   VI and VII.

   D.   Only VI.

   E.   There is no proposition that is necessarily false.

22. Which proposition has the SAME MEANING as statement III?

   A.   I and II.

   B.   I, II, V and VI.

   C.   V and VI.

   D.   Only II.

   E.   There is no proposition that has the same meaning as III.

23. Which proposition is a CONTRADICTION of statement III?

    A.   IV and V.

    B.   Only IV.

    C.   Only V.

    D.   I and II.

    E.   There is no proposition that is a contradiction of III.

24. Which proposition is IMPLIED by statement III?

    A.   I, II, VI and VII.

    B.   VI and VII.

    C.   I and II.

    D.   IV and V.

    E.   No proposition is implied by III.

25. Which proposition has the SAME MEANING as statement IV?

    A.   Only V.

    B.   V, VI and VII.

    C.   VI and VII.

    D.   I, II and III.

    E.   There is no proposition with the same meaning as IV.

26. Which proposition is a SUBCONTRARY of statement IV?

    A.   Only V.

    B.   V, VI and VII.

    C.   VI and VII.

    D.   I, II and III.

    E.   There is no proposition which is a subcontrary of IV.

27. Which proposition is necessarily TRUE if statement V is TRUE?

    A.   Only IV.

    B.   IV, VI and VII.

    C.   VI and VII.

    D.   I, II and III.

    E.   There is no proposition that is necessarily true.

28. Which proposition is necessarily FALSE if statement V is TRUE?

    A.   I, II, III, VI and VII.

    B.   I, II and III.

    C.   VI and V.

    D.   Only IV.

    E.   There is no proposition that is necessarily false.

29. Please focus on the following assertions:

    I.   If a syllogistic argument is VALID and its conclusion true, then at least one of its premisses must be true.

    II.   If a syllogism is valid and its conclusion false, then at least one of its premisses must be false.

    III.   If a syllogism is VALID and both its premisses are false, then its conclusion must be false.

    IV.   If a syllogism is VALID and both its premisses true, then its conclusion must be true.

Question: Which of the above statements are true?

    A.   I and IV.

    B.   II and III.

    C.   I and III.

    D.   II and IV.

    E.   IV only.

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30. Please focus on the following:

   I.   A VALID syllogism will not have false premisses and a true conclusion.

   II.   A VALID syllogism will not have true premisses and a false conclusion.

   III.   If a syllogism is INVALID and its conclusion false, then at least one of its premisses must be false.

   IV.   If a syllogism is INVALID and its conclusion true, then at least one of its premisses must be true.

Question: Which of the above claims are true?

   A.   II only.
   B.   I and III.
   C.   I and IV.
   D.   II and III.
   E.   I only.

31. Please focus on the following arguments:

   I.   If thus far not a single madman has become a logician, then no madman will ever be a logician in the future.

   II.   Al Capone must be partially insane, for there is no member of the Mafia who is not partially insane.

   III.   Joseph Goebbels is inhumane, for all members of the National Socialist Party are inhumane.

   IV.   So far only humans take Critical Thinking. We must therefore conclude that all future students of Critical Thinking are humans.

Question: Which of the above arguments are INDUCTIVE?

    A.   I and IV.

    B.   IV only.

    C.   I only.

    D.   II and III.

    E.   There is no inductive argument in the above list.

32.   Please focus on the following arguments:

    I.   All crows are black, therefore Mary's crow must also be black.

    II.   Mary's crow is black, because there is no crow that isn't black.

    III.   All crows are black because we still have not encountered one that isn't.

    IV.   All crows encountered thus far are black, therefore all crows encountered in the future must also be black.

Question: Which of the above arguments are INDUCTIVE?

    A.   III and IV.

    B.   III only.

    C.   IV only.

   D.   I and II.

    E.   II, III and IV.

33.   Which proposition is contrary to "There is no philosopher who is not a clear thinker"?

    A.   All philosophers are not clear thinkers.

    B.   All philosophers are clear thinkers.

    C.   Some philosophers are clear thinkers.

    D.   Some philosophers are not clear thinkers.

    E.   Some clear thinkers are philosophers.

data that can contribute to framing policies

research data

data utilized for grant applications
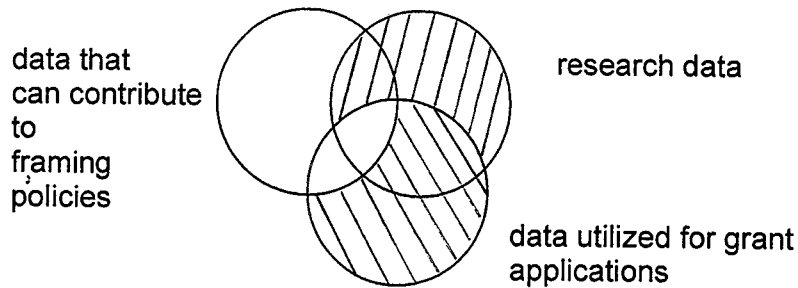
34. The Venn diagram above represents this argument:

A. Only research data are utilized for grant applications. Hence, all research data are data that contribute to framing policies.

B. No data that contribute to framing policies are not research data because no research data that are not utilized for grant applications.

C. No research data that are not data that contribute to framing policies because no research data that are not utilized for grant applications.

D. Only data that contribute to framing policies are research data because only data that are utilized for grant applications are data that contribute to framing policies.

E. All data that contribute to framing policies are research data because all research data are data that are utilized for grant applications.

phyto-planktons

plants cultivated by Muthu

plants exhibited at school

...13/-

178
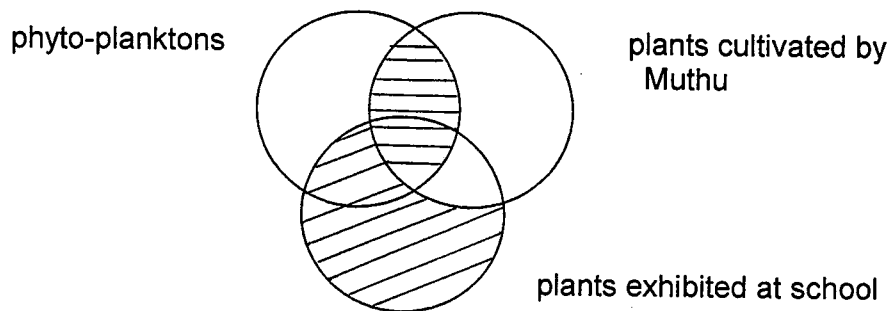
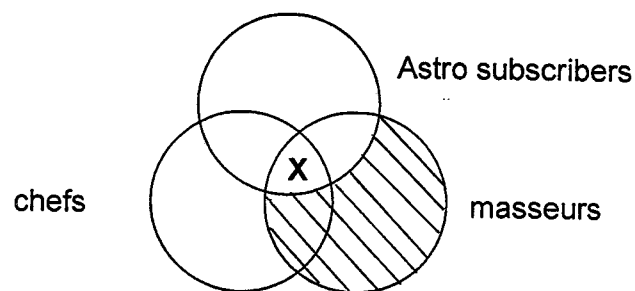35.   The Venn diagram above represents this argument:

A.   No phyto-planktons are plants cultivated by Muthu because all plants exhibited at school are plants cultivated by Muthu.

B.   No plants cultivated by Muthu are phyto-planktons and only plants exhibited at school are plants cultivated by Muthu.

C.   If it is not a plant exhibited at school, then it is not a plant cultivated by Muthu, and all phyto-planktons are not plants cultivated by Muthu.

D.   If it is not a plant cultivated by Muthu, then it is not a plant exhibited at school. Hence, no phyto-planktons are exhibited at school.

E.   If it is a plant exhibited at school, then it is a plant cultivated by Muthu because all plants cultivated by Muthu are phyto-planktons.

criminal cases

school
disciplinary
cases

X

cases reported in
the newspapers
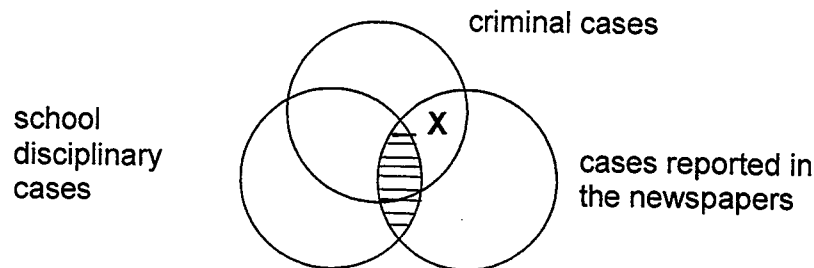
36.   The Venn diagram above represents this argument:

A.   Some cases that are reported in the newspapers are criminal cases because no school disciplinary cases are reported in the newspapers.

B.   Only criminal cases are reported in the newspapers and all cases reported in the newspapers are not school disciplinary cases.

C.   Some criminal cases are not school disciplinary cases because no school disciplinary cases are reported in the newspapers.

D.   If a case is not reported in the newspapers, then it is not a school disciplinary case. Hence, some criminal cases are reported in the newspapers.

E.   Some school disciplinary cases are not criminal cases because no criminal cases are reported in the newspapers.

37.   The Venn diagram above represents this argument:

A.   If a person is a masseur, then that person is an Astro subscriber. Hence, some masseurs are chefs.

B.   If a person is not an Astro subscriber, then that person is not a masseur. Therefore, some chefs are Astro subscribers.

C.   Only Astro subscribers are masseurs because some chefs are masseurs.

D.   Only Astro subscribers are masseurs and all masseurs are Astro subscribers.

E.   Only Astro subscribers are masseurs and only masseurs are chefs.

academic books / comic books / expensive books
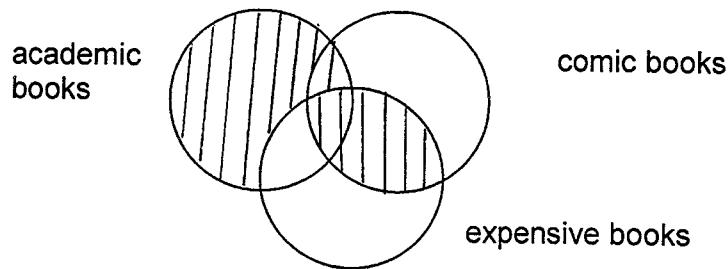
38. The Venn diagram above represents this argument:

A. Only comic books are not expensive and all academic books are expensive.

B. Only expensive books are academic books because no comic books are expensive.

C. If a book is not expensive, then it is not an academic book. Hence, no comic books are expensive.

D. No academic books that are not expensive. Therefore, all comic books are not expensive.

E. No academic books that are comic books because if a book is not expensive, then it is not an academic book.

cyclists / people who enjoy vacationing overseas / top spinners
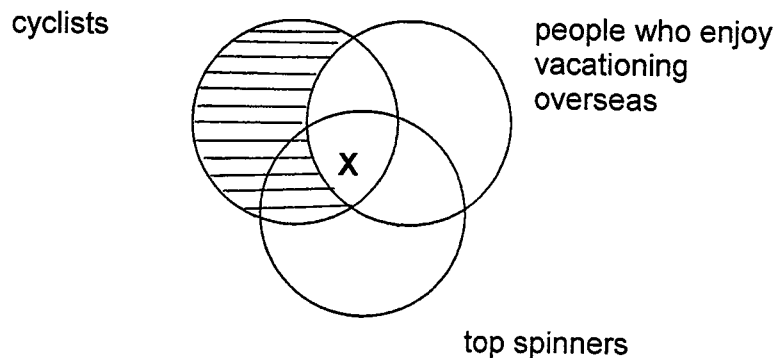
39. The Venn diagram above represents this argument:

A. Some cyclists enjoy vacationing overseas because some top spinners are cyclists.

B. Some people who enjoy vacationing overseas are top spinners because some cyclists are top spinners.

C. Only people who enjoy vacationing overseas are cyclists. Hence, some top spinners are cyclists.

D. Some top spinners are cyclists and some people who enjoy vacationing overseas are cyclists.

E. Some top spinners are cyclists because only people who enjoy vacationing overseas are cyclists.

fields of metaphysics

fields disparaged by Analytical Philosophy
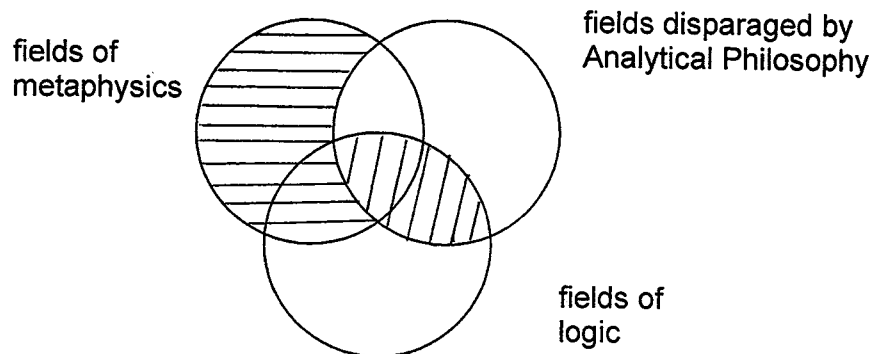
fields of logic

40. The Venn diagram above represents this argument:

A. If a field of scholarship is not disparaged by Analytical Philosophy, then it is not a field of metaphysics. Therefore, no fields of logic are disparaged by Analytical Philosophy.

B. All fields of logic are not fields of analytic because no fields of logic are disparaged by Metaphysical Philosophy.

C. All fields of logic are not disparaged by Analytical Philosophy because no fields of metaphysics are fields of logic.

D.   Only fields of scholarship that are not fields of logic that are disparaged by Analytical Philosophy, and no fields of metaphysics are fields of logic.

E.   If a field of scholarship is not disparaged by Analytical Philosophy, then it is not a field of metaphysics. Hence, if a field of scholarship is a field of logic, then it is not a field of metaphysics.

SECTION B – [50%]

(*)   For each question you are required to:-
[i]   reveal its structure (40%),
[ii] name the fallacy or fallacies in the argument (20%),
[iii] offer a brief discussion of the fallacy in the argument (40%).

41.   We must reject Karl Marx's theory on economic development. Karl Marx was never an economist. Furthermore Marxism has been accepted by Communists, and Communist ideology is simply unacceptable.

42.   Each time I spoke to Professor Mandelbaum, a philosopher, I experienced severe stomach upset. I also have stomach upsets whenever I read philosophy books. In future I will stop speaking to Professor Mandelbaum, neither will I read philosophy books.

43.   Mary must be a beautiful lady, because all beautiful ladies use Lux for bathing.

44.   It is clear that poor citizens need financial support from the government. This is because they have the lowest salaries and own no property.

45.   Thirty per cent of males in this country smoke. Scientists have conclusively proven that smoking causes lung cancer. Therefore, thirty per cent of citizens in this country will suffer from lung cancer.

- ooo0ooo -